Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

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

OC Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP3_0.2	SE204666A.012	%	60 - 130%	111
	TP5_0.1	SE204666A.013	%	60 - 130%	116
	TP10_0.1	SE204666A.014	%	60 - 130%	113

OP Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	TP3_0.2	SE204666A.012	%	60 - 130%	96
	TP5_0.1	SE204666A.013	%	60 - 130%	91
	TP10_0.1	SE204666A.014	%	60 - 130%	91
d14-p-terphenyl (Surrogate)	TP3_0.2	SE204666A.012	%	60 - 130%	94
	TP5_0.1	SE204666A.013	%	60 - 130%	92
	TP10_0.1	SE204666A.014	%	60 - 130%	88

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	TP3_0.2	SE204666A.012	%	70 - 130%	96
	TP5_0.1	SE204666A.013	%	70 - 130%	91
	TP10_0.1	SE204666A.014	%	70 - 130%	91
d14-p-terphenyl (Surrogate)	TP3_0.2	SE204666A.012	%	70 - 130%	94
	TP5_0.1	SE204666A.013	%	70 - 130%	92
	TP10_0.1	SE204666A.014	%	70 - 130%	88
d5-nitrobenzene (Surrogate)	TP3_0.2	SE204666A.012	%	70 - 130%	87
	TP5_0.1	SE204666A.013	%	70 - 130%	88
	TP10_0.1	SE204666A.014	%	70 - 130%	87

PAH (Polynuclear Aromatic Hydrocarbons) in TCLP Extract

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	TP3_0.2	SE204666A.012	%	40 - 130%	86
	TP5_0.1	SE204666A.013	%	40 - 130%	80
	TP10_0.1	SE204666A.014	%	40 - 130%	78
d14-p-terphenyl (Surrogate)	TP3_0.2	SE204666A.012	%	40 - 130%	90
	TP5_0.1	SE204666A.013	%	40 - 130%	90
	TP10_0.1	SE204666A.014	%	40 - 130%	86
d5-nitrobenzene (Surrogate)	TP3_0.2	SE204666A.012	%	40 - 130%	66
	TP5_0.1	SE204666A.013	%	40 - 130%	66
	TP10_0.1	SE204666A.014	%	40 - 130%	56

PCBs in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP3_0.2	SE204666A.012	%	60 - 130%	111
	TP5_0.1	SE204666A.013	%	60 - 130%	116
	TP10_0.1	SE204666A.014	%	60 - 130%	113

VOC's in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP3_0.2	SE204666A.012	%	60 - 130%	88
	TP5_0.1	SE204666A.013	%	60 - 130%	83
	TP10_0.1	SE204666A.014	%	60 - 130%	88
d4-1,2-dichloroethane (Surrogate)	TP3_0.2	SE204666A.012	%	60 - 130%	86
	TP5_0.1	SE204666A.013	%	60 - 130%	79
	TP10_0.1	SE204666A.014	%	60 - 130%	83
d8-toluene (Surrogate)	TP3_0.2	SE204666A.012	%	60 - 130%	95
	TP5_0.1	SE204666A.013	%	60 - 130%	85
	TP10_0.1	SE204666A.014	%	60 - 130%	89

Volatile Petroleum Hydrocarbons in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP3_0.2	SE204666A.012	%	60 - 130%	88
	TP5_0.1	SE204666A.013	%	60 - 130%	83
	TP10_0.1	SE204666A.014	%	60 - 130%	88
d4-1,2-dichloroethane (Surrogate)	TP3_0.2	SE204666A.012	%	60 - 130%	86
	TP5_0.1	SE204666A.013	%	60 - 130%	79
	TP10_0.1	SE204666A.014	%	60 - 130%	83
d8-toluene (Surrogate)	TP3_0.2	SE204666A.012	%	60 - 130%	95

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer 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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	TP5_0.1	SE204666A.013	%	60 - 130%	85
	TP10_0.1	SE204666A.014	%	60 - 130%	89

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

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

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB196785.001	Mercury	mg/kg	0.05	<0.05

Mercury in TCLP Extract

Method: ME-(AU)-[ENV]AN311(Perth) /AN312

Sample Number	Parameter	Units	LOR	Result
LB196832.001	Mercury	mg/L	0.0001	0.0406

Metals in TCLP Extract by ICPOES

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

Sample Number	Parameter	Units	LOR	Result
LB196809.001	Arsenic, As	mg/L	0.02	0.0164226
	Cadmium, Cd	mg/L	0.001	0.000116721
	Chromium, Cr	mg/L	0.005	-0.000729318
	Copper, Cu	mg/L	0.005	0.00148443
	Lead, Pb	mg/L	0.02	-0.00285516
	Nickel, Ni	mg/L	0.005	0.00323239
	Zinc, Zn	mg/L	0.01	0.00222029

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB196777.001		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
		Aldrin	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor epoxide	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
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		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
		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
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	90

OP Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB196777.001		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		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
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	91
		d14-p-terphenyl (Surrogate)	%	-	90

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB196777.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		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
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	88
		2-fluorobiphenyl (Surrogate)	%	-	91
		d14-p-terphenyl (Surrogate)	%	-	90

PAH (Polynuclear Aromatic Hydrocarbons) in TCLP Extract — Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB196823.001		Naphthalene	µg/L	0.1	<0.1
		2-methylnaphthalene	µg/L	0.1	<0.1
		1-methylnaphthalene	µg/L	0.1	<0.1
		Acenaphthylene	µg/L	0.1	<0.1
		Acenaphthene	µg/L	0.1	<0.1
		Fluorene	µg/L	0.1	<0.1
		Phenanthrene	µg/L	0.1	<0.1
		Anthracene	µg/L	0.1	<0.1
		Fluoranthene	µg/L	0.1	<0.1
		Pyrene	µg/L	0.1	<0.1
		Benzo(a)anthracene	µg/L	0.1	<0.1
		Chrysene	µg/L	0.1	<0.1
		Benzo(a)pyrene	µg/L	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
		Dibenzo(ah)anthracene	µg/L	0.1	<0.1
		Benzo(ghi)perylene	µg/L	0.1	<0.1
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	62
		2-fluorobiphenyl (Surrogate)	%	-	68
		d14-p-terphenyl (Surrogate)	%	-	92

PCBs in Soil — Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB196777.001		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
		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)	%	-	90

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB196784.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

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

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued) — Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB196784.001	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB196777.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB196776.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	82
		d8-toluene (Surrogate)	%	-	88
		Bromofluorobenzene (Surrogate)	%	-	81
	Totals	Total BTEX	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB196776.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	82

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / 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 x SDL / Mean + 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 identifer 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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE204998.002	LB196785.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE204999.006	LB196785.022	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE204999.008	LB196778.021	% Moisture	%w/w	1	<1.0	<1.0	200	0

OC Pesticides in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE204998.002	LB196777.014		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.17	0.16	30	6

OP Pesticides in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE204998.001	LB196777.024		Dichlorvos	mg/kg	0.5	<0.5	0	200	0
			Dimethoate	mg/kg	0.5	<0.5	0	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	0.0115416536	200	0
			Fenitrothion	mg/kg	0.2	<0.2	0.0009227438	200	0
			Malathion	mg/kg	0.2	<0.2	0.0029323344	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	0.0064965033	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	0.0065719589	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	0	200	0
			Methidathion	mg/kg	0.5	<0.5	0	200	0
			Ethion	mg/kg	0.2	<0.2	0	200	0
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	0	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	0	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4312162173	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4397206591	30	1

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Original	Duplicate	Parameter	Units	LOR

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / 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 x SDL / Mean + 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 identifer 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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE204998.001	LB196777.024		Naphthalene	mg/kg	0.1	<0.1	0	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	0	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	0	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	0	200	0
			Acenaphthene	mg/kg	0.1	<0.1	0	200	0
			Fluorene	mg/kg	0.1	<0.1	0	200	0
			Phenanthrene	mg/kg	0.1	<0.1	0.0079142231	200	0
			Anthracene	mg/kg	0.1	<0.1	0.0072275086	200	0
			Fluoranthene	mg/kg	0.1	<0.1	0.0079439399	200	0
			Pyrene	mg/kg	0.1	<0.1	0.0082383701	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	0.0124459310	200	0
			Chrysene	mg/kg	0.1	<0.1	0.0125908152	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0.0083650818	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0.0084012083	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	0.0038505566	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	0	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	0.0022634305	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	0	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	0.242	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	0.121	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	0	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4129990216	30	0
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4312162173	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4397206591	30	1

PCBs in Soil — Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE204998.002	LB196777.014		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	6

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE204998.002	LB196784.014	Arsenic, As	mg/kg	1	1	1	114	30
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	1.1	1.0	77	12
		Copper, Cu	mg/kg	0.5	21	16	33	29
		Nickel, Ni	mg/kg	0.5	1.2	0.8	80	35
		Lead, Pb	mg/kg	1	15	15	37	5
		Zinc, Zn	mg/kg	2	21	8.6	43	86 ②
SE204999.006	LB196784.022	Arsenic, As	mg/kg	1	2	2	84	4
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	1.8	1.7	59	9
		Copper, Cu	mg/kg	0.5	2.1	1.1	61	63 ②
		Nickel, Ni	mg/kg	0.5	<0.5	<0.5	200	0
		Lead, Pb	mg/kg	1	3	2	71	6
		Zinc, Zn	mg/kg	2	2.3	<2.0	126	14

TRH (Total Recoverable Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE204998.001	LB196777.024	TRH C10-C14	mg/kg	20	<20	0	200	0
		TRH C15-C28	mg/kg	45	<45	0	200	0
		TRH C29-C36	mg/kg	45	<45	0	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / 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 x SDL / Mean + 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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

TRH (Total Recoverable Hydrocarbons) in Soil (continued) — Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE204998.001	LB196777.024		TRH C37-C40	mg/kg	100	<100	0	200	0
			TRH C10-C36 Total	mg/kg	110	<110	0	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	0	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	0	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	0	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	0	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	0	200	0
SE204999.006	LB196777.022		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE204692.004	LB196776.031	Monocyclic	Benzene	mg/kg	0.1	<0.1	0	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	0.0122865327	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	0.0060565189	200	0
			m/p-xylene	mg/kg	0.2	<0.2	0.0102553788	200	0
			o-xylene	mg/kg	0.1	<0.1	0.0024673179	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	0.0010684136	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.2	7.6827524713	50	7
			d8-toluene (Surrogate)	mg/kg	-	8.9	7.9954757376	50	11
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.5	7.9246961635	50	7
		Totals	Total Xylenes	mg/kg	0.3	<0.3	0.0127226968	200	0
			Total BTEX	mg/kg	0.6	<0.6	0	200	0
SE204999.004	LB196776.033	Monocyclic	Benzene	mg/kg	0.1	<0.1	0	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	0.0120239139	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	0.0058927193	200	0
			m/p-xylene	mg/kg	0.2	<0.2	0.0097198706	200	0
			o-xylene	mg/kg	0.1	<0.1	0.0021916805	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	0.0005799982	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.0	7.4867205061	50	7
			d8-toluene (Surrogate)	mg/kg	-	8.5	7.9018450410	50	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.7	7.9056646754	50	9
		Totals	Total Xylenes	mg/kg	0.3	<0.3	0.0119115512	200	0
			Total BTEX	mg/kg	0.6	<0.6	0	200	0

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE204692.004	LB196776.031		TRH C6-C10	mg/kg	25	<25	0	200	0
			TRH C6-C9	mg/kg	20	<20	0	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.2	7.6827524713	30	7
			d8-toluene (Surrogate)	mg/kg	-	8.9	7.9954757376	30	11
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.5	7.9246961635	30	7
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	0	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	0	200	0
SE204999.004	LB196776.033		TRH C6-C10	mg/kg	25	<25	0.0203698961	200	0
			TRH C6-C9	mg/kg	20	<20	0.0193148783	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.0	7.4867205061	30	7
			d8-toluene (Surrogate)	mg/kg	-	8.5	7.9018450410	30	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.7	7.9056646754	30	9
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	0	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	0.0203698961	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.

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB196785.002	Mercury	mg/kg	0.05	0.19	0.2	70 - 130	96

Metals in TCLP Extract by ICPOES

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB196809.002	Arsenic, As	mg/L	0.02	NA	0.5	80 - 120	99
	Cadmium, Cd	mg/L	0.001	NA	0.5	80 - 120	96
	Chromium, Cr	mg/L	0.005	NA	0.5	80 - 120	95
	Copper, Cu	mg/L	0.005	NA	0.5	80 - 120	99
	Lead, Pb	mg/L	0.02	NA	0.5	80 - 120	94
	Nickel, Ni	mg/L	0.005	NA	0.5	80 - 120	96
	Zinc, Zn	mg/L	0.01	NA	0.5	80 - 120	100

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB196777.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	109
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	107
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	106
		Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	109
		Endrin	mg/kg	0.2	0.2	0.2	60 - 140	107
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	99
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.15	40 - 130	109

OP Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB196777.002		Dichlorvos	mg/kg	0.5	1.7	2	60 - 140	87
		Diazinon (Dimpylate)	mg/kg	0.5	2.0	2	60 - 140	102
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.1	2	60 - 140	103
		Ethion	mg/kg	0.2	2.0	2	60 - 140	102
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	87
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	82

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB196777.002		Naphthalene	mg/kg	0.1	4.0	4	60 - 140	99
		Acenaphthylene	mg/kg	0.1	4.3	4	60 - 140	107
		Acenaphthene	mg/kg	0.1	4.2	4	60 - 140	105
		Phenanthrene	mg/kg	0.1	4.4	4	60 - 140	110
		Anthracene	mg/kg	0.1	4.3	4	60 - 140	107
		Fluoranthene	mg/kg	0.1	4.1	4	60 - 140	102
		Pyrene	mg/kg	0.1	4.5	4	60 - 140	112
		Benzo(a)pyrene	mg/kg	0.1	4.1	4	60 - 140	102
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	83
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	87
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	82

PAH (Polynuclear Aromatic Hydrocarbons) in TCLP Extract

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB196823.002		Naphthalene	µg/L	0.1	29	40	60 - 140	73
		Acenaphthylene	µg/L	0.1	34	40	60 - 140	85
		Acenaphthene	µg/L	0.1	36	40	60 - 140	90
		Phenanthrene	µg/L	0.1	37	40	60 - 140	93
		Anthracene	µg/L	0.1	35	40	60 - 140	87
		Fluoranthene	µg/L	0.1	37	40	60 - 140	92
		Pyrene	µg/L	0.1	38	40	60 - 140	94
		Benzo(a)pyrene	µg/L	0.1	38	40	60 - 140	94
	Surrogates	d5-nitrobenzene (Surrogate)	µg/L	-	0.3	0.5	40 - 130	68
		2-fluorobiphenyl (Surrogate)	µg/L	-	0.4	0.5	40 - 130	72
		d14-p-terphenyl (Surrogate)	µg/L	-	0.5	0.5	40 - 130	92

PCBs in Soil

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

Sample Number	Parameter	Units	LOR

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.

PCBs in Soil (continued)

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB196777.002	Arochlor 1260	mg/kg	0.2	0.5	0.4	60 - 140	120

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 %
LB196784.002	Arsenic, As	mg/kg	1	330	318.22	80 - 120	105
	Cadmium, Cd	mg/kg	0.3	5.5	5.41	80 - 120	101
	Chromium, Cr	mg/kg	0.5	33	38.31	80 - 120	86
	Copper, Cu	mg/kg	0.5	300	290	80 - 120	104
	Nickel, Ni	mg/kg	0.5	180	187	80 - 120	96
	Lead, Pb	mg/kg	1	92	89.9	80 - 120	102
	Zinc, Zn	mg/kg	2	270	273	80 - 120	101

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB196777.002		TRH C10-C14	mg/kg	20	38	40	60 - 140	95
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	105
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	100
	TRH F Bands	TRH >C10-C16	mg/kg	25	41	40	60 - 140	103
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	113
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	90

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB196776.002	Monocyclic	Benzene	mg/kg	0.1	4.2	5	60 - 140	84
	Aromatic	Toluene	mg/kg	0.1	4.3	5	60 - 140	86
		Ethylbenzene	mg/kg	0.1	4.2	5	60 - 140	84
		m/p-xylene	mg/kg	0.2	8.4	10	60 - 140	84
		o-xylene	mg/kg	0.1	4.2	5	60 - 140	84
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.3	10	70 - 130	93
		d8-toluene (Surrogate)	mg/kg	-	10.0	10	70 - 130	100
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.0	10	70 - 130	90

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB196776.002		TRH C6-C10	mg/kg	25	63	92.5	60 - 140	68
		TRH C6-C9	mg/kg	20	55	80	60 - 140	69
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.3	10	70 - 130	93
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.0	10	70 - 130	90
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	38	62.5	60 - 140	60

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 identifer 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%
SE204692.001	LB196785.004	Mercury	mg/kg	0.05	0.21	<0.05	0.2	95

OC Pesticides in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE204692.002	LB196777.023		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	116
			Aldrin	mg/kg	0.1	<0.1	0.2	116
			Beta BHC	mg/kg	0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	<0.1	0.2	112
			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	116
			Endrin	mg/kg	0.2	<0.2	0.2	115
			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	100
			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	-	0.17	-	113

OP Pesticides in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE204692.002	LB196777.023		Dichlorvos	mg/kg	0.5	<0.5	2	71
			Dimethoate	mg/kg	0.5	<0.5	-	-
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	2	106
			Fenitrothion	mg/kg	0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	2	100
			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	97
			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	-	74
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	-	72

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE204692.002	LB196777.023	Naphthalene	mg/kg	0.1	<0.1	4	107
		2-methylnaphthalene	mg/kg	0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	<0.1	4	108
		Acenaphthene	mg/kg	0.1	<0.1	4	111
		Fluorene	mg/kg	0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	<0.1	4	111

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 identifer 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%
SE204692.002	LB196777.023		Anthracene	mg/kg	0.1	<0.1	4	108
			Fluoranthene	mg/kg	0.1	<0.1	4	110
			Pyrene	mg/kg	0.1	<0.1	4	111
			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	103
			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	-	0.4	-	73
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	-	74
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	-	72

PCBs in Soil — Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE204692.002	LB196777.023		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	129
			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	-	123

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%
SE204692.001	LB196784.004	Arsenic, As	mg/kg	1	53	12	50	83
		Cadmium, Cd	mg/kg	0.3	45	<0.3	50	90
		Chromium, Cr	mg/kg	0.5	56	15	50	82
		Copper, Cu	mg/kg	0.5	70	22	50	95
		Nickel, Ni	mg/kg	0.5	47	2.6	50	88
		Lead, Pb	mg/kg	1	68	34	50	67 ④
		Zinc, Zn	mg/kg	2	85	41	50	89

TRH (Total Recoverable Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE204692.002	LB196777.023		TRH C10-C14	mg/kg	20	<20	40	85
			TRH C15-C28	mg/kg	45	<45	40	98
			TRH C29-C36	mg/kg	45	<45	40	100
			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	90
			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%
SE204666A.01	LB196776.032	Monocyclic	Benzene	mg/kg	0.1	<0.1	5	69
2		Aromatic	Toluene	mg/kg	0.1	<0.1	5	73
			Ethylbenzene	mg/kg	0.1	<0.1	5	75
			m/p-xylene	mg/kg	0.2	<0.2	10	74
			o-xylene	mg/kg	0.1	<0.1	5	73

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 identifer 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%
SE204666A.01	LB196776.032	Polycyclic	Naphthalene	mg/kg	0.1	<0.1	-	-
2		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	10	85
			d8-toluene (Surrogate)	mg/kg	-	9.5	10	91
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	10	84
		Totals	Total Xylenes	mg/kg	0.3	<0.3	-	-
			Total BTEX	mg/kg	0.6	<0.6	-	-

Volatile Petroleum Hydrocarbons in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE204666A.01	LB196776.032		TRH C6-C10	mg/kg	25	<25	92.5	84
2			TRH C6-C9	mg/kg	20	<20	80	86
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	10	85
			d8-toluene (Surrogate)	mg/kg	-	9.5	10	91
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	-	84
		VPH F	Benzene (F0)	mg/kg	0.1	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	62.5	88

MATRIX SPIKE DUPLICATES

SE204666A R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / 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 x SDL / Mean + 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 identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

QC Sample	Sample Number	Parameter	Units	LOR

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 relevant report comments for further information.

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Company Name: WSP Australia P/L NSW
Address: Level 27, Ernst & Young Centre
Sydney
NSW 2001

Project Name: PS119057 - WENTWORTHVILLE PS BLOCK H

Order No.:
Report #: 711613
Phone: 02 9272 5586
Fax: 02 9272 5101

Received: Apr 2, 2020 1:32 PM
Due: Apr 3, 2020
Priority: 1 Day
Contact Name: Hamish Donovan

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Moisture Set	Eurofins | mgt Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	QA01A	Not Provided		Soil	S20-Ap03196	X	X
Test Counts						1	1

WSP Australia P/L NSW
Level 27, Ernst & Young Centre
Sydney
NSW 2001

Attention: **Hamish Donovan**

Report **711613-S**
Project name PS119057 - WENTWORTHVILLE PS BLOCK H
Received Date Apr 02, 2020

Client Sample ID			**QA01A**
Sample Matrix			**Soil**
Eurofins Sample No.			**S20-Ap03196**
Date Sampled			**Not Provided**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	61
TRH C29-C36	50	mg/kg	64
TRH C10-C36 (Total)	50	mg/kg	125
BTEX			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	107
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	100
Polycyclic Aromatic Hydrocarbons			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5

Client Sample ID			QA01A
Sample Matrix			**Soil**
Eurofins Sample No.			**S20-Ap03196**
Date Sampled			**Not Provided**
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	81
p-Terphenyl-d14 (surr.)	1	%	82
Heavy Metals			
Arsenic	2	mg/kg	7.0
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	12
Copper	5	mg/kg	24
Lead	5	mg/kg	110
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	6.5
Zinc	5	mg/kg	150
% Moisture	1	%	17

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.

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
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Apr 02, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Apr 02, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Apr 02, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Apr 02, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Apr 02, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Apr 02, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Apr 02, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

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Company Name:	WSP Australia P/L NSW	**Order No.:**	
Address:	Level 27, Ernst & Young Centre Sydney NSW 2001	**Report #:**	711613
		Phone:	02 9272 5586
		Fax:	02 9272 5101
Project Name:	PS119057 - WENTWORTHVILLE PS BLOCK H		

Received:	Apr 2, 2020 1:32 PM
Due:	Apr 3, 2020
Priority:	1 Day
Contact Name:	Hamish Donovan

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Moisture Set	Eurofins | mgt Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	QA01A	Not Provided		Soil	S20-Ap03196	X	X
Test Counts						1	1

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 1999, as amended May 2013 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. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. 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 5.3
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 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 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							
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	%	84			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C10-C14	%	70			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	76			70-130	Pass	
Toluene	%	86			70-130	Pass	
Ethylbenzene	%	96			70-130	Pass	
m&p-Xylenes	%	97			70-130	Pass	
o-Xylene	%	100			70-130	Pass	
Xylenes - Total*	%	98			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	97			70-130	Pass	
TRH C6-C10	%	86			70-130	Pass	
TRH >C10-C16	%	70			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	111			70-130	Pass	
Acenaphthylene	%	110			70-130	Pass	
Anthracene	%	111			70-130	Pass	
Benz(a)anthracene	%	114			70-130	Pass	
Benzo(a)pyrene	%	105			70-130	Pass	
Benzo(b&j)fluoranthene	%	103			70-130	Pass	
Benzo(g.h.i)perylene	%	102			70-130	Pass	
Benzo(k)fluoranthene	%	112			70-130	Pass	
Chrysene	%	113			70-130	Pass	
Dibenz(a.h)anthracene	%	97			70-130	Pass	
Fluoranthene	%	110			70-130	Pass	
Fluorene	%	112			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	101			70-130	Pass	
Naphthalene	%	127			70-130	Pass	
Phenanthrene	%	110			70-130	Pass	
Pyrene	%	112			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	87			70-130	Pass	
Cadmium	%	81			70-130	Pass	
Chromium	%	82			70-130	Pass	
Copper	%	81			70-130	Pass	
Lead	%	85			70-130	Pass	
Mercury	%	86			70-130	Pass	
Nickel	%	83			70-130	Pass	
Zinc	%	93			70-130	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	S20-Ap03134	NCP	%	95			70-130	Pass	
TRH C10-C14	S20-Ap02564	NCP	%	85			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-Ap03134	NCP	%	86			70-130	Pass	
Toluene	S20-Ap03134	NCP	%	81			70-130	Pass	
Ethylbenzene	S20-Ap03134	NCP	%	82			70-130	Pass	
m&p-Xylenes	S20-Ap03134	NCP	%	82			70-130	Pass	
o-Xylene	S20-Ap03134	NCP	%	81			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Xylenes - Total*	S20-Ap03134	NCP	%	81			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-Ap03134	NCP	%	90			70-130	Pass	
TRH C6-C10	S20-Ap03134	NCP	%	97			70-130	Pass	
TRH >C10-C16	S20-Ap02564	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S20-Ap03189	NCP	%	82			70-130	Pass	
Acenaphthylene	S20-Ap03189	NCP	%	85			70-130	Pass	
Anthracene	S20-Ap03189	NCP	%	107			70-130	Pass	
Benz(a)anthracene	S20-Ap03189	NCP	%	88			70-130	Pass	
Benzo(a)pyrene	S20-Ap03189	NCP	%	80			70-130	Pass	
Benzo(b&j)fluoranthene	S20-Ap03189	NCP	%	77			70-130	Pass	
Benzo(g.h.i)perylene	S20-Ap03189	NCP	%	81			70-130	Pass	
Benzo(k)fluoranthene	S20-Ap03189	NCP	%	85			70-130	Pass	
Chrysene	S20-Ap03189	NCP	%	86			70-130	Pass	
Dibenz(a.h)anthracene	S20-Ap03189	NCP	%	78			70-130	Pass	
Fluoranthene	S20-Ap03189	NCP	%	84			70-130	Pass	
Fluorene	S20-Ap03189	NCP	%	85			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S20-Ap03189	NCP	%	79			70-130	Pass	
Naphthalene	S20-Ap03189	NCP	%	89			70-130	Pass	
Phenanthrene	S20-Ap03189	NCP	%	109			70-130	Pass	
Pyrene	S20-Ap03189	NCP	%	85			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-Ap03189	NCP	%	88			70-130	Pass	
Cadmium	S20-Ap03189	NCP	%	82			70-130	Pass	
Chromium	S20-Ap03189	NCP	%	82			70-130	Pass	
Copper	S20-Ap03189	NCP	%	82			70-130	Pass	
Lead	S20-Ap03189	NCP	%	89			70-130	Pass	
Mercury	S20-Ap03189	NCP	%	84			70-130	Pass	
Nickel	S20-Ap03189	NCP	%	84			70-130	Pass	
Zinc	S20-Ap03189	NCP	%	82			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	S20-Ap03842	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S20-Ap03188	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S20-Ap03188	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S20-Ap03188	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-Ap03842	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-Ap03842	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-Ap03842	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-Ap03842	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-Ap03842	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S20-Ap03842	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-Ap03842	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-Ap03842	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S20-Ap03188	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S20-Ap03188	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S20-Ap03188	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S20-Ap03188	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-Ma48964	NCP	mg/kg	5.7	7.0	21	30%	Pass	
Cadmium	S20-Ma48964	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-Ma48964	NCP	mg/kg	11	11	1.0	30%	Pass	
Copper	S20-Ma48964	NCP	mg/kg	31	25	21	30%	Pass	
Lead	S20-Ma48964	NCP	mg/kg	10	13	22	30%	Pass	
Mercury	S20-Ma48964	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-Ma48964	NCP	mg/kg	9.1	9.1	<1	30%	Pass	
Zinc	S20-Ma48964	NCP	mg/kg	52	44	16	30%	Pass	

Comments

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
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

Authorised By

Alena Bounkeua	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (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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Sample Receipt Advice

Company name:	**WSP Australia P/L NSW**
Contact name:	Hamish Donovan
Project name:	PS119057 - WENTWORTHVILLE PS BLOCK H
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Apr 2, 2020 1:32 PM
Eurofins reference:	**711613**

Sample information

- ☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☑ Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 6.3 degrees Celsius.
- ☑ 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).

Contact notes

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

Alena Bounkeua on Phone : or by e.mail: AlenaBounkeua@eurofins.com

Results will be delivered electronically via e.mail to Hamish Donovan - hamish.donovan@wsp.com.

CHAIN OF CUSTODY & ANALYSIS REQUEST

SGS Environmental Services Sydney
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Lab ID Number: *(please quote on correspondence)*

Company Name:	WSP	Project Name/No:	PS119057 – Wentworthville PS Block H	
Address:	Level 27, Ernst & Young Centre	Purchase Order No:		
	680 George Street	Results Required Date:	**24 Hour TAT (early on Friday if possible?)**	
	Sydney NSW 2000	Telephone:	D: 0400 359 547	
Contact Name:	Hamish Donovan / Ben Shelton	Email Results to:	Hamish.Donovan@wsp.com, Benjamin.Shelton@wsp.com	
Quotation No:	SY141023-1-IS			

SGS ID	Client Sample ID	Sampling Date/ Time	Matrix (Tick as appropriate) Soil Sample	Water Sample	___FRAGMENT__	NO. OF CONTAINERS	ANALYSIS REQUESTED CL10	Hold	CL5	Additional Report Formats / Notes/Guidelines/LOR/ Special instructions
	TP1_0.1						X			
	TP1_0.3							X		
	TP2_0.2						X			
	TP2_0.3							X		
	TP3_0.2							X		
	TP3_0.25							X		
	TP4_0.2						X			
	TP4_0.4							X		
	TP5_0.1							X		
	TP5_0.4							X		
	TP6_0.1							X		
	TP6_0.2							X		
	TP7_0.1						X			
	TP7_0.2							X		
	TP8_0.1							X		
	TP8_0.25							X		
	TP9_0.1						X			
	TP9_0.2							X		

711613

	TP10_0.1							X											
	TP10_0.2							X											
	TP11_0.1						X												
	TP11_0.2							X											
	TP12_0.1						X												
	TP12_0.25							X											
	QA01						X												
	QA01A						X		Please send to Eurofins – TRH, BTEXN, PAHs, 8 metals										
	TB010420								X										
	TS010420								X										
	RN010420						X												

Relinquished By: / WSP	Date/Time:	Received By: Priyam	Date/Time: 02/04/20 1:32 PM
Relinquished By:	Date/Time:	Received By:	Date/Time:
Samples Intact: *Yes / No*	Temperature: °C	Sample Security Sealed: *Yes / No*	Hazards: *e.g. may contain Asbestos*

Comments / Subcontracting details:

WSP Australia Pty Limited

Level 27, 680 George Street Sydney
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Telephone +61 2 9272 1407
Facsimile +61 2 9272 5101
Email ANZLab@wsp.com

ABN 80 078 004 798

NCSI Certified Quality System ISO 9001

Certificate of Analysis

LOCATION:	**Wentworthville Public School**	**CERTIFICATE NO:**	**SYD-PS119057-127544**
CLIENT:	Grindley Construction	DATE\S SAMPLED:	2/04/2020
CLIENT ADDRESS:	55 Grandview Street, Pymble NSW 2073	DATE RECEIVED:	3/04/2020
TELEPHONE:	0448936127	DATE ANALYSED:	3/04/2020
EMAIL:	dmcgrath@grindley.com.au	ORDER NUMBER:	N/A
CONTACT:	Andrew Beard	SAMPLED BY:	Benjamin Shelton

TEST METHOD: Filters examined at WSP Corporate Laboratories in accordance with N.O.H.S.C (2005) Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres and WSP's Laboratory Procedure (LP4 - Counting of Asbestos and Synthetic Mineral Fibres). Accredited for compliance with ISO/IEC: 17025 – Testing (No. 17199).

Lab No	Sample ID	Location	Results (Fibres/Field)
WIP:			
001	6995	Block G work area - West elevation	0.0 / 100
002	7240	Block G work area - North elevation	0.0 / 100
003	7270	Block G work area - East elevation	0.0 / 100
004	6670	Block G work area - South elevation	1.0 / 100

NB: If the fibre count is less than 10 fibres per 100 fields then the count is not significantly above that of background. Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust. [N.O.H.S.C.:3003 (2005)]

Volume measurement not performed by a WSP approved sampler, therefore not covered by scope of accreditation.

NATA
ACCREDITED FOR TECHNICAL COMPETENCE

Approved Counter

Name: Vanessa Riley

Approved Signatory

Name: Sneha Shakya

AUTHORISATION DATE

Friday, 3 April 2020

WSP

GRAVIMETRIC DETERMINATION AND QUANTIFICATION OF ASBESTOS IN SOIL

WENTWORTHVILLE PUBLIC SCHOOL BLOCK H

APRIL 2020

GRAVIMETRIC DETERMINATION AND QUANTIFICATION OF ASBESTOS IN SOIL

WENTWORTHVILLE PUBLIC SCHOOL BLOCK H

WSP

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SYDNEY NSW 2001

TEL: +61 2 9272 5100
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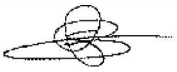
WSP.COM

REV	DATE	DETAILS
A	03/04/2020	Wentworthville Public School Block H_SYD-PS119057-127509.pdf

	NAME	DATE	SIGNATURE
Prepared by:	Melanie Reed	03/04/2020	
Reviewed by:	Shannon Bradford	03/04/2020	

ABBREVIATIONS

A	Amosite Asbestos Detected
ACM	Asbestos Containing Material
AF	Asbestos Fines
C	Crocidolite Asbestos Detected
CH	Chrysotile Asbestos Detected
FA	Fibrous Asbestos
NAD	No Asbestos Detected
NEPM	National Environment Protection Measures
OF	Organic Fibres Detected
PLM	Polarised Light Microscopy
SMF	Synthetic Mineral Fibres Detected
UMF	Unknown Mineral Fibres Detected

ANALYSIS METHODOLOGY

AS 4964-2004 - Soils: Samples received by the laboratory are analysed in accordance with section 8.2.3 *Soil Samples* of Australian Standard (AS 4964-2004). Trace analysis is conducted in accordance with section 8.4 *Trace analysis criteria* of the standard. Asbestos analysis is conducted in accordance with the standard section 8.3.3 *Analytical criteria*, and follows methodology outlined in Appendix D *Simplified flowchart for bulk asbestos identification.*

Quantification of Asbestos in Soils: There is no accepted valid analytical method in Australia for estimating the concentration of asbestos in soils. NATA does not accredit facilities for the estimation of the concentration of ACM or free asbestos fibres in soils. This report is consistent with the analytical procedures and reporting recommendations in the Western Australia *Guidelines for the Assessment, Remediation, and Management of Asbestos-Contaminated Sites in Western Australia – May 2009* and Schedule B1 – Guideline on Investigation Levels for Soil and Groundwater [National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013)].

Percentages for asbestos content in materials and reporting limits of percentage weight for weight asbestos in soil are based on values outlined in Schedule B1 – Guideline on Investigation Levels for Soil and Groundwater [National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013)]. Non-Friable (ACM) weight is calculated based on the assumption of 15% asbestos by weight in non-friable ACM products used in Australia. Friable asbestos weight, including Fibrous Asbestos (AF) and Asbestos Fines (AF), is calculated based on the assumption of 100% asbestos by weight.

The reporting limit of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This reporting limit is not applicable to free fibres (Respirable Fibres). Loose respirable fibres are detected under criteria set by Australian Standard (AS 4964-2004), section 8.4 *Trace analysis criteria*, with an implied detection and reporting limit of 0.1g/kg.

METHOD SPECIFIC DEFINITION

- Asbestos Containing Materials (ACM) - comprises asbestos-containing-material which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin (e.g. asbestos fencing and vinyl tiles). This term is restricted to material that cannot pass a 7 mm x 7 mm sieve.
- Fibrous Asbestos (FA) - comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This type of asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded (friable) or was previously bonded and is now significantly degraded (crumbling).
- Asbestos Fines (AF) - AF includes free fibres, small fibre bundles and also small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve.

All calculations of percentage asbestos under this method are approximate and should be used as a guide only. Such results cannot be used in place of field evaluations.

These quantitative results are not covered by the scope of NATA accreditation.

ANALYSIS RESULTS

	UNIT	LIMIT OF REPORTING	SAMPLE: TP1_0.1	SAMPLE: TP1_0.2	SAMPLE: TP1_0.3	SAMPLE: TP2_0.2	SAMPLE: TP3_0.2	SAMPLE: TP3_0.25	SAMPLE: TP4_0.1	SAMPLE: TP4_0.2	SAMPLE: TP5_0.1	SAMPLE: TP5_0.3	SAMPLE: TP5_0.4
Total Soil Weight	g	1	549	590	536	625	608	610	574	581	569	618	565
Asbestos Type Detected	N/A	-	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Free Fibres (Respirable Fibres) in <2mm Sample	g/kg	0.1	No	No	No	No	No	No	No	No	No	No	No
ACM in >7mm Sample	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
FA & AF	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
ACM in >7mm Sample (as 15% Asbestos)	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
FA & AF (as 100% asbestos)	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

These quantitative results are not covered by the scope of NATA accreditation.

LEGEND:

NAD	No Asbestos Detected
CH	Chrysotile Asbestos Detected
A	Amosite Asbestos Detected
C	Crocidolite Asbestos Detected
UMF	Unknown Mineral Fibres Detected

ANALYSIS RESULTS

	UNIT	LIMIT OF REPORTING	SAMPLE: TP6_0.1	SAMPLE: TP7_0.1	SAMPLE: TP7_0.2	SAMPLE: TP8_0.1	SAMPLE: TP9_0.1	SAMPLE: TP9_0.2	SAMPLE: TP10_0.1	SAMPLE: TP11_0.1	SAMPLE: TP11_0.2	SAMPLE: TP12_0.1
Total Soil Weight	g	1	696	658	437	629	606	724	693	462	409	520
Asbestos Type Detected	N/A	-	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Free Fibres (Respirable Fibres) in <2mm Sample	g/kg	0.1	No	No	No	No	No	No	No	No	No	No
ACM in >7mm Sample	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
FA & AF	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
ACM in >7mm Sample (as 15% Asbestos)	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
FA & AF (as 100% asbestos)	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

These quantitative results are not covered by the scope of NATA accreditation.

LEGEND:

NAD	No Asbestos Detected
CH	Chrysotile Asbestos Detected
A	Amosite Asbestos Detected
C	Crocidolite Asbestos Detected
UMF	Unknown Mineral Fibres Detected

APPENDIX A

AS 4964 LABORATORY CERTIFICATES

WSP Australia Pty Limited

Level 27, 680 George Street Sydney
PO Box 20967, World Square
Telephone +61 2 9272 1407
Facsimile +61 2 9272 5101
Email ANZLab@wsp.com

ABN 80 078 004 798
NCSI Certified Quality System ISO 9001

Certificate of Analysis

LOCATION:	**Wentworthville Public School Block H**	**CERTIFICATE NO:**	**SYD-PS119057-127509**
CLIENT:	WSP - CLM Team NSW	DATE\S SAMPLED:	1/04/2020
CLIENT ADDRESS:	680 George Street, Sydney NSW 2000	DATE RECEIVED:	2/04/2020
TELEPHONE:	0400 359 547	DATE ANALYSED:	2/04/2020
EMAIL:	hamish.donovan@wsp.com	ORDER NUMBER:	N/A
CONTACT:	Hamish Donovan	SAMPLED BY:	Benjamin Shelton

TEST METHOD: Qualitative identification of asbestos fibres in bulk and soil samples at WSP Corporate Laboratories by polarised light microscopy, including dispersion staining, in accordance with AS4964 (2004) Method for the qualitative identification of asbestos in bulk samples and WSP's Laboratory Procedure (LP3 - Identification of Asbestos Fibres). Trace analysis carried out on all non-homogenous samples. Accredited for compliance with ISO/IEC: 17025 – Testing (No. 17199).

Lab No	Sample ID	Sample Description	Sample Dimensions	Identification Type
001	TP1_0.1	Soil	549 gm	OF, NAD*
002	TP1_0.2	Soil	590 gm	OF, NAD*
003	TP1_0.2_FR	Fibre Cement Sheet	2 gm	CH
004	TP1_0.3	Soil	536 gm	OF, NAD*
005	TP2_0.2	Soil	625 gm	OF, NAD*
006	TP3_0.2	Soil	608 gm	OF, NAD*
007	TP3_0.25	Soil	610 gm	OF, NAD*
008	TP3_0.2_FR	Fibre Cement Sheet	14 gm	CH
009	TP4_0.1	Soil	574 gm	OF, NAD*
010	TP4_0.2	Soil	581 gm	OF, NAD*
011	TP5_0.1	Soil	569 gm	OF, NAD*
012	TP5_0.1_FR	Fibre Cement Sheet	12 gm	CH
013	TP5_0.3	Soil	618 gm	OF, NAD*
014	TP5_0.4	Soil	565 gm	OF, NAD*
015	TP6_0.1	Soil	696 gm	OF, NAD*
016	TP7_0.1	Soil	658 gm	OF, NAD*
017	TP7_0.1_FR	Fibre Cement Sheet	20 gm	CH
018	TP7_0.2	Soil	437 gm	OF, NAD*
019	TP8_0.1	Soil	629 gm	OF, NAD*
020	TP9_0.1	Soil	606 gm	OF, NAD*
021	TP9_0.2	Soil	724 gm	OF, NAD*
022	TP10_0.1	Soil	693 gm	OF, NAD*
023	TP11_0.1	Soil	462 gm	OF, NAD*
024	TP11_0.2	Soil	409 gm	OF, NAD*
025	TP12_0.1	Soil	520 gm	OF, NAD*

WSP Australia Pty Limited

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Email ANZLab@wsp.com

ABN 80 078 004 798
NCSI Certified Quality System ISO 9001

Certificate of Analysis

LOCATION: **Wentworthville Public School Block H**

CERTIFICATE NO: **SYD-PS119057-127509**

LEGEND:

NAD	-	No Asbestos Detected
CH	-	Chrysotile Asbestos Detected
A	-	Amosite Asbestos Detected
C	-	Crocidolite Asbestos Detected
UMF	-	Unknown Mineral Fibres Detected
SMF	-	Synthetic Mineral Fibres Detected
OF	-	Organic Fibres Detected
Trace	-	Trace Asbestos Detected
*	-	No trace asbestos detected at the reporting limit of 0.1 g/kg

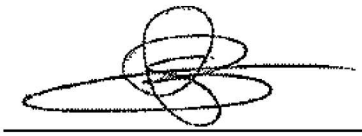
NATA
ACCREDITED FOR
TECHNICAL
COMPETENCE

Approved Identifier

Name: Sneha Shakya

Approved Signatory

Name: Shannon Bradford



AUTHORISATION DATE

Friday, 3 April 2020

Hand picked refers to small discrete amounts of asbestos distributed unevenly in a large body of non asbestos material.

Notes:
If no asbestos is detected in vinyl tiles, mastics, sealants, epoxy resins and ore samples then confirmation by another independent analytical technique is advised due to the nature of the samples.
The results contained within this report relate only to the sample(s) submitted for testing. The laboratory accepts no responsibility for location, sampling date, sample ID, sampler, and client details provided by the sampler. WSP accepts no responsibility for the initial collection, packaging or transportation of samples submitted by external persons. NATA does not accredit the sampling process, therefore sampling is not covered by the scope of accreditation. This document may not be reproduced except in full.

Our ref: PS119057-Wentworthville Public School_STP01 & STP02_CLM-LTR-001

Your ref: PS119057_Waste Classification_STP01 & STP02

29 April 2020

Confidential

Damian McGrath
Project Manager
55 Grandview Street,
Pymble NSW 2073

Dear Damian,

Re: Waste Classification – Stockpiles (STP01 and STP02), 70-100 Fullagar road, Wentworthville Public School, Wentworthville NSW 2145.

WASTE CLASSIFICATION REPORT	
Date sampled	20/04/2020 and 21/04/2020
Company	Grindley Construction Pty Ltd.
Project name	Remediation Action Plan - Wentworthville Public School
Site address	Block H, 70-100 Fullagar road, Wentworthville NSW 2145
Site history	Portions of Wentworthville Public School are currently undergoing refurbishment and redevelopment. As part of the refurbishments and redevelopment, a new underground on-site stormwater detention (OSD) tank will be installed in Block H. There are two stockpiles (STP01 & STP02) on site with the soil originating from underneath the former underground OSD tank including soil adjacent to southern face of the removed tank. Refer to Attachment A, Figure 2 for stockpile location.
Material identification and source	The stockpiles (STP01 & STP02) are located east of the OSD tank, within the Wentworthville Public School property. STP01 is approximately 20 m^3, while STP02 is slightly larger at approximately 30 m^3. Material encountered within STP01 comprised a homogenous, yellow, coarse grained sand mixed with reworked natural clay. Material from STP02 comprised a reworked natural orange/grey clay, mixed with yellow sand and shale.

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WASTE CLASSIFICATION REPORT	
Samples collected	A total of six soil samples were collected from STP01and STP02 and analysed at a NATA accredited laboratory. Sample identification of STP01: — STP01_0.3 — STP01A_0.3 — STP01B_0.3 Sample identification of STP02: — STP02_0.3 — STP02A_0.3 — STP02B_0.3 Analytical results summary tables and laboratory certificates are presented in Attachment C and Attachment D respectively. Three samples were collected from each stockpile to provide the minimum sampling requirement for stockpiles less than 75m^3 presented in the National Environment Protection (Assessment of Site Contamination) Measure 1999 amended 2013 (NEPM 2013). Given that the site has been used as a school for over 100 years, samples were analysed for a broad suite of analytes commonly associated with general urban land use.
Sampling method	The sampling methodology used during the works is as follows: — Samples were collected using a shovel to a minimum depth of 0.3m into the stockpile. — Soil samples were collected directly from the shovel using disposable nitrile gloves. All samples collected were placed in dedicated laboratory supplied containers. — Samples were stored in an insulated cooler box with ice immediately after sampling. Samples were kept chilled prior to and during delivery to the selected National Association of Testing Authorities (NATA) accredited laboratory via a courier under appropriate 'chain of custody' documentation.
Laboratory analytes	— Heavy metals — Total recoverable hydrocarbons (TRH) — Benzene, toluene, ethylbenzene, xylene and naphthalene (BTEXN) — Polycyclic aromatic hydrocarbons (PAHs) — Organochlorine pesticides (OCPs) — Organophosphorus Pesticides (OPPs) — Polychlorinated biphenyls (PCBs) — Asbestos (NEPM quantification)

WASTE CLASSIFICATION REPORT	
Assessment criteria	The field observations and analytical results are compared to the applicable criteria presented in the NSW Environment Protection Authority (2014) *Waste Classification Guidelines* as amended.
Visual/olfactory evidence of contamination	As soil was being excavated from the OSD tank, every load was visually monitored as it was placed into the stockpiles. No visual or olfactory evidence of contamination were noted during the collection of samples from STP01 and STP02. Furthermore, no asbestos containing material (ACM) was observed during excavation or sampling.
Analytical results and comparison	All analytical results were below general solid waste CT1 criteria. Analytical results are summarised in Table 1, Attachment D.
Waste classification	Based on the analytical results the material is classified as **"GENERAL SOLID WASTE – NON PUTRESCIBLE".**
Disposal Requirements: The material classified under this waste classification report is suitable to be disposed to a facility appropriately licensed to accept **General Solid Waste – Non-putrescible**.	

Note that this waste classification is considered correct as at the date of sampling. WSP is not responsible for changes to material composition and classification due to activities occurring after this date. This waste classification certificate only relates to the materials described in the 'Material identification and source' section and as delineated in Figure 2. Any other materials disposed off-site should be accompanied by their own discrete waste classification report.

The findings of this waste classification are subject to the limitations attached.

Yours sincerely

Poushali Talukder
Graduate Environmental Engineer

Julie Porter
Principal Environmental Engineer

LIMITATIONS

Scope of services

This environmental site assessment report (the report) has been prepared in accordance with the scope of services set out in the contract, or as otherwise agreed, between the client and WSP (scope of services). In some circumstances the scope of services may have been limited by a range of factors such as time, budget, access and/or site disturbance constraints.

Reliance on data

In preparing the report, WSP has relied upon data, surveys, analyses, designs, plans and other information provided by the client and other individuals and organisations, most of which are referred to in the report (the data). Except as otherwise stated in the report, WSP has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report (conclusions) are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. WSP will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to WSP

Environmental conclusions

In accordance with the scope of services, WSP has relied upon the data and has conducted environmental field monitoring and/or testing in the preparation of the report. The nature and extent of monitoring and/or testing conducted is described in the report.

On all sites, varying degrees of non-uniformity of the vertical and horizontal soil or groundwater conditions are encountered. Hence no monitoring, common testing or sampling technique can eliminate the possibility that monitoring or testing results/samples are not totally representative of soil and/or groundwater conditions encountered. The conclusions are based upon the data and the environmental field monitoring and/or testing and are therefore merely indicative of the environmental condition of the site at the time of preparing the report, including the presence or otherwise of contaminants or emissions.

Also, it should be recognised that site conditions, including the extent and concentration of contaminants, can change with time.

Within the limitations imposed by the scope of services, the monitoring, testing, sampling and preparation of this report have been undertaken and performed in a professional manner, in accordance with generally accepted practices and using a degree of skill and care ordinarily exercised by reputable environmental consultants under similar circumstances. No other warranty, expressed or implied, is made.

Report for benefit of client

The report has been prepared for the benefit of the client and no other party. WSP assumes no responsibility and will not be liable to any other person or organisation for or in relation to any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report (including without limitation matters arising from any negligent act or omission of WSP or for any loss or damage suffered by any other party relying upon the matters dealt with or conclusions expressed in the report). Other parties should not rely upon the report or the accuracy or completeness of any conclusions and should make their own enquiries and obtain independent advice in relation to such matters.

Other limitations

WSP will not be liable to update or revise the report to take into account any events or emergent circumstances or facts occurring or becoming apparent after the date of the report.

The scope of services did not include any assessment of the title to or ownership of the properties, buildings and structures referred to in the report nor the application or interpretation of laws in the jurisdiction in which those properties, buildings and structures are located.

ATTACHMENT A
FIGURES

Legend

- Block H Investigation location
- Site boundary

Client:	Grindley Constructions Pty Ltd
Project:	Stockpiles (STP01, STP02) waste class
Title	Investigation Location
Project no.:	PS119057

Figure 1

Legend

- Block H Clearance Certificate Extent
- Approximate stockpile locations (STP01, STP02)
- Approximate OSD tank location (General solid waste)

Client:	Grindley Constructions Pty Ltd
Project:	Stockpiles (STP01, STP02) waste class
Title	Site location plan
Project no.: PS119057	**Figure 2**

ATTACHMENT B
MATERIAL PHOTOGRAPHS

Photo 1. Example of stockpiled material (STP01 and STP02)

Photo 2. Example of sandy material observed in STP01

Photo 3. Sample of reworked natural CLAY with sand obtained from STP02

ATTACHMENT D
LABORATORY CERTIFICATES

	TPH		BTEX				PAH			Metals								OCP					OPP		PCB	
	C6 - C9	C10 - C36 (Sum)	Benzene	Toluene	Ethylbenzene	Xylene (Sum)	Benzo(a) pyrene	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum)	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	DDT	Endosulfan I	Endosulfan II	Endosulfan sulphate	Scheduled Chemicals	Chlorpyrifos	Moderately harmful pesticides	PCBs (Sum of total)	Asbestos
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		mg/kg	mg/kg	mg/kg	Y/N
EQL	20	110	0.1	0.1	0.1	0.3	0.1	0.2	0.8	1	0.3	0.5	0.5	1	0.05	0.5	2	0.1	0.2	0.2	0.1	0.05	0.2	2	1	2
NSW 2014 General Solid Waste CT1 (No Leaching)	650	10,000	10	288	600	1,000	0.8		200	100	20	100[#7]		100	4	40			60[#8]	60[#8]	60[#8]	<50	4	250	50	250
NSW 2014 General Solid Waste SCC1 (with leached)	650	10,000	18	518	1,080	1,800	10		200	500	100	1,900[#7]		1,500	50	1,050			108[#8]	108[#8]	108[#8]	<50	7.5		50	
NSW 2014 General Solid Waste TCLP1 (leached)																										
NSW 2014 Restricted Solid Waste CT2 (No Leaching)	2,600	40,000	40	1,152	2,400	4,000	3.2		800	400	80	400[#7]		400	16	160			240[#8]	240[#8]	240[#8]	<50	16	1000	50	1000
NSW 2014 Restricted Solid Waste SCC2 (with leached)	2,600	40,000	72	2,073	4,320	7,200	23		800	2,000	400	7,600[#7]		6,000	200	4,200			432[#8]	432[#8]	432[#9]	<50	30		< 50	
NSW 2014 Restricted Solid Waste TCLP2 (leached)																										
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion																										
Clay 0-1m			0.7	480	NL[#17]	110																				
Clay 1-2m			1	NL[#17]	NL[#17]	310																				
Clay 2-4m			2	NL[#17]	NL[#17]	NL[#17]																				
Clay >=4m			3	NL[#17]	NL[#17]	NL[#17]																				
Sand 0-1m			0.5	160	55	40																				
Sand 1-2m			0.5	220	NL[#17]	60																				
Sand 2-4m			0.5	310	NL[#17]	95																				
Sand >=4m			0.5	540	NL[#17]	170																				
Silt 0-1m			0.6	390	NL[#17]	95																				
Silt 1-2m			0.7	NL[#17]	NL[#17]	210																				
Silt 2-4m			1	NL[#17]	NL[#17]	NL[#17]																				
Silt >=4m			2	NL[#17]	NL[#17]	NL[#17]																				
NEPM 2013 Table 1A(1) HILs Res B Soil								4[#10]	400[#11]	500[#12]	150	500[#7]	30,000	1,200[#13]	120[#14]	1,200	60,000						340		1#15	
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space										100[#1]		190[#2]	60[#3]	1,100[#4]		30[#5]	70[#6]	180								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil			65	105	125	45	0.7																			
Field ID	**Date**																									
STP01_0.3	**20-04-20**	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.2	<0.8	2	<0.3	3.4	4.1	10	<0.05	1.2	19	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.2	<0.2	<0.1	<0.05	<0.2	<2	<1	NAD
STP01A_0.3	**20-04-20**	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.2	<0.8	<1	<0.3	2.6	2.3	6	<0.05	0.6	8.5	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.2	<0.2	<0.1	<0.05	<0.2	<2	<1	NAD
STP01B_0.3	**20-04-20**	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.2	<0.8	3	<0.3	26	4.7	13	<0.05	2.1	59	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.2	<0.2	<0.1	<0.05	<0.2	<2	<1	NAD
STP02_0.3	**21-04-20**	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.2	<0.8	8	<0.3	5.7	14	20	<0.05	1.8	24	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.2	<0.2	<0.1	<0.05	<0.2	<2	<1	NAD
STP02A_0.3	**21-04-20**	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.2	<0.8	4	<0.3	4.4	12	17	<0.05	1.2	24	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.2	<0.2	<0.1	<0.05	<0.2	<2	<1	NAD
STP02B_0.3	**21-04-20**	<20	<110	<0.1	<0.1	<0.1	<0.3	<0.1	<0.2	<0.8	5	<0.3	4.4	15	19	<0.05	1.8	25	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.2	<0.2	<0.1	<0.05	<0.2	<2	<1	NAD

ATTACHMENT C
SUMMARY RESULTS

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Hamish Donovan
Client	WSP AUSTRALIA PTY LIMITED
Address	Level 27, Ernst & Young Centre 680 George St NSW 2000
Telephone	02 9272 1453
Facsimile	02 9272 5101
Email	Hamish.Donovan@wsp.com
Project	**PS119057 - Wentworhville PS Block H**
Order Number	**PS119057**
Samples	3

LABORATORY DETAILS

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Laboratory	SGS Alexandria Environmental
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Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE205282 R0**
Date Received	20/4/2020
Date Reported	22/4/2020

COMMENTS

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

SIGNATORIES

Bennet LO
Senior Organic Chemist/Metals Chemist

Dong LIANG
Metals/Inorganics Team Leader

Ly Kim HA
Organic Section Head

VOC's in Soil [AN433] Tested: 21/4/2020

PARAMETER	UOM	LOR	STP01_0.3 SOIL - 20/4/2020 SE205282.001	STP01A_0.3 SOIL - 20/4/2020 SE205282.002	STP01B_0.3 SOIL - 20/4/2020 SE205282.003
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 21/4/2020

PARAMETER	UOM	LOR	STP01_0.3 SOIL - 20/4/2020 SE205282.001	STP01A_0.3 SOIL - 20/4/2020 SE205282.002	STP01B_0.3 SOIL - 20/4/2020 SE205282.003
TRH C6-C9	mg/kg	20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 21/4/2020

PARAMETER	UOM	LOR	STP01_0.3 SOIL - 20/4/2020 SE205282.001	STP01A_0.3 SOIL - 20/4/2020 SE205282.002	STP01B_0.3 SOIL - 20/4/2020 SE205282.003
TRH C10-C14	mg/kg	20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 21/4/2020

PARAMETER	UOM	LOR	STP01_0.3 SOIL - 20/4/2020 SE205282.001	STP01A_0.3 SOIL - 20/4/2020 SE205282.002	STP01B_0.3 SOIL - 20/4/2020 SE205282.003
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 21/4/2020

PARAMETER	UOM	LOR	STP01_0.3 SOIL - 20/4/2020 SE205282.001	STP01A_0.3 SOIL - 20/4/2020 SE205282.002	STP01B_0.3 SOIL - 20/4/2020 SE205282.003
Arsenic, As	mg/kg	1	2	<1	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	3.4	2.6	26
Copper, Cu	mg/kg	0.5	4.1	2.3	4.7
Lead, Pb	mg/kg	1	10	6	13
Nickel, Ni	mg/kg	0.5	1.2	0.6	2.1
Zinc, Zn	mg/kg	2	19	8.5	59

Mercury in Soil [AN312] Tested: 21/4/2020

PARAMETER	UOM	LOR	STP01_0.3 SOIL - 20/4/2020 SE205282.001	STP01A_0.3 SOIL - 20/4/2020 SE205282.002	STP01B_0.3 SOIL - 20/4/2020 SE205282.003
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 21/4/2020

PARAMETER	UOM	LOR	STP01_0.3 SOIL - 20/4/2020 SE205282.001	STP01A_0.3 SOIL - 20/4/2020 SE205282.002	STP01B_0.3 SOIL - 20/4/2020 SE205282.003
% Moisture	%w/w	1	**11.2**	**10.8**	**16.3**

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid , mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser . Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	Carcinogenic PAHs may be expressed as Benzo(a)pyrene equivalents by applying the BaP toxicity equivalence factor (NEPM 1999, June 2013, B7). These can be reported as the individual PAHs and as a sum of carcinogenic PAHs. The sum is reported three ways, the first assuming all <LOR results are zero, the second assuming all < LOR results are half the LOR and the third assuming all <LOR results are the LOR.
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

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Project	**PS119057 - Wentworthville PS Block H**
Order Number	**PS119057**
Samples	3

LABORATORY DETAILS

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SGS Reference	**SE205382 R0**
Date Received	22/4/2020
Date Reported	23/4/2020

COMMENTS

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

SIGNATORIES

Dong LIANG
Metals/Inorganics Team Leader

Kamrul AHSAN
Senior Chemist

Ly Kim HA
Organic Section Head

VOC's in Soil [AN433] Tested: 22/4/2020

PARAMETER	UOM	LOR	STP02_0.3 SOIL - 21/4/2020 SE205382.001	STP02A_0.3 SOIL - 21/4/2020 SE205382.002	STP02B_0.3 SOIL - 21/4/2020 SE205382.003
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 22/4/2020

PARAMETER	UOM	LOR	STP02_0.3 SOIL - 21/4/2020 SE205382.001	STP02A_0.3 SOIL - 21/4/2020 SE205382.002	STP02B_0.3 SOIL - 21/4/2020 SE205382.003
TRH C6-C9	mg/kg	20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 22/4/2020

PARAMETER	UOM	LOR	STP02_0.3 SOIL - 21/4/2020 SE205382.001	STP02A_0.3 SOIL - 21/4/2020 SE205382.002	STP02B_0.3 SOIL - 21/4/2020 SE205382.003
TRH C10-C14	mg/kg	20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 22/4/2020

PARAMETER	UOM	LOR	STP02_0.3 SOIL - 21/4/2020 SE205382.001	STP02A_0.3 SOIL - 21/4/2020 SE205382.002	STP02B_0.3 SOIL - 21/4/2020 SE205382.003
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 22/4/2020

PARAMETER	UOM	LOR	STP02_0.3 SOIL - 21/4/2020 SE205382.001	STP02A_0.3 SOIL - 21/4/2020 SE205382.002	STP02B_0.3 SOIL - 21/4/2020 SE205382.003
Arsenic, As	mg/kg	1	8	4	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	5.7	4.4	4.4
Copper, Cu	mg/kg	0.5	14	12	15
Lead, Pb	mg/kg	1	20	17	19
Nickel, Ni	mg/kg	0.5	1.8	1.2	1.8
Zinc, Zn	mg/kg	2	24	24	25

Mercury in Soil [AN312] Tested: 22/4/2020

PARAMETER	UOM	LOR	STP02_0.3 SOIL - 21/4/2020 SE205382.001	STP02A_0.3 SOIL - 21/4/2020 SE205382.002	STP02B_0.3 SOIL - 21/4/2020 SE205382.003
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 22/4/2020

PARAMETER	UOM	LOR	STP02_0.3 SOIL - 21/4/2020 SE205382.001	STP02A_0.3 SOIL - 21/4/2020 SE205382.002	STP02B_0.3 SOIL - 21/4/2020 SE205382.003
% Moisture	%w/w	1	**12.3**	**14.7**	**13.2**

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid , mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser . Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	Carcinogenic PAHs may be expressed as Benzo(a)pyrene equivalents by applying the BaP toxicity equivalence factor (NEPM 1999, June 2013, B7). These can be reported as the individual PAHs and as a sum of carcinogenic PAHs. The sum is reported three ways, the first assuming all <LOR results are zero, the second assuming all < LOR results are half the LOR and the third assuming all <LOR results are the LOR.
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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ANALYTICAL REPORT

Accreditation No. 2562

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Project	**PS119057 - Wentworhville PS Block H**
Order Number	**PS119057**
Samples	3

LABORATORY DETAILS

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SGS Reference	**SE205282A R0**
Date Received	27/4/2020
Date Reported	28/4/2020

COMMENTS

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

SIGNATORIES

Ly Kim HA
Organic Section Head

OC Pesticides in Soil [AN420] Tested: 27/4/2020

PARAMETER	UOM	LOR	STP01_0.3 SOIL - 20/4/2020 SE205282A.001	STP01A_0.3 SOIL - 20/4/2020 SE205282A.002	STP01B_0.3 SOIL - 20/4/2020 SE205282A.003
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1

OP Pesticides in Soil [AN420] Tested: 27/4/2020

PARAMETER	UOM	LOR	STP01_0.3 SOIL - 20/4/2020 SE205282A.001	STP01A_0.3 SOIL - 20/4/2020 SE205282A.002	STP01B_0.3 SOIL - 20/4/2020 SE205282A.003
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7

PCBs in Soil [AN420] Tested: 27/4/2020

PARAMETER	UOM	LOR	STP01_0.3 SOIL - 20/4/2020 SE205282A.001	STP01A_0.3 SOIL - 20/4/2020 SE205282A.002	STP01B_0.3 SOIL - 20/4/2020 SE205282A.003
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1

METHOD	METHODOLOGY SUMMARY
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Hamish Donovan
Client	WSP AUSTRALIA PTY LIMITED
Address	Level 27, Ernst & Young Centre 680 George St NSW 2000
Telephone	02 9272 1453
Facsimile	02 9272 5101
Email	Hamish.Donovan@wsp.com
Project	**PS119057 - Wentworthville PS Block H**
Order Number	**PS119057**
Samples	3

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	**SE205382A R0**
Date Received	27/4/2020
Date Reported	28/4/2020

COMMENTS

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

SIGNATORIES

Ly Kim HA
Organic Section Head

OC Pesticides in Soil [AN420] Tested: 27/4/2020

PARAMETER	UOM	LOR	STP02_0.3 SOIL - 21/4/2020 SE205382A.001	STP02A_0.3 SOIL - 21/4/2020 SE205382A.002	STP02B_0.3 SOIL - 21/4/2020 SE205382A.003
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1
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Endrin	mg/kg	0.2	<0.2	<0.2	<0.2
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Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1
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Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1

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Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2
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Ethion	mg/kg	0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7

PCBs in Soil [AN420] Tested: 27/4/2020

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Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2
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Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1

METHOD	METHODOLOGY SUMMARY
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).

FOOTNOTES

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If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

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Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

WSP

GRAVIMETRIC DETERMINATION AND QUANTIFICATION OF ASBESTOS IN SOIL

WENTWORTHVILLE PUBLIC SCHOOL BLOCK H

APRIL 2020

GRAVIMETRIC DETERMINATION AND QUANTIFICATION OF ASBESTOS IN SOIL

WENTWORTHVILLE PUBLIC SCHOOL BLOCK H

WSP

WSP
LEVEL 27, 680 GEORGE STREET
SYDNEY NSW 2000
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SYDNEY NSW 2001

TEL: +61 2 9272 5100
FAX: +61 2 9272 5101
WSP.COM

REV	DATE	DETAILS
A	22/04/2020	Wentworthville Public School Block H_SYD-PS119057-128447.pdf

	NAME	DATE	SIGNATURE
Prepared by:	Sneha Shakya	22/04/2020	
Reviewed by:	Sneha Shakya	22/04/2020	

ABBREVIATIONS

A	Amosite Asbestos Detected
ACM	Asbestos Containing Material
AF	Asbestos Fines
C	Crocidolite Asbestos Detected
CH	Chrysotile Asbestos Detected
FA	Fibrous Asbestos
NAD	No Asbestos Detected
NEPM	National Environment Protection Measures
OF	Organic Fibres Detected
PLM	Polarised Light Microscopy
SMF	Synthetic Mineral Fibres Detected
UMF	Unknown Mineral Fibres Detected

ANALYSIS METHODOLOGY

AS 4964-2004 - Soils: Samples received by the laboratory are analysed in accordance with section 8.2.3 *Soil Samples* of Australian Standard (AS 4964-2004). Trace analysis is conducted in accordance with section 8.4 *Trace analysis criteria* of the standard. Asbestos analysis is conducted in accordance with the standard section 8.3.3 *Analytical criteria*, and follows methodology outlined in Appendix D *Simplified flowchart for bulk asbestos identification.*

Quantification of Asbestos in Soils: There is no accepted valid analytical method in Australia for estimating the concentration of asbestos in soils. NATA does not accredit facilities for the estimation of the concentration of ACM or free asbestos fibres in soils. This report is consistent with the analytical procedures and reporting recommendations in the Western Australia *Guidelines for the Assessment, Remediation, and Management of Asbestos-Contaminated Sites in Western Australia – May 2009* and Schedule B1 – Guideline on Investigation Levels for Soil and Groundwater [National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013)].

Percentages for asbestos content in materials and reporting limits of percentage weight for weight asbestos in soil are based on values outlined in Schedule B1 – Guideline on Investigation Levels for Soil and Groundwater [National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013)]. Non-Friable (ACM) weight is calculated based on the assumption of 15% asbestos by weight in non-friable ACM products used in Australia. Friable asbestos weight, including Fibrous Asbestos (AF) and Asbestos Fines (AF), is calculated based on the assumption of 100% asbestos by weight.

The reporting limit of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This reporting limit is not applicable to free fibres (Respirable Fibres). Loose respirable fibres are detected under criteria set by Australian Standard (AS 4964-2004), section 8.4 *Trace analysis criteria*, with an implied detection and reporting limit of 0.1g/kg.

METHOD SPECIFIC DEFINITION

- Asbestos Containing Materials (ACM) - comprises asbestos-containing-material which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin (e.g. asbestos fencing and vinyl tiles). This term is restricted to material that cannot pass a 7 mm x 7 mm sieve.
- Fibrous Asbestos (FA) - comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This type of asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded (friable) or was previously bonded and is now significantly degraded (crumbling).
- Asbestos Fines (AF) - AF includes free fibres, small fibre bundles and also small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve.

All calculations of percentage asbestos under this method are approximate and should be used as a guide only. Such results cannot be used in place of field evaluations.

These quantitative results are not covered by the scope of NATA accreditation.

ANALYSIS RESULTS

	UNIT	LIMIT OF REPORTING	SAMPLE: STP01_0.3	SAMPLE: STP01A_0.3	SAMPLE: STP01B_0.3
Total Soil Weight	g	1	738	854	732
Asbestos Type Detected	N/A	-	NAD	NAD	NAD
Free Fibres (Respirable Fibres) in <2mm Sample	g/kg	0.1	No	No	No
ACM in >7mm Sample	g	0.001	<0.001	<0.001	<0.001
FA & AF	g	0.001	<0.001	<0.001	<0.001
ACM in >7mm Sample (as 15% Asbestos)	%w/w	0.01	<0.01	<0.01	<0.01
FA & AF (as 100% asbestos)	%w/w	0.001	<0.001	<0.001	<0.001

These quantitative results are not covered by the scope of NATA accreditation.

LEGEND:

NAD	No Asbestos Detected
CH	Chrysotile Asbestos Detected
A	Amosite Asbestos Detected
C	Crocidolite Asbestos Detected
UMF	Unknown Mineral Fibres Detected

APPENDIX A

AS 4964 LABORATORY CERTIFICATES

WSP Australia Pty Limited

Level 27, 680 George Street Sydney
PO Box 20967, World Square
Telephone +61 2 9272 1407
Facsimile +61 2 9272 5101
Email ANZLab@wsp.com

ABN 80 078 004 798
NCSI Certified Quality System ISO 9001

Certificate of Analysis

LOCATION:	**Wentworthville Public School, Block H**	**CERTIFICATE NO:**	**SYD-PS119057-128447**
CLIENT:	WSP - CLM Team NSW	DATE\S SAMPLED:	20/04/2020
CLIENT ADDRESS:	680 George Street, Sydney NSW 2000	DATE RECEIVED:	21/04/2020
TELEPHONE:	0400 359 547	DATE ANALYSED:	22/04/2020
EMAIL:	hamish.donovan@wsp.com	ORDER NUMBER:	N/A
CONTACT:	Hamish Donovan	SAMPLED BY:	Poushali Talukder

TEST METHOD: Qualitative identification of asbestos fibres in bulk and soil samples at WSP Corporate Laboratories by polarised light microscopy, including dispersion staining, in accordance with AS4964 (2004) Method for the qualitative identification of asbestos in bulk samples and WSP's Laboratory Procedure (LP3 - Identification of Asbestos Fibres). Trace analysis carried out on all non-homogenous samples. Accredited for compliance with ISO/IEC: 17025 – Testing (No. 17199).

Lab No	Sample ID	Sample Description	Sample Dimensions	Identification Type
001	STP01_0.3	Soil	738 gm	OF, NAD*
002	STP01A_0.3	Soil	854 gm	OF, NAD*
003	STP01B_0.3	Soil	732 gm	OF, NAD*

LEGEND:

NAD	-	No Asbestos Detected
CH	-	Chrysotile Asbestos Detected
A	-	Amosite Asbestos Detected
C	-	Crocidolite Asbestos Detected
UMF	-	Unknown Mineral Fibres Detected
SMF	-	Synthetic Mineral Fibres Detected
OF	-	Organic Fibres Detected
Trace	-	Trace Asbestos Detected
*	-	No trace asbestos detected at the reporting limit of 0.1 g/kg

NATA
ACCREDITED FOR
TECHNICAL
COMPETENCE

Approved Identifier
Name: Sneha Shakya

Approved Signatory
Name: Sneha Shakya

AUTHORISATION DATE

Wednesday, 22 April 2020

Hand picked refers to small discrete amounts of asbestos distributed unevenly in a large body of non asbestos material.

Notes:
If no asbestos is detected in vinyl tiles, mastics, sealants, epoxy resins and ore samples then confirmation by another independent analytical technique is advised due to the nature of the samples.
The results contained within this report relate only to the sample(s) submitted for testing. The laboratory accepts no responsibility for location, sampling date, sample ID, sampler, and client details provided by the sampler. WSP accepts no responsibility for the initial collection, packaging or transportation of samples submitted by external persons. NATA does not accredit the sampling process, therefore sampling is not covered by the scope of accreditation.

WSP

GRAVIMETRIC DETERMINATION AND QUANTIFICATION OF ASBESTOS IN SOIL

70-100 FULLAGAR ROAD, WENTWORTHVILLE, NSW

APRIL 2020

GRAVIMETRIC DETERMINATION AND QUANTIFICATION OF ASBESTOS IN SOIL

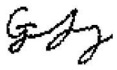
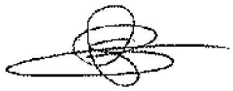
70-100 FULLAGAR ROAD, WENTWORTHVILLE, NSW

WSP

WSP
LEVEL 27, 680 GEORGE STREET
SYDNEY NSW 2000
GPO BOX 5394
SYDNEY NSW 2001

TEL: +61 2 9272 5100
FAX: +61 2 9272 5101
WSP.COM

REV	DATE	DETAILS
A	22/04/2020	70-100 Fullagar Road, Wentworthville, NSW_SYD-PS119057-128473.pdf

	NAME	DATE	SIGNATURE
Prepared by:	Gavin Young	22/04/2020	
Reviewed by:	Shannon Bradford	22/04/2020	

ABBREVIATIONS

A	Amosite Asbestos Detected
ACM	Asbestos Containing Material
AF	Asbestos Fines
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CH	Chrysotile Asbestos Detected
FA	Fibrous Asbestos
NAD	No Asbestos Detected
NEPM	National Environment Protection Measures
OF	Organic Fibres Detected
PLM	Polarised Light Microscopy
SMF	Synthetic Mineral Fibres Detected
UMF	Unknown Mineral Fibres Detected

ANALYSIS METHODOLOGY

AS 4964-2004 - Soils: Samples received by the laboratory are analysed in accordance with section 8.2.3 *Soil Samples* of Australian Standard (AS 4964-2004). Trace analysis is conducted in accordance with section 8.4 *Trace analysis criteria* of the standard. Asbestos analysis is conducted in accordance with the standard section 8.3.3 *Analytical criteria*, and follows methodology outlined in Appendix D *Simplified flowchart for bulk asbestos identification.*

Quantification of Asbestos in Soils: There is no accepted valid analytical method in Australia for estimating the concentration of asbestos in soils. NATA does not accredit facilities for the estimation of the concentration of ACM or free asbestos fibres in soils. This report is consistent with the analytical procedures and reporting recommendations in the Western Australia *Guidelines for the Assessment, Remediation, and Management of Asbestos-Contaminated Sites in Western Australia – May 2009* and Schedule B1 – Guideline on Investigation Levels for Soil and Groundwater [National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013)].

Percentages for asbestos content in materials and reporting limits of percentage weight for weight asbestos in soil are based on values outlined in Schedule B1 – Guideline on Investigation Levels for Soil and Groundwater [National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013)]. Non-Friable (ACM) weight is calculated based on the assumption of 15% asbestos by weight in non-friable ACM products used in Australia. Friable asbestos weight, including Fibrous Asbestos (AF) and Asbestos Fines (AF), is calculated based on the assumption of 100% asbestos by weight.

The reporting limit of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This reporting limit is not applicable to free fibres (Respirable Fibres). Loose respirable fibres are detected under criteria set by Australian Standard (AS 4964-2004), section 8.4 *Trace analysis criteria*, with an implied detection and reporting limit of 0.1g/kg.

METHOD SPECIFIC DEFINITION

- Asbestos Containing Materials (ACM) - comprises asbestos-containing-material which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin (e.g. asbestos fencing and vinyl tiles). This term is restricted to material that cannot pass a 7 mm x 7 mm sieve.
- Fibrous Asbestos (FA) - comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This type of asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded (friable) or was previously bonded and is now significantly degraded (crumbling).
- Asbestos Fines (AF) - AF includes free fibres, small fibre bundles and also small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve.

All calculations of percentage asbestos under this method are approximate and should be used as a guide only. Such results cannot be used in place of field evaluations.

These quantitative results are not covered by the scope of NATA accreditation.

ANALYSIS RESULTS

	UNIT	LIMIT OF REPORTING	SAMPLE: STP02_0.3	SAMPLE: STP02A_0.3	SAMPLE: STP02B_0.3
Total Soil Weight	g	1	525	559	410
Asbestos Type Detected	N/A	-	NAD	NAD	NAD
Free Fibres (Respirable Fibres) in <2mm Sample	g/kg	0.1	No	No	No
ACM in >7mm Sample	g	0.001	<0.001	<0.001	<0.001
FA & AF	g	0.001	<0.001	<0.001	<0.001
ACM in >7mm Sample (as 15% Asbestos)	%w/w	0.01	<0.01	<0.01	<0.01
FA & AF (as 100% asbestos)	%w/w	0.001	<0.001	<0.001	<0.001

These quantitative results are not covered by the scope of NATA accreditation.

LEGEND:

NAD	No Asbestos Detected
CH	Chrysotile Asbestos Detected
A	Amosite Asbestos Detected
C	Crocidolite Asbestos Detected
UMF	Unknown Mineral Fibres Detected

APPENDIX A

AS 4964 LABORATORY CERTIFICATES

WSP Australia Pty Limited

Level 27, 680 George Street Sydney
PO Box 20967, World Square
Telephone +61 2 9272 1407
Facsimile +61 2 9272 5101
Email ANZLab@wsp.com

ABN 80 078 004 798
NCSI Certified Quality System ISO 9001

Certificate of Analysis

LOCATION:	**70-100 Fullagar Road, Wentworthville, NSW**	**CERTIFICATE NO:**	**SYD-PS119057-128473**
CLIENT:	WSP - CLM Team NSW	DATE\S SAMPLED:	21/04/2020
CLIENT ADDRESS:	680 George Street, Sydney NSW 2000	DATE RECEIVED:	21/04/2020
TELEPHONE:	0400 359 547	DATE ANALYSED:	
EMAIL:	hamish.donovan@wsp.com	ORDER NUMBER:	N/A
CONTACT:	Hamish Donovan	SAMPLED BY:	Poushali Talukder

TEST METHOD: Qualitative identification of asbestos fibres in bulk and soil samples at WSP Corporate Laboratories by polarised light microscopy, including dispersion staining, in accordance with AS4964 (2004) Method for the qualitative identification of asbestos in bulk samples and WSP's Laboratory Procedure (LP3 - Identification of Asbestos Fibres). Trace analysis carried out on all non-homogenous samples. Accredited for compliance with ISO/IEC: 17025 – Testing (No. 17199).

Lab No	Sample ID	Location	Sample Description	Sample Dimensions	Identification Type
001	STP02_0.3	Stockpile 2 from Block H	Soil	525 gm	OF, NAD*
002	STP02A_0.3	Stockpile 2 from Block H	Soil	559 gm	OF, NAD*
003	STP02B_0.3	Stockpile 2 from Block H	Soil	410 gm	OF, NAD*

LEGEND:

NAD	-	No Asbestos Detected
CH	-	Chrysotile Asbestos Detected
A	-	Amosite Asbestos Detected
C	-	Crocidolite Asbestos Detected
UMF	-	Unknown Mineral Fibres Detected
SMF	-	Synthetic Mineral Fibres Detected
OF	-	Organic Fibres Detected
Trace	-	Trace Asbestos Detected
*	-	No trace asbestos detected at the reporting limit of 0.1 g/kg

NATA
ACCREDITED FOR
TECHNICAL
COMPETENCE

Approved Identifier
Name: Melanie Reed

Approved Signatory
Name: Shannon Bradford

AUTHORISATION DATE

Wednesday, 22 April 2020

Hand picked refers to small discrete amounts of asbestos distributed unevenly in a large body of non asbestos material.

Notes:
If no asbestos is detected in vinyl tiles, mastics, sealants, epoxy resins and ore samples then confirmation by another independent analytical technique is advised due to the nature of the samples.
The results contained within this report relate only to the sample(s) submitted for testing. The laboratory accepts no responsibility for location, sampling date, sample ID, sampler, and client details provided by the sampler. WSP accepts no responsibility for the initial collection, packaging or transportation of samples submitted by external persons. NATA does not accredit the sampling process, therefore sampling is not covered by the scope of accreditation.

Our ref: PS119057-Wentworthville Public School_STP06_CLM-LTR-001

Your ref: PS119057_Waste Classification_STP06

1 July 2020

Confidential

Damian McGrath
Project Manager
55 Grandview Street
Pymble NSW 2073

Dear Damian,

Re: Waste Classification – STP06, 70-100 Fullagar road, Wentworthville Public School, Wentworthville NSW 2145.

WASTE CLASSIFICATION REPORT	
Date sampled	26/06/2020
Company	Grindley Construction Pty Ltd.
Project name	Remediation Action Plan - Wentworthville Public School
Site address	Stockpile STP06, 70-100 Fullagar road, Wentworthville NSW 2145
Site history	The site has historically been a public school. The school underwent construction between 1943 and 1961. It is understood that uncontrolled fill materials would have been imported to the site during construction works and ground levelling. Portions of Wentworthville Public School are currently undergoing refurbishment and redevelopment. As part of the works, a new two storey learning space is being constructed which requires excavation for footings and service trenches. Refer to Attachment A, Figure 3 for stockpile location.

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