
APPENDIX E

Photo plates 1 - 26



Photo plate 1 - Stockpiled household rubbish



Photo plate 2 - Stockpiled building waste



Photo plate 3 - Stockpiled timber logs



Photo plate 4 - Stockpiled concrete waste



Photo plate 5 - Dairy stockyards



Photo plate 6 - Inside Dairy shed



Photo plate 7 - Concrete pit behind Dairy shed



Photo plate 8 - U Shaped concrete slab



Photo plate 9 - Metal trough



Photo plate 10 - Metal trough and timber poles



Photo plate 11 - Wind Turbine and metal pipe



Photo plate 12 - Land filled material and tank in creek



Photo plate 13 - Area affected by land filling



Photo plate 14 - Former Homestead Location



Photo plate 15 - Tanks adjacent to Former Homestead



Photo plate 16 - Rubbish inside Corrugated iron tank



Photo plate 17 - Abandoned car 1



Photo plate 18 - Abandoned car 2



Photo plate 19 - Discarded timber fencing



Photo plate 20 - Dam wall to the north east of Homestead



Photo plate 21 - Shed and soil bund



Photo plate 22 - Stockyards to the east of Homestead



Photo plate 23 - Possible stable



Photo plate 24 - Collapsed structure



Photo plate 25 - Cement sheeting fragment in grass adjacent to slab



Photo plate 26 - Smaller structure near collapsed structure

APPENDIX F

Graphic Symbols
Test Pit Logs (Pits 1 – 25)
Borehole Logs (Bores 26 - 28)
Groundwater Field Sheets

GRAPHIC SYMBOLS FOR SOIL & ROCK

SOIL

	BITUMINOUS CONCRETE
	CONCRETE
	TOPSOIL
	FILLING
	PEAT
	CLAY
	SILTY CLAY
	SANDY CLAY
	GRAVELLY CLAY
	SHALY CLAY
	SILT
	CLAYEY SILT
	SANDY SILT
	SAND
	CLAYEY SAND
	SILTY SAND
	GRAVEL
	SANDY GRAVEL
	CLAYEY GRAVEL
	COBBLES/BOULDERS
	TALUS

SEDIMENTARY ROCK

	BOULDER CONGLOMERATE
	CONGLOMERATE
	CONGLOMERATIC SANDSTONE
	SANDSTONE FINE GRAINED
	SANDSTONE COARSE GRAINED
	SILTSTONE
	LAMINITE
	MUDSTONE, CLAYSTONE, SHALE
	COAL
	LIMESTONE

METAMORPHIC ROCK

	SLATE, PHYLITTE, SCHIST
	GNEISS
	QUARTZITE

IGNEOUS ROCK

	GRANITE
	DOLERITE, BASALT
	TUFF
	PORPHYRY



TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 20 m AHD
EASTING: 283492
NORTHING: 6125086
DIP/AZIMUTH: 90°/-

PIT No: 1
PROJECT No: 48670
DATE: 29 May 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing			Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments				
20	0.0	FILLING - brown fine to coarse gravelly (siltstone) silty clay filling with some cobbles, boulders (siltstone) and rootlets		E	0.0						
	0.1			D	0.1						
	0.25			D	0.25						
	0.3	CLAY - grey mottled orange red clay with some sand and rootlets		D	0.3						
	0.5			D	0.5						
	0.8			U	0.8						
	0.8	CLAY - red orange mottled grey clay with trace rootlets		D, E	0.8		pp = 310-340kPa				
	0.9			D, E	0.9						
19	1.3			D	1.3		pp = 190-220kPa				
	1.5			D	1.5						
	1.8			D, E	1.8						
18	2.0	SILTSTONE - very low strength, slightly to moderately weathered, red orange mottled grey brown siltstone		D, E	2.0						
	2.3			D	2.3						
	2.6	Pit discontinued at 2.6m (slow progress in low strength siltstone)			2.6						
17	3										

RIG: Deere 315SJ - 600mm bucket

LOGGED: DBY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PIQ	Photo ionisation detector
B	Box sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		W	Water level

CHECKED
Initials: <i>DBY</i>
Date: 15/9/09



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 16 m AHD
EASTING: 283535
NORTHING: 6125197
DIP/AZIMUTH: 90°/-

PIT No: 2
PROJECT No: 48670
DATE: 29 May 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing			Water	Dynamic Penetrometer Test (blows per 150mm)					
				Type	Depth	Sample		Results & Comments	5	10	15	20	
16		TOPSOIL - brown silty clay with some rootlets, humid to damp		E	0.0								
				D	0.1								
					0.25								
	0.4	CLAY - grey mottled yellow brown clay with some rootlets		D, E	0.4		pp = 330-440kPa						
	0.5	CLAY - red orange mottled grey clay			0.5								
					0.8		pp = 190-240kPa						
				D, E	1.0								
15	1				1.3		pp = 160-290kPa						
				D	1.5								
					1.8		pp = 230-290kPa						
				D, E	2.0								
14	2				2.3		pp = 230kPa						
				D	2.5								
	2.8	SILTSTONE - very low strength, slightly to moderately weathered, red orange mottled grey siltstone		D, E	2.8								
13	3	Pit discontinued at 3.0m (limit of investigation)			3.0								

RIG: Deere 315SJ - 600mm bucket

LOGGED: DBY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
R	Bulk sample	S	Standard penetration test
J	Tube sample (x mm dia.)	PI	Point load strength Is(SC) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		W	Water level

CHECKED	
Initials:	B
Date:	15/9/09



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 12 m AHD
EASTING: 283427
NORTHING: 6125437
DIP/AZIMUTH: 90°/-

PIT No: 3
PROJECT No: 48670
DATE: 29 May 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)				
				Type	Depth	Sample	Results & Comments		5	10	15	20	
12		TOPSOIL - brown silty clay with some rootlets, humid to damp		E	0.0								
	0.2	CLAY - red mottled brown clay with some rootlets		D, E	0.2		pp = 320-430kPa						
	0.4	CLAY - grey mottled yellow orange red clay with some rootlets and trace silt		D, E	0.4		pp = 340-410kPa						
	0.8	CLAY - yellow red mottled grey clay with trace silt and rootlets		B, E	0.8		pp = 330kPa						
11	1												
					1.3		pp = 400-440kPa						
				D	1.5								
					1.8		pp = 210-280kPa						
				D, E	2.0								
10	2												
	2.3	SILTSTONE - very low to low strength, slightly to moderately weathered, orange red mottled grey siltstone											
				D	2.5								
					2.6								
													
9	3				3.0								
				D, E									
	3.2	Pit discontinued at 3.2m (limit of investigation)			3.2								

RIG: Deere 315SJ - 600mm bucket

LOGGED: DBY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength (50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		W	Water level

CHECKED
Initials: <i>DBY</i>
Date: <i>5/9/09</i>



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 19 m AHD
EASTING: 2833565
NORTHING: 6125698
DIP/AZIMUTH: 90°/-

PIT No: 4
PROJECT No: 48670
DATE: 29 May 09
SHEET 1 OF 1

Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
			Type	Depth	Sample	Results & Comments		5	10	15	20
0.0	TOPSOIL - brown silty clay with some rootlets, damp to moist		E	0.0							
0.1			E	0.1							
0.2	CLAY - orange mottled brown grey clay with some rootlets, damp to moist		D	0.2		op = 260-300kPa					
0.25			D	0.25							
0.4	CLAY - red mottled orange clay with some rootlets and trace silt, humid to damp		D, E	0.4		op = 280-360kPa					
0.5			D, E	0.5							
0.8	CLAY - grey mottled orange red clay with trace silt and rootlets, humid to damp		D, E	0.8		op = 280-380kPa					
1.0			D, E	1.0							
1.3	CLAY - orange red mottled grey clay with trace rootlets and silt, humid to damp (RESIDUAL SOIL)		D	1.3		pp = 300-370kPa					
1.5			D	1.5							
1.8	- becoming more grey below 1.7m		D, E	1.8		op = 300-400kPa					
2.0			D, E	2.0							
2.5	SILTSTONE - low strength, slightly to moderately weathered, orange red mottled grey siltstone		D, E	2.5							
2.8	Pit discontinued at 2.8m (refusal in medium strength siltstone)			2.8							

RIG: Deere 315SJ - 600mm bucket

LOGGED: DBY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	op	Pocket penetrometer (kPa)
D	Disturbed sample	P/D	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
J	Tube sample (x mm dia.)	PL	Point load strength (50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		▼	Water level

CHECKED	
Initials:	<i>[Signature]</i>
Date:	15/9/09



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 16 m AHD
EASTING: 283374
NORTHING: 6125864
DIP/AZIMUTH: 90°/-

PIT No: 5
PROJECT No: 48670
DATE: 28 May 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing			Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample		5	10	15	20
16	0.0	TOPSOIL - brown silty clay with some rootlets, damp to moist		E	0.0						
	0.1				0.1						
	0.2	CLAY - grey red mottled yellow brown clay with some rootlets and trace silt, humid to damp		D, E	0.2						
	0.25				0.25						
	0.4	CLAY - red mottled grey clay with some rootlets and trace silt, humid to damp		B, E	0.4						
	0.5				0.5						
	0.8				0.8						
	1.0			D, E	1.0						
	1.3	CLAY - orange mottled grey clay with some sand and trace rootlets, damp to moist		D	1.3						
	1.5				1.5						
15	1.8	SILTSTONE - low strength, slightly to moderately weathered, orange red mottled grey siltstone		D, E	1.8						
	2.0				2.0						
	2.3			D	2.3						
	2.5				2.5						
	2.8			D, E	2.8						
	3.0	Pit discontinued at 3.0m (limit of investigation)			3.0						
14	2										
13	3										

RIG: Deere 315SJ - 600mm bucket

LOGGED: DBY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photogrammetric indicator
B	Block sample	S	Standard penetration test
U	Tube sample (x mm dia.)	pl	Point load strength (50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		W	Water level

CHECKED	
Initials	<i>[Signature]</i>
Date	5/9/09



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 32 m AHD
EASTING: 283337
NORTHING: 6126165
DIP/AZIMUTH: 90°/-

PIT No: 6
PROJECT No: 48670
DATE: 28 May 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing			Water	Dynamic Penetrometer Test (blows per 150mm)				
				Type	Depth	Sample		Results & Comments	5	10	15	20
31	0	TOPSOIL - brown silty clay with some rootlets, damp to moist		E	0.0							
	0.1				0.1							
31	0.2	CLAY - grey mottled orange red clay with some silt and rootlets and trace sand, humid to damp		D	0.2		pp = 180-400kPa					
	0.25				0.25							
31	0.4	SANDY CLAY - yellow orange mottled grey sandy clay with some rootlets, humid to damp		D, E	0.4		pp = 230-250kPa					
	0.5		U	0.5								
	0.7	CLAY - orange red mottled grey clay with trace sand and silt, humid to damp	D, E	0.7								
	0.8		D, E	0.8		pp = 330-380kPa						
31	1.0			1.0								
	1.2	SILTSTONE - low strength, slightly to moderately weathered, orange red mottled grey brown siltstone			1.3							
			D, E		1.5							
	1.9	Pit discontinued at 1.9m (refusal in medium strength siltstone)										
30	2											
29	3											

RIG: Deere 315SJ - 600mm bucket

LOGGED: DBY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Packet penetrometer (kPa)
U	Undisturbed sample	PD	Photo densitometer deflector
B	Bulk sample	S	Standard penetration test
J	Tube sample (x mm dia)	PL	Point load strength (50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seal
		W	Water level

CHECKED
Initials: <i>P</i>
Date: <i>18/9/09</i>



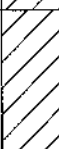
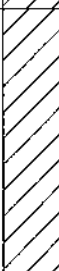
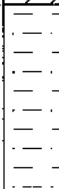
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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 16 m AHD
EASTING: 283117
NORTHING: 6126243
DIP/AZIMUTH: 90°/--

PIT No: 7
PROJECT No: 48670
DATE: 27 May 09
SHEET 1 OF 1

Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
			Type	Depth	Sample	Results & Comments		5	10	15	20
0.0	TOPSOIL - brown silty clay with some fine to coarse gravel and rootlet remains, humid to damp		E	0.0							
0.1			D	0.1							
0.2				0.2							
0.3	CLAY - orange mottled red clay with trace silt, humid to damp		D, E	0.3		pp = 300-400kPa					
0.5				0.5							
0.7	CLAY - red orange mottled grey clay, humid to damp		D, E	0.7		op = 320kPa					
1.0				1.0							
1.3			D	1.3		pp = 280-310kPa					
1.5				1.5							
1.6	CLAY - grey brown clay, humid to damp		D, E	1.6		pp = 300-370kPa					
1.7				1.7							
2.0				2.0							
2.3	SILTSTONE - low strength, grey brown siltstone		D, E	2.3							
2.5				2.5							
2.8	Pit discontinued at 2.8m (refusal on medium strength siltstone)			2.8							

RIG: Deere 315SJ - 600mm bucket

LOGGED: DBY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	DO	Puckel penetrometer (kPa)
D	Disturbed sample	PD	Photoionisation detector
B	Blank sample	S	Standard penetration test
U ₁	Ure sample (x mm dia)	PL	Point load strength test (50) MPa
W	Water sample	V	Screw Vane (kPa)
C	Core drilling	>	Water seep
		W	Water level

CHECKED
Initials: *B*
Date: *15/1/09*



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 30 m AHD
EASTING: 283052
NORTHING: 6126522
DIP/AZIMUTH: 90°/-

PIT No: 8
PROJECT No: 48670
DATE: 27 May 09
SHEET 1 OF 1

Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
			Type	Depth	Sample	Results & Comments		5	10	15	20
0.0	TOPSOIL - dark brown silty clay with some rootlets, damp to moist		E	0.0							
0.1			D	0.1							
0.25				0.25							
0.3	CLAY - orange red mottled grey clay with trace silt, humid to damp		D, E	0.3		pp = 300-420 kPa					
0.5				0.5							
0.8			C	0.8		pp = 200-300 kPa					
0.9	SANDY CLAY - orange mottled grey sandy clay, humid to damp		D, E	0.9							
1.3				1.3		pp = 200-300 kPa					
1.5			D, E	1.5							
1.7	Pit discontinued at 1.7m (refusal on low to medium strength siltstone)										

RIG: Deere 315SJ - 600mm bucket

LOGGED: DBY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Duplicate BD1/270509 collected at 0 - 0.1m

☐ Sand Penetrometer AS1289.6.3.3

☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND	
A	Auger sample
D	Disturbed sample
B	Block sample
C	Tube sample (x mm dia.)
W	Water sample
C	Core drilling
pp	Pocket penetrometer (kPa)
PID	Photo ionisation detector
S	Standard penetration test
PL	Point load strength 1s(50) MPa
V	Shear Vane (kPa)
>	Water seep
▼	Water level

CHECKED	
Initials	<i>DBY</i>
Date	15/9/09



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 11 m AHD
EASTING: 282698
NORTHING: 6126697
DIP/AZIMUTH: 90°/-

PIT No: 9
PROJECT No: 48670
DATE: 28 May 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL - brown silty clay with some rootlets, damp to moist		E	0.0							
				D	0.1							
					0.25							
	0.6	CLAY - yellow mottled brown grey clay with trace rootlets, humid to damp		D, E	0.4		pp = 260-330 kPa					
					0.5							
					0.8		pp = 300-440 kPa					
				D, E	1.0							
					1.3		pp = 230-290 kPa					
				D	1.5							
		- becoming damp to moist below 1.8m			1.8		pp = 130-170 kPa					
				D, E	2.0							
		- trace silt below 2.3m			2.3		pp = 90-180 kPa					
				B	2.5							
					2.8		pp = 160-190 kPa					
				D, E	3.0							
	3.0	Pit discontinued at 3.0m (limit of investigation)										

RIG: Deere 315SJ - 600mm bucket

LOGGED: DBY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Penetration index
B	Blank sample	S	Standard penetration test
J	Tube sample (undisturbed)	PL	Point load strength (50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core logging	>	Water seep
		≡	Water level

CHECKED	
Initials:	B
Date:	15/9/09



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 26 m AHD
EASTING: 282803
NORTHING: 6126789
DIP/AZIMUTH: 90°/-

PIT No: 10
PROJECT No: 48670
DATE: 28 May 09
SHEET 1 OF 1

Depth (m)	Description of Strata	Graphic Log	Type	Sampling & In Situ Testing			Water	Dynamic Penetrometer Test (blows per 150mm)			
				Depth	Sample	Results & Comments		5	10	15	20
0.0	TOPSOIL - light to dark brown silty clay with trace rootlets, damp to moist		E	0.0							
0.1			D	0.1							
0.25				0.25							
0.4			D	0.4		pp = 190kPa					
0.5				0.5							
0.8	CLAY - orange mottled brown slightly sandy clay with trace rootlets, humid to damp			0.8		pp = 220-270kPa					
1.0			D, E	1.0							
1.3				1.3		pp = 120-200kPa					
1.5			D	1.5							
1.8				1.8		pp = 160-190kPa					
2.0			D, E	2.0							
2.3				2.3		pp = 190-300kPa					
2.5			D	2.5							
2.6	SANDSTONE - very low to low strength, slightly to moderately weathered, orange red mottled grey brown sandstone		D	2.6							
	Pit discontinued at 2.6m (refusal in medium strength sandstone)										

RIG: Deere 315SJ - 600mm bucket

LOGGED: DBY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo irradiation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength (50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core sample	>	Water seep
		W	Water level

CHECKED
Initials: <i>DBY</i>
Date: <i>15/9/09</i>



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 8 m AHD
EASTING: 282550
NORTHING: 6126445
DIP/AZIMUTH: 90°/-

PIT No: 11
PROJECT No: 48670
DATE: 28 May 09
SHEET 1 OF 1

Depth (m)	Description of Strata	Graphic Log	Type	Sampling & In Situ Testing			Water	Dynamic Penetrometer Test (blows per 150mm)			
				Depth	Sample	Results & Comments		5	10	15	20
0.0	TOPSOIL - light grey to brown silty clay with some rootlets, humid to damp		M	0.0							
0.1			D	0.1							
0.25				0.25							
0.4	CLAY - red mottled brown clay with some rootlets and trace silt		D	0.4		pp = 420-480kPa					
0.5				0.5							
0.8				0.8		pp = 480-600kPa					
0.8	SANDY CLAY - yellow red mottled grey brown sandy clay with trace silt and rootlets		D, E	0.8							
1.0				1.0							
1.3			D	1.3		pp > 600kPa					
1.5				1.5							
1.6	CLAY - red mottled grey brown clay with some sand and trace silt and rootlets, humid to damp		D, E	1.6		pp = 270-340kPa					
1.8				1.8							
2.0				2.0							
2.3			D	2.3		pp = 200-320kPa					
2.5				2.5							
2.9	CLAY - orange red mottled brown grey slightly sandy clay, humid to damp		D, E	2.9		pp = 190-230kPa					
3.0				3.0							
3.3	Pit discontinued at 3.3m (limit of investigation)			3.3							

RIG: Deere 315SJ - 600mm bucket

LOGGED: DBY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Duplicate BD1/280509 collected at 0 - 0.1m

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Pinhole ionisation detector
B	Bulk sample	S	Standard penetration test
T	Tube sample (X mm dia.)	PL	Point load strength (1s/50) kPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		W	Water level

CHECKED
Initials: <i>[Signature]</i>
Date: 15/4/09



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 18 m AHD
EASTING: 282892
NORTHING: 6126425
DIP/AZIMUTH: 90°/-

PIT No: 12
PROJECT No: 48670
DATE: 27 May 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Type	Sampling & In Situ Testing			Water	Dynamic Penetrometer Test (blows per 150mm)			
					Depth	Sample	Results & Comments		5	10	15	20
1	0.0	TOPSOIL - brown silty clay with some rootlets, humid to damp		E	0.0							
	0.1			D	0.1							
	0.25				0.25							
	0.3	CLAY - orange yellow mottled grey brown clay with trace silt, humid to damp		D, E	0.3		pp = 230-350kPa					
	0.5				0.5							
	0.8			D, E	0.8		pp = 310-440kPa					
	1.0				1.0							
	1.3	CLAY - red mottled grey clay, humid to damp		D	1.3		pp = 250-290kPa					
	1.5				1.5							
	1.7			D, E	1.7		pp = 230-320kPa					
2	2.0				2.0							
	2.3	- trace sand below 2.3m		D	2.3		pp = 230-320kPa					
	2.5				2.5							
	2.8			D, E	2.8		pp = 340-360kPa					
	3.0	Pit discontinued at 3.0m (limit of investigation)			3.0							

RIG: Deere 315SJ - 600mm bucket

LOGGED: DBY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PI	Phonon insulation detector
B	Bulk sample	S	Standard penetration test
J	Tube sample (x mm dia.)	PL	Point load strength test (SC) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		W	Water level

CHECKED	
Initials:	<i>[Signature]</i>
Date:	15/9/09



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 16 m AHD
EASTING: 283615
NORTHING: 6125034
DIP/AZIMUTH: 90°/-

PIT No: 13
PROJECT No: 48670
DATE: 17 Jun 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing			Water	Dynamic Penetrometer Test (blows per 150mm)				
				Type	Depth	Sample		Results & Comments	5	10	15	20
15	0.1	TOPSOIL - brown silty clay with some rootlets and organic content		E	0.0							
					0.1		pp = 360-480kPa					
		CLAY - yellow mottled brown grey clay with some rootlets and trace silt (RESIDUAL SOIL)		D	0.2							
	0.5				0.5		pp = 200-330kPa					
		CLAY - orange grey mottled red clay with trace rootlets and silt (RESIDUAL SOIL)		D	0.7							
	1.0				1.0		pp = 120-150kPa					
14				D, E								
					1.3							
	1.4				1.4		pp = 120-200kPa					
		CLAY - orange red mottled grey clay with trace ironstone gravel		B								
	1.5				1.5							
13		Pit discontinued at 1.5m (limit of investigation)										

RIG: Gemco 210B

LOGGED: DBY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength (50) kPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		↑	Water level

CHECKED	
Initials:	<i>DBY</i>
Date:	<i>17/6/09</i>



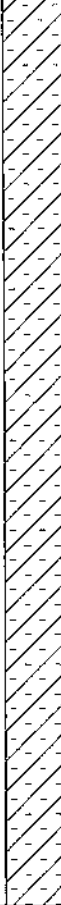
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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 38 m AHD
EASTING: 283263
NORTHING: 6127173
DIP/AZIMUTH: 90°/-

PIT No: 14
PROJECT No: 48670
DATE: 01 Jul 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing			Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample		Results & Comments	5	10	15
38		TOPSOIL - brown silty clay with rootlets and some fine to coarse sand		E, D	0.0		pp = 0kPa				
	0.3	CLAY - hard, brown mottled red and grey clay			0.2						
					0.5		pp > 600kPa pp > 600kPa				
	0.8	SHALY CLAY - hard, grey mottled red shaly clay (extremely weathered siltstone)		U E, D, B	0.8						
					0.9						
37	1			E, D	1.0		pp > 600kPa	1			
					1.3						
					1.5		pp > 600kPa				
				E, D	1.8						
36	2				2.0		pp > 600kPa	2			
				D	2.3						
					2.6		pp > 600kPa				
				D	2.8						
35	3				3.0		pp > 600kPa	3			
				D							
32	3.2	Pit discontinued at 3.2m (limit of investigation)			3.2						

RIG: Deere 315SJ - 600mm bucket

LOGGED: AAW

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3

☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
B	Disturbed sample	PID	Photo ionisation detector
D	Bulk sample	S	Standard penetration test
U	Tube sample (X mm dia.)	PL	Point load strength (50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		W	Water level

CHECKED	
Initials	15/9/09
Date	15/9/09



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 16 m AHD
EASTING: 283318
NORTHING: 6127538
DIP/AZIMUTH: 90°/-

PIT No: 15
PROJECT No: 48670
DATE: 01 Jul 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing			Water	Dynamic Penetrometer Test (blows per 150mm)						
				Type	Depth	Sample		Results & Comments	5	10	15	20		
16		TOPSOIL - brown slightly sandy silty clay with some rootlets		D, E	0.0									
						0.2								
	0.4	CLAY - stiff, orange mottled grey and red clay, humid				0.5		pp = 150-200kPa						
					D, E	0.7								
	0.8	CLAY - very stiff, grey mottled orange (slightly shaly) clay, humic												
15	1				D	1.0		pp = 240-470kPa	1					
						1.2								
					D	1.5		pp = 170-340kPa						
						1.7								
14	2				E, D	2.0		pp = 270-320kPa	2					
					2.2									
				D	2.5		pp = 290-410kPa							
		- becoming hard shaly clay below 2.7m			2.7									
				D	2.8		pp = 400-480kPa							
13	3	Pit discontinued at 3.0m (limit of investigation)			3.0			3						

RIG: Deere 315SJ - 600mm bucket

LOGGED: AAW

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample, Duplicate BD1/010709 collected at 0 - 0.2m

☐ Sand Penetrometer AS1289.6.3.3

☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Block sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength ls(SC) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		W	Water level

CHECKED	
Initials	<i>[Signature]</i>
Date	15/7/09



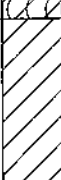
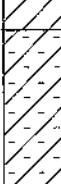
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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 22 m AHD
EASTING: 284347
NORTHING: 6128172
DIP/AZIMUTH: 90°/-

PIT No: 16
PROJECT No: 48670
DATE: 01 Jul 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing			Water	Dynamic Penetrometer Test: (blows per 150mm)			
				Type	Depth	Sample		Results & Comments	5	10	15
2		TOPSOIL - brown silty clay with some rootlets and trace fine sand		E, D	0.0		pp = 0				
					0.2						
	0.5	CLAY - stiff, orange clay			0.5		pp = 470-550kPa				
				U D, B	0.7						
					0.9						
2	1	SHALY CLAY - very stiff, grey mottled orange shaly clay		D, E	1.0		pp > 600kPa	1			
					1.2						
					1.5		pp > 600kPa				
				D	1.7						
					2.0		pp > 600kPa	2			
				D	2.2						
		- becoming hard below 2.4m			2.5		pp > 600kPa				
				D, E	2.7						
		- becoming humid to damp below 2.8m			2.9		pp > 600kPa				
				D	3.1			3			
	3.1	Pit discontinued at 3.1m (limit of investigation)			3.1						

RIG: Deere 315SJ - 600mm bucket

LOGGED: AAW

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	P(i)	Point in situ detector
B	Blank sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength (50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		W	Water level

CHECKED
Initials: <i>[Signature]</i>
Date: <i>15/7/09</i>



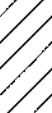
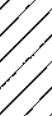
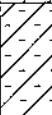
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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 24 m AHD
EASTING: 284521
NORTHING: 6127846
DIP/AZIMUTH: 90°/-

PIT No: 17
PROJECT No: 48670
DATE: 02 Jul 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)				
				Type	Depth	Sample	Results & Comments		5	10	15	20	
24		TOPSOIL - brown silty clay with rootlets		D, E	0.0		pp = 0						
	0.3	CLAY - hard, orange mottled grey clay			0.2								
					0.5		pp > 600kPa						
				D	0.7								
					1.0		pp > 600kPa						
23	1			D, E	1.2				1				
	1.2	SHALY CLAY - hard, grey mottled orange shaly clay			1.5		pp > 600kPa						
				D	1.8								
		- becoming very hard below 2.0m			2.0		pp > 600kPa		2				
22	2	SILTSTONE - very low strength, grey siltstone with dry bands		E, D	2.2								
					2.5		pp > 600kPa						
				D	2.7								
					2.9		pp > 600kPa						
21	3			D					3				
	3.1	Pit discontinued at 3.1m (limit of investigation)			3.1								

RIG: Dcerc 315SJ - 600mm bucket

LOGGED: AAW

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Packet penetrometer (kPa)
D	Disturbed sample	PI	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength (50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		W	Water level

CHECKED	
Initials:	
Date:	15/07/09



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 32 m AHD
EASTING: 283940
NORTHING: 612777
DIP/AZIMUTH: 90°/-

PIT No: 18
PROJECT No: 48670
DATE: 17 Jun 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
29	0	CLAY - light brown clay with trace rootlets, moist to wet		E	0.0							
	0.1	CLAY - yellow mottled orange clay with trace silt, humid to damp (RESIDUAL)		D	0.1		pp > 600kPa					
	0.2				0.2							
	0.5			D	0.5		pp = 370-460kPa					
	0.7				0.7							
	0.8	CLAY - grey mottled red orange clay, humid to damp										
29.1	1.0			D, E	1.0			1				
	1.2	SHALY CLAY - hard, grey mottled red brown shaly clay with trace silt/sand			1.2							
	1.4			D	1.4		pp > 600kPa					
	1.5				1.5							
	2.0			D, E	2.0		pp > 600kPa	2				
30	2.2	- grading to extremely weathered sandstone			2.2							
	2.5			D	2.5		pp = 380kPa					
	2.7				2.7							
29.3	3.0			D, E	3.0			3				
3.1	3.1	Pit discontinued at 3.1m (limit of investigation)			3.1							

RIG: Gemco 210B

LOGGED: DBY

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Undisturbed sample (x mm dia)	PI	Point load strength (50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		↓	Water level

CHECKED

Initials: *[Signature]*

Date: 17/6/09



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 24 m AHD
EASTING: 284007
NORTHING: 6128182
DIP/AZIMUTH: 90°/-

PIT No: 19
PROJECT No: 48670
DATE: 02 Jul 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		10	15	20	
24	0.0	TOPSOIL - brown clay with some rootlets		E, D	0.0		pp > 600kPa					
	0.2				0.2							
	0.3	CLAY - very stiff, orange mottled grey clay with trace organic content										
	0.5			E, D	0.5		pp > 600kPa					
	0.7	CLAY - stiff, red mottled grey clay			0.7							
23	1.0			D	1.0		pp = 320-470kPa	1				
	1.2	CLAY - stiff, grey mottled red clay			1.2							
	1.5			E, D	1.5		pp = 180-310kPa					
	1.7				1.7							
22	2.0	- becoming very stiff below 2.0 m		D	2.0		pp = 200-450kPa	2				
	2.2				2.2							
	2.5			D	2.5		pp = 380-480kPa					
	2.7				2.7							
	2.9			D	2.9		pp = 310-500kPa					
21	3.1	Pit discontinued at 3.1m (limit of investigation)			3.1							

RIG: Deere 315SJ - 600mm bucket

LOGGED: AAW

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample, Duplicate BD1/020709 collected at 0-0.2 m

☐ Sand Penetrometer AS1289.6.3.3

☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Packet penetrometer (kPa)
D	Disturbed sample	PID	Photo-ionisation detector
B	Bulk sample	S	Standard penetration test
U	Ure sample (x mm dia.)	PL	Point load strength test (MPa)
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seal
		W	Water level

CHECKED	
Initials:	
Date:	5/7/09



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 36 m AHD
EASTING: 284060
NORTHING: 6128555
DIP/AZIMUTH: 90°/-

PIT No: 20
PROJECT No: 48670
DATE: 01 Jul 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Type	Sampling & In Situ Testing			Water	Dynamic Penetrometer Test (blows per 150mm)			
					Depth	Sample	Results & Comments		5	10	15	20
36	0.0	TOPSOIL - brown clay with some rootlets, humid		D, E	0.0		pp = 90-160kPa					
	0.2				0.2							
	0.4	CLAY - stiff, brown mottled red and grey clay			0.5		pp = 200-310kPa					
	0.6			D, E	0.7							
	0.8	CLAY - hard, red mottled grey clay			1.0		pp > 600kPa	1				
35	1.0			D	1.2							
	1.2				1.5		pp > 600kPa					
	1.4			D	1.7							
	1.6				2.0		pp > 600kPa	2				
34	2.0			D	2.2							
	2.2	Pit discontinued at 2.2m (refusal in hard slightly shaly clay)										
33	3.0											

RIG: Deere 315SJ - 600mm bucket

LOGGED: AAW

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3

☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength (50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core logging	>	Water seep
		W	Water level

CHECKED	
Initials:	<i>[Signature]</i>
Date:	3/9/09



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 20 m AHD
EASTING: 283900
NORTHING: 6127455
DIP/AZIMUTH: 90°/-

PIT No: 21
PROJECT No: 48670
DATE: 01 Jul 09
SHEET 1 OF 1

Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
			Type	Depth	Sample	Results & Comments		5	13	15	20
0.0	TOPSOIL - brown silty clay with trace fine sand		D, E	0.0		pp = 0					
0.2				0.2							
0.3	CLAY - very stiff, orange mottled red and grey clay										
0.5			D, E	0.5		pp > 600kPa					
0.7				0.7							
0.9	CLAY - hard, red mottled grey clay										
1.0			D	1.0		pp > 600kPa	1				
1.2				1.2							
1.5			D, E	1.5		pp > 600kPa					
1.7				1.7							
2.0	CLAY - hard, grey mottled red clay		D	2.0		pp > 600kPa	2				
2.2				2.2							
2.5			D	2.5		pp > 600kPa					
2.7				2.7							
2.8	Pit discontinued at 2.8m (refusal in hard clay)										

RIG: Deere 315SJ - 600mm bucket

LOGGED: AAW

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3

REMARKS: E = environmental sample, Duplicate BD2/010709 collected at 0-0.2 m

☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Packet penetrometer (kPa)
D	Disturbed sample	PD	Photo initiation detector
B	Block sample	S	Standard penetration test
J	Tube sample (x mm dia.)	PL	Point load strength (50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		*	Water level

CHECKED
Initials
Date: 3/9/09



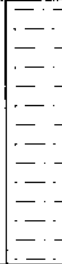
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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 44 m AHD
EASTING: 283475
NORTHING: 6128641
DIP/AZIMUTH: 90°/-

PIT No: 22
PROJECT No: 48670
DATE: 01 Jul 09
SHEET 1 OF 1

Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing			Water	Dynamic Penetrometer Test (blows per 150mm)			
			Type	Depth	Sample		Results & Comments	5	12	15
0.0	TOPSOIL - brown silty clay with some rootlets		E, D	0.0		pp = 0				
0.3	CLAY - hard, orange mottled grey clay		D	0.2						
				0.5		pp > 600kPa				
				0.7						
0.9	SHALY CLAY - hard, grey mottled orange shaly clay		D, B	1.0		op > 600kPa	1			
				1.2						
1.5	SILTSTONE - low strength, grey siltstone with some clay bands		D, E	1.5		op > 600kPa				
				1.7						
				2.0		pp > 600kPa	2			
2.2	Pit discontinued at 2.2m (refusal)		D	2.2						

RIG: Deere 315SJ - 600mm bucket

LOGGED: AAW

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3

☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND				CHECKED	
A	Auger sample	pp	Pocket penetrometer (kPa)	Initials:	
D	Disturbed sample	PID	Photo ionisation detector	Date:	5/9/09
B	Blank sample	S	Standard penetration test		
J	Jane sample (x mm dia)	PL	Point load strength ls(SC) kPa		
W	Water sample	V	Shear Vane (kPa)		
C	Core drilling	>	Water seep		
		?	Water eva		



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 16 m AHD
EASTING: 283351
NORTHING: 6127832
DIP/AZIMUTH: 90°/--

PIT No: 23
PROJECT No: 48670
DATE: 01 Jul 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Type	Sampling & In Situ Testing			Water
					Sample	Results & Comments	Dynamic Penetrometer Test (blows per 150mm)	
E		TOPSOIL - brown silty clay with some roots		F D		pp = 180-290kPa		
				D				
	0.4	CLAY - hard, orange mottled grey slightly sandy clay		C		pp > 600kPa		
				D				
				D				
1	1.0	SANDY CLAY - stiff, grey mottled orange sandy clay, damp		F D		pp = 340-480kPa	1	
				D				
	1.3			D		pp ≈ 220-300kPa		
				D				
				D				
2	2.0			D		pp = 240-370kPa	2	
				D				
				D		pp = 320-420kPa		
				D				
	2.7	SILTSTONE - dark brown and red siltstone		D		pp > 600kPa		
	2.8	Pit discontinued at 2.8m (refusal on siltstone)		D				
3							3	

RIG: Deere 315SJ - 600mm bucket

LOGGED: AAW

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			CHECKED
A	Auger sample	pp	Pocket penetrometer (KPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Blank sample	S	Standard penetration test
J	Tube sample (X mm dia)	PL	Point load strength (t50) MPa
W	Water sample	V	Shear Vane (KPa)
C	Core drilling	>	Water seep
		W	Water hole

Initials: *PS/100*
 Date: *PS/100*



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 20 m AHD
EASTING: 284314
NORTHING: 6127397
DIP/AZIMUTH: 90°/-

PIT No: 24
PROJECT No: 48670
DATE: 01 Jul 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing			Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample		Results & Comments	5	10	15
20		TOPSOIL - brown silty clay with some sand		D, E	0.0		pp = 0				
						0.2					
0.3		CLAY - hard, grey mottled orange clay				0.5		pp > 600kPa			
					D, E	0.7					
C.B.		Pit discontinued at 0.8m (refusal in medium strength, weathered, red and grey shale)									
19	1							1			
18	2							2			
17	3							3			

RIG: Deere 315SJ - 600mm bucket

LOGGED: AAW

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
✓	Tube sample (x mm dia.)	PL	Point load strength (x50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		W	Water level

CHECKED	
Initials:	<i>[Signature]</i>
Date:	05/07/09



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TEST PIT LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 20 m AHD
EASTING: 283757
NORTHING: 6127080
DIP/AZIMUTH: 90°/-

PIT No: 25
PROJECT No: 48670
DATE: 01 Jul 09
SHEET 1 OF 1

R.L.	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing			Water	Dynamic Penetrometer Test (blows per 150mm)				
				Type	Depth	Sample		Results & Comments	5	10	15	20
		SANDY CLAY - brown sandy clay with some silt		E, D	0.0		pp = 20-30kPa					
						0.2						
	0.4	CLAY - stiff, grey mottled orange clay with trace sand, humid			E, D	0.5		pp = 250-320kPa				
						0.7						
						1.0		pp = 160-170kPa	1			
					D	1.2						
	1.4	CLAY - stiff, red mottled grey clay, humid				1.5		pp = 180-250kPa				
					D	1.7						
						2.0		pp = 160-210kPa	2			
					D	2.2						
		- becoming firm to stiff below 2.5 m			2.5		pp = 60-100kPa					
				D, E	2.7							
					2.9		pp = 60-150kPa					
				D	3.1			3				
	3.1	Pit discontinued at 3.1m (limit of investigation)			3.1							

RIG: Dore 315SJ - 600mm bucket

LOGGED: AAW

WATER OBSERVATIONS: No free groundwater observed

REMARKS: E = environmental sample

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Packet penetrometer (kPa)
D	Disturbed sample	PID	Photomicroscopic detector
U	Undisturbed sample	S	Standard penetration test
J	Tube sample (x mm dia.)	PL	Point load strength (50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED	
Initials:	B
Date:	18/9/09



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BOREHOLE LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 32 m AHD
EASTING: 282968
NORTHING: 6126708
DIP/AZIMUTH: 90°/--

BORE No: BH26
PROJECT No: 48670
DATE: 17 Jun 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing			Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments		
32		TOPSOIL - black sandy topsoil						Monument cover	
	0.25	TOPSOIL - brown sandy topsoil with some gravel							
	0.5	CLAY - light brown/red clay							
	0.75	CLAY - very stiff, mottled orange, grey and red clay							
31	1			S	1.0		5,8,13 N = 21	1	backfill
					1.45				casing
30	2	CLAY - hard, mottled grey and red silty clay						2	
		- some moist daly at 2.4m							
				S	2.5		6,17,21 N = 38		
					2.95			3	bentonite
29	3								
	3.65	SANDSTONE - extremely low strength, extremely weathered, mottled orange/red and grey sandstone							
28	4			S	4.0		13,5/50mm refusal	4	
					4.16				screen
								5	sand
27	5								
				S	5.5		17/140mm, - refusal		
					5.64				
26	6	Bore discontinued at 6.0m (limit of investigation)						6	

RIG: Gemco 210B

DRILLER: P Boers

LOGGED: AC

CASING:

TYPE OF BORING: Solid flight auger (TC-bit) to 6.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Standpipe installed to 6.0m

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo-oxidation detector
B	Bulk sample	S	Standard penetration test
J	Tube sample (x mm dia.)	PL	Point load strength ls(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	W	Water seep
		WL	Water level

CHECKED	
Initials:	B
Date:	15/6/09



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BOREHOLE LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 16 m AHD
EASTING: 283421
NORTHING: 6125283
DIP/AZIMUTH: 90°/-

BORE No: 8H27
PROJECT No: 48670
DATE: 17 Jun 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing			Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments		
16		CLAY - brown clay						Monument cover	
15.7	0.3	CLAY - very stiff, mottled orange and grey clay							
15	1			S	1.0		3.8,13 N = 21	1	backfill
					1.45				casing
14	2							2	
				S	2.5		6,18,- refusal		
					2.8				bentonite
13	3	SANDSTONE - extremely low strength, extremely weathered, brown sandstone						3	
12	4	SANDSTONE - extremely low strength, extremely weathered, brown sandstone with bands of low strength, highly weathered, grey sandstone		S	4.0 4.06		5/60mm,- refusal	4	screen
11	5							5	sand
10	6	Bore discontinued at 6.0m (limit of investigation)						6	

RIG: Gemco 210B

DRILLER: P Boers

LOGGED: AC

CASING:

TYPE OF BORING: Solid flight auger (TC-bit) to 6.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Standpipe installed to 6.0m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	go	Pocket penetrometer (kPa)
O	Disturbed sample	PID	Photo ionisation detector
B	Block sample	S	Standard penetration test
J	Tube sample (x mm dia)	PL	Point load strength: 1st(50) kPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		W	Water cnc

CHECKED

Initials: *[Signature]*
Date: 17/06/09



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BOREHOLE LOG

CLIENT: Shaolin Temple Foundation (Australia)
PROJECT: Proposed Residential & Tourist Development
LOCATION: Comberton Grange

SURFACE LEVEL: 20 m AHD
EASTING: 284010
NORTHING: 6128076
DIP/AZIMUTH: 90°/-

BORE No: BH28
PROJECT No: 48670
DATE: 17 Jun 09
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing			Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments		
20		CLAY - orange clay						Monument cover	
	0.6	CLAY - very stiff, mottled orange red and grey clay							
10	1			S	1.0		5,10,13 N = 23	1 backfill	
		- moist clay at 1.4m			1.45			casing	
10	2							2	
				S	2.5		8,10,16 N = 26		
					2.95			bentonite	
10	3	SANDSTONE - extremely low strength, extremely weathered sandstone						3	
				S	4.0		10/110mm - refusal		
10	4	SANDSTONE - extremely low strength, extremely weathered, grey sandstone			4.11			4	
								screen	
15	5	SHALE - extremely low strength, extremely weathered, grey shale						5	sand
14	6	Bore discontinued at 6.0m (limit of investigation)						6	

RIG: Gemco 210B

DRILLER: P Boers

LOGGED: AC

CASING:

TYPE OF BORING: Solid flight auger (TC-bit) to 6.0m

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Standpipe installed to 6.0m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	no	Packet penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PI	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		#	Water level

CHECKED

Initials: *[Signature]*

Date: *18/6/09*



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GROUNDWATER FIELD SHEET

PROJECT DETAILS / CONDITIONS					
Project Name	Proposed Residential and Tourist Development				
Project Number	48670				
Location	Comberton Grange, Jervis Bay				
BORE INSTALLATION DETAILS					
Date/Time	17/06/09				
Bore / Standpipe ID	BH 28				
Relative Level	20 m AHD				
Groundwater Level	No Free Groundwater Observed				
Bore Depth	6.0 m				
Installed By	AC				
BORE DEVELOPMENT DETAILS					
Date/Time	01/07/09 2:00 pm				
Groundwater Level	5.5 m bgl				
Estimated Bore Volume	4 L				
Total Volume Purged	3 L to dry				
Equipment	PVC bailer				
Purged By	AAW				
BORE PURGE DETAILS					
Date/Time	10/07/09 9:35 am				
Groundwater Level	4.78 m bgl				
Estimated Bore Volume	9 L				
Total Volume Purged	5 L to dry				
Equipment	PVC bailer				
Purged By	AAW				
Water Quality Parameters					
Volume	DO (ppm)	TDS (ppm)	pH	Redox (mV)	Temp
1 L	10.28	1959	3.65	393	16.0
2 L	10.21	1971	3.65	391	16.0
3 L	10.16	1980	3.65	391	16.0
4 L	10.13	1984	3.63	391	15.9
5 L	10.17	1986	3.61	391	15.7
GROUNDWATER SAMPLING					
Date/Time	10/07/09 12.15 pm				
Weather Conditions	Sunny				
Sample ID	BH 28				
Sample Appearance	Brown, high sediment content				
Filtration performed	Yes				
QA/QC Samples	Yes, BD1/100709				
Sampling Containers					
Comments / Observations	1 L glass, 1 L plastic, HNO ₃ preserved, H ₂ SO ₄ preserved, HCl preserved				
Sampled By	AAW				

APPENDIX G

Summary of Laboratory Results

Table G1: Summary of Soil Laboratory Results, mg/kg

Sample ID	Heavy Metals								TRH/BTEX						PAHs		Phenols	Total PCB	OCP					ASBESTOS
	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	C ₆ -C ₉	C ₁₀ -C ₃₆	Benzene	Toluene	Ethy I-Benzene	Xylene	Total PAH	B(a)P			Aldrin + Dieldrin	Chlordane	DDT + DDD + DDE	Heptachlor		
1/0-0.1	4	<0.5	14	34	26	<0.1	9	160	<25	300	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.06	<0.2	<0.1	<0.3	<0.1	NIL	
1/0.3-0.5	10	<0.5	17	9	15	<0.1	1	4	<25	<250	<0.5	<0.5	<1	<3	-	-	-	-	-	-	-	-	-	
2/0-0.1	<4	<0.5	5	3	9	<0.1	1	8	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
2/0.4-0.5	8	<0.5	23	4	16	<0.1	2	4	<25	<250	<0.5	<0.5	<1	<3	-	-	-	-	-	-	-	-	-	
3/0-0.1	6	<0.5	20	8	23	<0.1	3	8	<25	250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
4/0-0.1	<4	<0.5	8	3	9	<0.1	1	6	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
5/0-0.1	6	<0.5	14	5	17	<0.1	3	12	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
6/0-0.1	<4	<0.5	6	4	9	<0.1	2	5	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
7/0-0.1	6	0.5	18	9	19	<0.1	4	13	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
7/0.3-0.5	11	<0.5	25	18	22	<0.1	2	9	<25	<250	<0.5	<0.5	<1	<3	-	-	-	-	-	-	-	-	-	
8/0-0.1	<4	<0.5	2	3	18	<0.1	<1	5	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
BD1-27/5/09**	<4	<0.5	2	3	6	<0.1	<1	5	<25	<250	<0.5	<0.5	<1	<3	-	-	-	-	-	-	-	-	-	
9/0-0.1	<4	<0.5	3	2	6	<0.1	1	5	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
9/0.4-0.5	5	<0.5	13	2	15	<0.1	4	5	<25	<250	<0.5	<0.5	<1	<3	-	-	-	-	-	-	-	-	-	
10/0-0.1	<4	<0.5	2	2	5	<0.1	<1	4	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
11/0-0.1	<4	<0.5	7	5	10	<0.1	4	17	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
BD1-28/5/09**	<4	<0.5	8	6	11	<0.1	4	19	<25	260	<0.5	<0.5	<1	<3	-	-	-	-	-	-	-	-	-	
11/0.4-0.6	4	<0.5	21	13	12	<0.1	11	29	<25	<250	<0.5	<0.5	<1	<3	-	-	-	-	-	-	-	-	-	
12/0.3-0.5	7	<0.5	17	1	12	<0.1	1	2	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
13/0-0.1	<4	<0.5	9	4	11	<0.1	1	10	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
13/0.5-0.7	8	<0.5	18	5	14	0.1	1	4	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
14/0-0.2	<4	<0.5	4	<1	4	<0.1	<1	2	<25	<280	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
14/1.0-1.3	6	<0.5	10	<1	14	<0.1	<1	<1	<25	<250	<0.5	<0.5	<1	<3	-	-	-	-	-	-	-	-	-	
15/0-0.2	11	<0.5	19	<1	11	<0.1	<1	1	<25	<260	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
BD1/1/07/09	12	0.5	28	<1	15	<0.1	<1	1	<25	<250	<0.5	<0.5	<1	<3	-	-	-	-	-	-	-	-	-	
16/0-0.2	12	<0.5	17	3	13	<0.1	<1	2	<25	<600	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
16/1.0-1.2	5	<0.5	14	4	18	<0.1	<1	1	<25	<250	<0.5	<0.5	<1	<3	-	-	-	-	-	-	-	-	-	
17/0-0.2	<4	<0.5	3	1	7	<0.1	<1	3	<25	<310	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
18/0-0.1	<4	<0.5	6	<1	7	<0.1	<1	<1	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
18/0.5-0.7	8	<0.5	19	1	14	<0.1	<1	<1	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
19/0-0.2	5	<0.5	18	4	11	<0.1	3	6	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
BD1/2/07/09	5	<0.5	15	3	10	<0.1	3	6	<25	<250	<0.5	<0.5	<1	<3	-	-	-	-	-	-	-	-	-	
20/0-0.2	13	<0.5	43	<1	13	<0.1	2	2	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
21/0-0.2	5	<0.5	7	3	13	<0.1	1	3	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
BD2/1/07/09	7	<0.5	14	4	16	<0.1	2	5	<25	<250	<0.5	<0.5	<1	<3	-	-	-	-	-	-	-	-	-	
22/0-0.2	<4	<0.5	8	8	15	<0.1	<1	24	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
23/0-0.2	6	<0.5	21	2	12	<0.1	<1	4	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
24/0-0.2	<4	<0.5	6	1	8	<0.1	<1	7	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
25/0-0.2	<4	<0.5	6	<1	7	<0.1	1	1	<25	<250	<0.5	<0.5	<1	<3	<1.55	<0.05	<5	<0.6	<0.2	<0.1	<0.3	<0.1	NIL	
C1	100	20	12%	1000	300	15	600	7000	65*	1000*	1*	1.4*	3.1*	14*	20	1	8500	10	10	50	200	10	no asbestos at the ground surface	
C5	20	3	400	100	600	1	60	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	no asbestos at the ground surface	
NEPC	1-50	100-300	5-1000	2-100	2-200	0.03	5-500	10-300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Notes

- * Threshold concentrations for sensitive sites, NSW EPA Guidelines for Assessing Service Station Sites, 1994. (for TRH and BTEX, for all land uses).
- ** Replicate of sample above
- C1 NSW DEC Contaminated Sites: *Guidelines for the NSW Site Auditors Scheme 2nd Edition, 2006*. Health-based guidelines for residential with gardens and accessible soil including children's day-care centers, preschools, primary schools, townhouses, villas (Column 1)
- C5 NSW DEC Contaminated Sites: *Guidelines for the NSW Site Auditors Scheme 2nd Edition, 2006*. Provisional phytotoxicity-based investigation levels for sandy loams (Column 5)
- NEPC NEPC (1999). National Environmental Protection (Assessment of Site Contamination) Measure Schedule B(1) Guidelines on the Investigation Levels for Soil and Groundwater, Background Ranges
- ND not defined
- NIL No asbestos found at reporting limit of 0.1g/kg

Table G2: Summary of Fibre board Laboratory Results

Sample ID	Asbestos	Lead in Paint (%w/w)
FB1	60x35x3mm Fibre cement sheet, Chrysotile asbestos detected	-
FB2	-	0.21

Table G3: Summary of Groundwater Laboratory Results

Sample ID	Heavy Metals								Hardness	TRH/BTEX						PAHs		Phenols	PCB		OCP								OPP		
	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc		C ₆ -C ₉	C ₁₀ -C ₃₆	Benzene	Toluene	Ethyl-Benzene	Xylene	Total PAH	Naphthalene		Aroclor 1242	Aroclor 1254	Aldrin + Dieldrin	Chlordane	DDT	Endosulfan	Endrin	Heptachlor	Chlorpyrifos	Diazinon	Dimethoate	Fenitrothion	
Unit	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mgCaCO ₃ /L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
GW/28	<1	0.4	<1	<1	<1	<0.5	160	220	400	<10	<370	<1	<1	<1	<3	<1.6	<1	0.14	<2	<2	<0.4	<0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
BD1/100709	<1	0.5	1	<1	<1	<0.5	170	250	-	-	-	-	-	-	-	<1.6	<1	-	-	-	-	-	-	-	-	-	-	-	-		
Assessment Criteria	13 ^a	0.2 ^a	27.4 ^a	1.4 ^a	3.4 ^a	0.6 ^a	11 ^a	8 ^a	-	600 ^c		10 ^b	800 ^b	300 ^b	600 ^b	-	16 ^a	0.32 ^a	0.6 ^a	0.03 ^a	-	0.08 ^a	0.01 ^a	0.2 ^a	0.02 ^a	0.09 ^a	0.01 ^a	0.1 ^a	0.15 ^a	0.2 ^a	
Hardness Adjusted Guideline	-	2	229	12.7	91	-	99	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Notes

- a ANZECC *Guidelines for Fresh and Marine Water Quality*, 2000 Trigger values for toxicants at 95% levels of protection, Freshwater - Table 3.4.1
- NSW EPA Contaminated Sites *Guidelines for Assessing Service Station Sites* (1994) threshold concentrations for waters – Protection of aquatic ecosystems. Currently there are no other comprehensive, DECC endorsed
- b investigation levels for petroleum hydrocarbons
- c Dutch Intervention Value (Dutch IV) for mineral oils, from *Environmental Quality Standards in the Netherlands*, 1999
- BOLD** Exceedance of hardness adjusted guideline

APPENDIX H

Laboratory Results sheets and Chain of Custody Documentation



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CERTIFICATE OF ANALYSIS 29410

Client:

Douglas Partners Unanderra
Unit 1, 1 Luso Drive
Unanderra
NSW 2526

Attention: Jane Smalley

Sample log in details:

Your Reference:	<u>48670, Preliminary Contam. Assess.</u>
No. of samples:	63 Soils, 1 Material
Date samples received:	01/06/09
Date completed instructions received:	01/06/09

Analysis Details:

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

Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by:	9/06/09
Date of Preliminary Report:	Not issued
Issue Date:	5/06/09

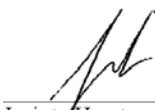
NATA accreditation number 2901. This document shall not be reproduced except in full.

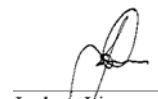
This document is issued in accordance with NATA's accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Tests not covered by NATA are denoted with *.

Results Approved By:


Jacinta Hurst
Operations Manager


Joshua Lim
Chemist

Envirolab Reference: 29410
Revision No: R 00



vTPH & BTEX in Soil	UNITS	29410-1	29410-7	29410-11	29410-12	29410-17
Our Reference:	-----	5/0-0.1	6/0-0.1	7/0-0.1	7/0.3-0.5	8/0-0.1
Your Reference	-----	28/05/2009	28/05/2009	27/05/2009	27/05/2009	27/05/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	86	92	92	95	90

vTPH & BTEX in Soil	UNITS	29410-21	29410-22	29410-26	29410-31	29410-32
Our Reference:	-----	9/0-0.1	9/0.4-0.5	10/0-0.1	11/0-0.1	11/0.4-0.6
Your Reference	-----	28/05/2009	28/05/2009	28/05/2009	29/05/2009	29/05/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	93	94	84	81	84

vTPH & BTEX in Soil	UNITS	29410-37	29410-38	29410-39	29410-43	29410-44
Our Reference:	-----	12/0.3-0.5	BD1-27/5/09	BD1-28/5/09	1/0-0.1	1/0.3-0.5
Your Reference	-----	27/05/2009	27/05/2009	28/05/2009	29/05/2009	29/05/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	98	93	94	88	89

vTPH & BTEX in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	29410-47 2/0-0.1 29/05/2009 Soil	29410-48 2/0.4-0.5 29/05/2009 Soil	29410-53 3/0-0.1 29/05/2009 Soil	29410-59 4/0-0.1 29/05/2009 Soil	29410-64 TB1 29/05/2009 Soil
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	95	88	94	87	93

vTPH & BTEX in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	29410-65 TB2 29/05/2009 Soil	29410-66 TB3 29/05/2009 Soil
Date extracted	-	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009
vTPH C ₆ - C ₉	mg/kg	<25	<25
Benzene	mg/kg	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	113	97

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	29410-1	29410-7	29410-11	29410-12	29410-17
Your Reference	-----	5/0-0.1	6/0-0.1	7/0-0.1	7/0.3-0.5	8/0-0.1
Date Sampled	-----	28/05/2009	28/05/2009	27/05/2009	27/05/2009	27/05/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
TPH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TPH C29 - C36	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	80	89	90	88	86

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	29410-21	29410-22	29410-26	29410-31	29410-32
Your Reference	-----	9/0-0.1	9/0.4-0.5	10/0-0.1	11/0-0.1	11/0.4-0.6
Date Sampled	-----	28/05/2009	28/05/2009	28/05/2009	29/05/2009	29/05/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
TPH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TPH C29 - C36	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	85	85	85	86	85

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	29410-37	29410-38	29410-39	29410-43	29410-44
Your Reference	-----	12/0.3-0.5	BD1-27/5/09	BD1-28/5/09	1/0-0.1	1/0.3-0.5
Date Sampled	-----	27/05/2009	27/05/2009	28/05/2009	29/05/2009	29/05/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
TPH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TPH C29 - C36	mg/kg	<100	<100	110	150	<100
Surrogate o-Terphenyl	%	85	92	96	96	89

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	29410-47	29410-48	29410-53	29410-59	29410-64
Your Reference	-----	2/0-0.1	2/0.4-0.5	3/0-0.1	4/0-0.1	TB1
Date Sampled	-----	29/05/2009	29/05/2009	29/05/2009	29/05/2009	29/05/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
TPH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TPH C29 - C36	mg/kg	<100	<100	100	<100	<100
Surrogate o-Terphenyl	%	92	91	93	91	91

sTPH in Soil (C10-C36)			
Our Reference:	UNITS	29410-65	29410-66
Your Reference	-----	TB2	TB3
Date Sampled	-----	29/05/2009	29/05/2009
Type of sample		Soil	Soil
Date extracted	-	3/06/2009	3/06/2009
Date analysed	-	3/06/2009	3/06/2009
TPH C ₁₀ - C ₁₄	mg/kg	<50	<50
TPH C ₁₅ - C ₂₈	mg/kg	<100	<100
TPH C ₂₉ - C ₃₆	mg/kg	<100	<100
Surrogate o-Terphenyl	%	91	91

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	29410-1 5/0-0.1 28/05/2009 Soil	29410-7 6/0-0.1 28/05/2009 Soil	29410-11 7/0-0.1 27/05/2009 Soil	29410-17 8/0-0.1 27/05/2009 Soil	29410-21 9/0-0.1 28/05/2009 Soil
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	99	101	104	99	101

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	29410-26 10/0-0.1 28/05/2009 Soil	29410-31 11/0-0.1 29/05/2009 Soil	29410-37 12/0.3-0.5 27/05/2009 Soil	29410-43 1/0-0.1 29/05/2009 Soil	29410-47 2/0-0.1 29/05/2009 Soil
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	3/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	101	102	103	100	102

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	29410-53 3/0-0.1 29/05/2009 Soil	29410-59 4/0-0.1 29/05/2009 Soil
Date extracted	-	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Surrogate p- Terphenyl-d ₁₄	%	104	102

Organochlorine Pesticides in soil						
Our Reference:	UNITS	29410-1	29410-7	29410-11	29410-17	29410-21
Your Reference	-----	5/0-0.1	6/0-0.1	7/0-0.1	8/0-0.1	9/0-0.1
Date Sampled	-----	28/05/2009	28/05/2009	27/05/2009	27/05/2009	28/05/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	125	117	120	117	121

Organochlorine Pesticides in soil						
Our Reference:	UNITS	29410-26	29410-31	29410-37	29410-43	29410-47
Your Reference	-----	10/0-0.1	11/0-0.1	12/0.3-0.5	1/0-0.1	2/0-0.1
Date Sampled	-----	28/05/2009	29/05/2009	27/05/2009	29/05/2009	29/05/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	121	124	117	119	121

Organochlorine Pesticides in soil			
Our Reference:	UNITS	29410-53	29410-59
Your Reference	-----	3/0-0.1	4/0-0.1
Date Sampled	-----	29/05/2009	29/05/2009
Type of sample		Soil	Soil
Date extracted	-	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009
HCB	mg/kg	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Surrogate TCLMX	%	115	118

Organophosphorus Pesticides	UNITS	29410-1	29410-7	29410-11	29410-17	29410-21
Our Reference:	-----	5/0-0.1	6/0-0.1	7/0-0.1	8/0-0.1	9/0-0.1
Your Reference	-----	28/05/2009	28/05/2009	27/05/2009	27/05/2009	28/05/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	125	117	120	117	121

Organophosphorus Pesticides	UNITS	29410-26	29410-31	29410-37	29410-43	29410-47
Our Reference:	-----	10/0-0.1	11/0-0.1	12/0.3-0.5	1/0-0.1	2/0-0.1
Your Reference	-----	28/05/2009	29/05/2009	27/05/2009	29/05/2009	29/05/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	121	125	117	119	121

Organophosphorus Pesticides			
Our Reference:	UNITS	29410-53	29410-59
Your Reference	-----	3/0-0.1	4/0-0.1
Date Sampled	-----	29/05/2009	29/05/2009
Type of sample		Soil	Soil
Date extracted	-	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009
Diazinon	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Surrogate TCLMX	%	115	118

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	29410-1 5/0-0.1 28/05/2009 Soil	29410-7 6/0-0.1 28/05/2009 Soil	29410-11 7/0-0.1 27/05/2009 Soil	29410-17 8/0-0.1 27/05/2009 Soil	29410-21 9/0-0.1 28/05/2009 Soil
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	125	117	120	117	121

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	29410-26 10/0-0.1 28/05/2009 Soil	29410-31 11/0-0.1 29/05/2009 Soil	29410-37 12/0.3-0.5 27/05/2009 Soil	29410-43 1/0-0.1 29/05/2009 Soil	29410-47 2/0-0.1 29/05/2009 Soil
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	121	124	117	119	121

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	29410-53 3/0-0.1 29/05/2009 Soil	29410-59 4/0-0.1 29/05/2009 Soil
Date extracted	-	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009
Arochlor 1016	mg/kg	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1
Surrogate TCLMX	%	115	118

Total Phenolics in Soil						
Our Reference:	UNITS	29410-1	29410-7	29410-11	29410-17	29410-21
Your Reference	-----	5/0-0.1	6/0-0.1	7/0-0.1	8/0-0.1	9/0-0.1
Date Sampled	-----	28/05/2009	28/05/2009	27/05/2009	27/05/2009	28/05/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	5/06/2009	5/06/2009	5/06/2009	5/06/2009	5/06/2009
Total Phenolics (as Phenol)	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0

Total Phenolics in Soil						
Our Reference:	UNITS	29410-26	29410-31	29410-37	29410-43	29410-47
Your Reference	-----	10/0-0.1	11/0-0.1	12/0.3-0.5	1/0-0.1	2/0-0.1
Date Sampled	-----	28/05/2009	29/05/2009	27/05/2009	29/05/2009	29/05/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	5/06/2009	5/06/2009	5/06/2009	5/06/2009	5/06/2009
Total Phenolics (as Phenol)	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0

Total Phenolics in Soil			
Our Reference:	UNITS	29410-53	29410-59
Your Reference	-----	3/0-0.1	4/0-0.1
Date Sampled	-----	29/05/2009	29/05/2009
Type of sample		Soil	Soil
Date extracted	-	3/06/2009	3/06/2009
Date analysed	-	5/06/2009	5/06/2009
Total Phenolics (as Phenol)	mg/kg	<5.0	<5.0

Acid Extractable metals in soil	UNITS	29410-1	29410-7	29410-11	29410-12	29410-17
Our Reference:	-----	5/0-0.1	6/0-0.1	7/0-0.1	7/0.3-0.5	8/0-0.1
Your Reference	-----	28/05/2009	28/05/2009	27/05/2009	27/05/2009	27/05/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date digested	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
Arsenic	mg/kg	6	<4	6	11	<4
Cadmium	mg/kg	<0.5	<0.5	0.5	<0.5	<0.5
Chromium	mg/kg	14	6	18	25	2
Copper	mg/kg	5	4	9	18	3
Lead	mg/kg	17	9	19	22	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	2	4	2	<1
Zinc	mg/kg	12	5	13	9	5

Acid Extractable metals in soil	UNITS	29410-21	29410-22	29410-26	29410-31	29410-32
Our Reference:	-----	9/0-0.1	9/0.4-0.5	10/0-0.1	11/0-0.1	11/0.4-0.6
Your Reference	-----	28/05/2009	28/05/2009	28/05/2009	29/05/2009	29/05/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date digested	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
Arsenic	mg/kg	<4	5	<4	<4	4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	3	13	2	7	21
Copper	mg/kg	2	2	2	5	13
Lead	mg/kg	6	15	5	10	12
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	1	4	<1	4	11
Zinc	mg/kg	5	5	4	17	29

Acid Extractable metals in soil	UNITS	29410-37	29410-38	29410-39	29410-43	29410-44
Our Reference:	-----	12/0.3-0.5	BD1-27/5/09	BD1-28/5/09	1/0-0.1	1/0.3-0.5
Your Reference	-----	27/05/2009	27/05/2009	28/05/2009	29/05/2009	29/05/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date digested	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
Arsenic	mg/kg	7	<4	<4	4	10
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	17	2	8	14	17
Copper	mg/kg	1	3	6	34	9
Lead	mg/kg	12	6	11	26	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	1	<1	4	9	1
Zinc	mg/kg	2	5	19	160	4

Acid Extractable metals in soil					
Our Reference:	UNITS	29410-47	29410-48	29410-53	29410-59
Your Reference	-----	2/0-0.1	2/0.4-0.5	3/0-0.1	4/0-0.1
Date Sampled	-----	29/05/2009	29/05/2009	29/05/2009	29/05/2009
Type of sample		Soil	Soil	Soil	Soil
Date digested	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009
Arsenic	mg/kg	<4	8	6	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	5	23	20	8
Copper	mg/kg	3	4	8	3
Lead	mg/kg	9	16	23	9
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	1	2	3	1
Zinc	mg/kg	8	4	8	6

Moisture						
Our Reference:	UNITS	29410-1	29410-7	29410-11	29410-12	29410-17
Your Reference	-----	5/0-0.1	6/0-0.1	7/0-0.1	7/0.3-0.5	8/0-0.1
Date Sampled	-----	28/05/2009	28/05/2009	27/05/2009	27/05/2009	27/05/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Moisture	%	17	20	28	22	25

Moisture						
Our Reference:	UNITS	29410-21	29410-22	29410-26	29410-31	29410-32
Your Reference	-----	9/0-0.1	9/0.4-0.5	10/0-0.1	11/0-0.1	11/0.4-0.6
Date Sampled	-----	28/05/2009	28/05/2009	28/05/2009	29/05/2009	29/05/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Moisture	%	18	17	19	30	16

Moisture						
Our Reference:	UNITS	29410-37	29410-38	29410-39	29410-43	29410-44
Your Reference	-----	12/0.3-0.5	BD1-27/5/09	BD1-28/5/09	1/0-0.1	1/0.3-0.5
Date Sampled	-----	27/05/2009	27/05/2009	28/05/2009	29/05/2009	29/05/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Moisture	%	17	26	24	30	15

Moisture						
Our Reference:	UNITS	29410-47	29410-48	29410-53	29410-59	29410-64
Your Reference	-----	2/0-0.1	2/0.4-0.5	3/0-0.1	4/0-0.1	TB1
Date Sampled	-----	29/05/2009	29/05/2009	29/05/2009	29/05/2009	29/05/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Date analysed	-	3/06/2009	3/06/2009	3/06/2009	3/06/2009	3/06/2009
Moisture	%	20	22	21	28	<0.10

Moisture			
Our Reference:	UNITS	29410-65	29410-66
Your Reference	-----	TB2	TB3
Date Sampled	-----	29/05/2009	29/05/2009
Type of sample		Soil	Soil
Date prepared	-	3/06/2009	3/06/2009
Date analysed	-	3/06/2009	3/06/2009
Moisture	%	0.10	<0.10

Asbestos ID - soils						
Our Reference:	UNITS	29410-1	29410-7	29410-11	29410-17	29410-21
Your Reference	-----	5/0-0.1	6/0-0.1	7/0-0.1	8/0-0.1	9/0-0.1
Date Sampled	-----	28/05/2009	28/05/2009	27/05/2009	27/05/2009	28/05/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
Sample Description	-	40g soil	40g soil	40g soil	40g soil	40g soil
Asbestos ID in soil	-	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected

Asbestos ID - soils						
Our Reference:	UNITS	29410-26	29410-31	29410-37	29410-43	29410-47
Your Reference	-----	10/0-0.1	11/0-0.1	12/0.3-0.5	1/0-0.1	2/0-0.1
Date Sampled	-----	28/05/2009	29/05/2009	27/05/2009	29/05/2009	29/05/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	4/06/2009	4/06/2009	4/06/2009	4/06/2009	4/06/2009
Sample Description	-	40g soil	40g soil	40g soil	40g soil	40g soil
Asbestos ID in soil	-	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected

Asbestos ID - soils			
Our Reference:	UNITS	29410-53	29410-59
Your Reference	-----	3/0-0.1	4/0-0.1
Date Sampled	-----	29/05/2009	29/05/2009
Type of sample		Soil	Soil
Date analysed	-	4/06/2009	4/06/2009
Sample Description	-	40g soil	40g soil
Asbestos ID in soil	-	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected

Asbestos ID - materials		
Our Reference:	UNITS	29410-52
Your Reference	-----	FB1
Date Sampled	-----	26/05/2009
Type of sample		Material
Date analysed	-	5/06/2009
Sample Description	-	60x35x3mm Fibre cement sheet
Asbestos ID in materials	-	Chrysotile asbestos detected
Asbestos Fibres	-	Bonded

Method ID	Methodology Summary
GC.16	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS.
GC.3	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
GC.12 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
GC-5	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
GC.8	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
GC-6	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
LAB.30	Total Phenolics - determined colorimetrically following distillation.
Metals.20 ICP-AES	Determination of various metals by ICP-AES.
Metals.21 CV-AAS	Determination of Mercury by Cold Vapour AAS.
LAB.8	Moisture content determined by heating at 105 deg C for a minimum of 4 hours.
ASB.1	Qualitative identification of asbestos type fibres in bulk using Polarised Light Microscopy and Dispersion Staining Techniques.
AS4964-2004	Qualitative identification of asbestos type fibres in bulk using Polarised Light Microscopy and Dispersion Staining Techniques.

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTPH & BTEX in Soil						Base II Duplicate II %RPD		
Date extracted	-			3/06/2009	29410-1	3/06/2009 3/06/2009	LCS-3	3/06/2009
Date analysed	-			4/06/09	29410-1	4/06/2009 4/06/2009	LCS-3	4/06/09
vTPH C ₆ - C ₉	mg/kg	25	GC.16	<25	29410-1	<25 <25	LCS-3	67%
Benzene	mg/kg	0.5	GC.16	<0.5	29410-1	<0.5 <0.5	LCS-3	62%
Toluene	mg/kg	0.5	GC.16	<0.5	29410-1	<0.5 <0.5	LCS-3	81%
Ethylbenzene	mg/kg	1	GC.16	<1.0	29410-1	<1.0 <1.0	LCS-3	71%
m+p-xylene	mg/kg	2	GC.16	<2.0	29410-1	<2.0 <2.0	LCS-3	60%
o-Xylene	mg/kg	1	GC.16	<1.0	29410-1	<1.0 <1.0	LCS-3	60%
Surrogate aaa-Trifluorotoluene	%		GC.16	88	29410-1	86 94 RPD: 9	LCS-3	85%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sTPH in Soil (C ₁₀ -C ₃₆)						Base II Duplicate II %RPD		
Date extracted	-			3/06/2009	29410-1	3/06/2009 3/06/2009	LCS-3	3/06/2009
Date analysed	-			3/06/2009	29410-1	3/06/2009 3/06/2009	LCS-3	3/06/2009
TPH C ₁₀ - C ₁₄	mg/kg	50	GC.3	<50	29410-1	<50 <50	LCS-3	98%
TPH C ₁₅ - C ₂₈	mg/kg	100	GC.3	<100	29410-1	<100 <100	LCS-3	107%
TPH C ₂₉ - C ₃₆	mg/kg	100	GC.3	<100	29410-1	<100 <100	LCS-3	127%
Surrogate o-Terphenyl	%		GC.3	93	29410-1	80 87 RPD: 8	LCS-3	96%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			3/06/2009	29410-1	3/06/2009 3/06/2009	LCS-3	3/06/2009
Date analysed	-			3/06/2009	29410-1	3/06/2009 3/06/2009	LCS-3	3/06/2009
Naphthalene	mg/kg	0.1	GC.12 subset	<0.1	29410-1	<0.1 <0.1	LCS-3	101%
Acenaphthylene	mg/kg	0.1	GC.12 subset	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	GC.12 subset	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	GC.12 subset	<0.1	29410-1	<0.1 <0.1	LCS-3	95%
Phenanthrene	mg/kg	0.1	GC.12 subset	<0.1	29410-1	<0.1 <0.1	LCS-3	98%
Anthracene	mg/kg	0.1	GC.12 subset	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	GC.12 subset	<0.1	29410-1	<0.1 <0.1	LCS-3	92%
Pyrene	mg/kg	0.1	GC.12 subset	<0.1	29410-1	<0.1 <0.1	LCS-3	98%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Benzo(a)anthracene	mg/kg	0.1	GC.12 subset	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	GC.12 subset	<0.1	29410-1	<0.1 <0.1	LCS-3	112%
Benzo(b+k)fluoranthene	mg/kg	0.2	GC.12 subset	<0.2	29410-1	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	GC.12 subset	<0.05	29410-1	<0.05 <0.05	LCS-3	86%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	GC.12 subset	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	GC.12 subset	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	GC.12 subset	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		GC.12 subset	102	29410-1	99 99 RPD: 0	LCS-3	113%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organochlorine Pesticides in soil						Base II Duplicate II %RPD		
Date extracted	-			3/06/2009	29410-1	3/06/2009 3/06/2009	LCS-3	3/06/2009
Date analysed	-			4/06/2009	29410-1	4/06/2009 4/06/2009	LCS-3	4/06/2009
HCB	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	LCS-3	96%
gamma-BHC	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	LCS-3	96%
Heptachlor	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	LCS-3	78%
delta-BHC	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	LCS-3	99%
Heptachlor Epoxide	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	LCS-3	104%
gamma-Chlordane	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	LCS-3	106%
Dieldrin	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	LCS-3	112%
Endrin	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	LCS-3	92%
pp-DDD	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	LCS-3	116%
Endosulfan II	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	LCS-3	99%
Methoxychlor	mg/kg	0.1	GC-5	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%		GC-5	115	29410-1	125 125 RPD: 0	LCS-3	122%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organophosphorus Pesticides						Base II Duplicate II %RPD		
Date extracted	-			3/06/2009	29410-1	3/06/2009 3/06/2009	LCS-3	3/06/2009
Date analysed	-			4/06/2009	29410-1	4/06/2009 4/06/2009	LCS-3	4/06/0009
Diazinon	mg/kg	0.1	GC.8	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Dimethoate	mg/kg	0.1	GC.8	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	0.1	GC.8	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Ronnel	mg/kg	0.1	GC.8	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos	mg/kg	0.1	GC.8	<0.1	29410-1	<0.1 <0.1	LCS-3	110%
Fenitrothion	mg/kg	0.1	GC.8	<0.1	29410-1	<0.1 <0.1	LCS-3	123%
Bromophos-ethyl	mg/kg	0.1	GC.8	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Ethion	mg/kg	0.1	GC.8	<0.1	29410-1	<0.1 <0.1	LCS-3	96%
Surrogate TCLMX	%		GC.8	115	29410-1	125 125 RPD: 0	LCS-3	112%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	-			3/06/2009	29410-1	3/06/2009 3/06/2009	LCS-3	3/06/2009
Date analysed	-			4/06/2009	29410-1	4/06/2009 4/06/2009	LCS-3	4/06/2009
Arochlor 1016	mg/kg	0.1	GC-6	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	GC-6	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	GC-6	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	GC-6	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	GC-6	<0.1	29410-1	<0.1 <0.1	LCS-3	114%
Arochlor 1260	mg/kg	0.1	GC-6	<0.1	29410-1	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%		GC-6	115	29410-1	125 125 RPD: 0	LCS-3	61%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Total Phenolics in Soil						Base II Duplicate II %RPD		
Date extracted	-			3/6/09	29410-1	3/06/2009 3/06/2009	LCS-1	3/6/09
Date analysed	-			5/6/09	29410-1	5/06/2009 5/06/2009	LCS-1	5/6/09
Total Phenolics (as Phenol)	mg/kg	5	LAB.30	<5.0	29410-1	<5.0 <5.0	LCS-1	103%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date digested	-			3/6/09	29410-1	3/06/2009 3/06/2009	LCS-1	3/6/09
Date analysed	-			4/6/09	29410-1	4/06/2009 4/06/2009	LCS-1	4/6/09
Arsenic	mg/kg	4	Metals.20 ICP-AES	<4	29410-1	6 <4	LCS-1	104%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Cadmium	mg/kg	0.5	Metals.20 ICP-AES	<0.5	29410-1	<0.5 <0.5	LCS-1	104%
Chromium	mg/kg	1	Metals.20 ICP-AES	<1	29410-1	14 8 RPD: 55	LCS-1	109%
Copper	mg/kg	1	Metals.20 ICP-AES	<1	29410-1	5 5 RPD: 0	LCS-1	110%
Lead	mg/kg	1	Metals.20 ICP-AES	<1	29410-1	17 10 RPD: 52	LCS-1	104%
Mercury	mg/kg	0.1	Metals.21 CV-AAS	<0.1	29410-1	<0.1 <0.1	LCS-1	105%
Nickel	mg/kg	1	Metals.20 ICP-AES	<1	29410-1	3 2 RPD: 40	LCS-1	109%
Zinc	mg/kg	1	Metals.20 ICP-AES	<1	29410-1	12 11 RPD: 9	LCS-1	109%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Moisture				
Date prepared	-			3/06/2009
Date analysed	-			3/06/2009
Moisture	%	0.1	LAB.8	<0.10

QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Asbestos ID - soils				
Date analysed	-			[NT]

QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Asbestos ID - materials				
Date analysed	-			[NT]

QUALITY CONTROL	UNITS	Dup. Sm#	Duplicate	Spike Sm#	Spike % Recovery
vTPH & BTEX in Soil			Base + Duplicate + %RPD		
Date extracted	-	29410-37	3/06/2009 3/06/2009	29410-7	3/06/2009
Date analysed	-	29410-37	4/06/2009 4/06/2009	29410-7	4/06/09
vTPH C ₆ - C ₉	mg/kg	29410-37	<25 <25	29410-7	83%
Benzene	mg/kg	29410-37	<0.5 <0.5	29410-7	75%
Toluene	mg/kg	29410-37	<0.5 <0.5	29410-7	98%
Ethylbenzene	mg/kg	29410-37	<1.0 <1.0	29410-7	88%
m+p-xylene	mg/kg	29410-37	<2.0 <2.0	29410-7	78%
o-Xylene	mg/kg	29410-37	<1.0 <1.0	29410-7	77%
Surrogate aaa-Trifluorotoluene	%	29410-37	98 98 RPD: 0	29410-7	101%

Client Reference: 48670, Preliminary Contam. Assess.

QUALITY CONTROL sTPH in Soil (C10-C36)	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	29410-37	3/06/2009 3/06/2009	29410-7	3/06/2009
Date analysed	-	29410-37	3/06/2009 3/06/2009	29410-7	3/06/2009
TPH C10 - C14	mg/kg	29410-37	<50 <50	29410-7	89%
TPH C15 - C28	mg/kg	29410-37	<100 <100	29410-7	95%
TPH C29 - C36	mg/kg	29410-37	<100 <100	29410-7	93%
Surrogate o-Terphenyl	%	29410-37	85 87 RPD: 2	29410-7	87%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	29410-37	3/06/2009 3/06/2009	29410-7	3/06/2009
Date analysed	-	29410-37	4/06/2009 4/06/2009	29410-7	3/06/2009
Naphthalene	mg/kg	29410-37	<0.1 <0.1	29410-7	89%
Acenaphthylene	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	29410-37	<0.1 <0.1	29410-7	87%
Phenanthrene	mg/kg	29410-37	<0.1 <0.1	29410-7	87%
Anthracene	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	29410-37	<0.1 <0.1	29410-7	83%
Pyrene	mg/kg	29410-37	<0.1 <0.1	29410-7	88%
Benzo(a)anthracene	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	29410-37	<0.1 <0.1	29410-7	98%
Benzo(b+k)fluoranthene	mg/kg	29410-37	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	29410-37	<0.05 <0.05	29410-7	76%
Indeno(1,2,3-c,d)pyrene	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	29410-37	103 100 RPD: 3	29410-7	102%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	29410-37	3/06/2009 3/06/2009	29410-7	3/06/2009
Date analysed	-	29410-37	4/06/2009 4/06/2009	29410-7	4/06/2009
HCB	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	29410-37	<0.1 <0.1	29410-7	95%
gamma-BHC	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	29410-37	<0.1 <0.1	29410-7	103%
Heptachlor	mg/kg	29410-37	<0.1 <0.1	29410-7	103%
delta-BHC	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	29410-37	<0.1 <0.1	29410-7	104%
Heptachlor Epoxide	mg/kg	29410-37	<0.1 <0.1	29410-7	108%
gamma-Chlordane	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	29410-37	<0.1 <0.1	29410-7	100%
Dieldrin	mg/kg	29410-37	<0.1 <0.1	29410-7	111%
Endrin	mg/kg	29410-37	<0.1 <0.1	29410-7	108%
pp-DDD	mg/kg	29410-37	<0.1 <0.1	29410-7	118%
Endosulfan II	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	29410-37	<0.1 <0.1	29410-7	107%
Methoxychlor	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%	29410-37	117 121 RPD: 3	29410-7	122%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	29410-37	3/06/2009 3/06/2009	29410-7	3/06/2009
Date analysed	-	29410-37	4/06/2009 4/06/2009	29410-7	4/06/2009
Diazinon	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Dimethoate	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Ronnel	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos	mg/kg	29410-37	<0.1 <0.1	29410-7	114%
Fenitrothion	mg/kg	29410-37	<0.1 <0.1	29410-7	120%
Bromophos-ethyl	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Ethion	mg/kg	29410-37	<0.1 <0.1	29410-7	98%
Surrogate TCLMX	%	29410-37	117 121 RPD: 3	29410-7	124%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	29410-37	3/06/2009 3/06/2009	29410-7	3/06/2009
Date analysed	-	29410-37	4/06/2009 4/06/2009	29410-7	4/06/2009
Arochlor 1016	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	29410-37	<0.1 <0.1	29410-7	121%
Arochlor 1260	mg/kg	29410-37	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%	29410-37	117 121 RPD: 3	29410-7	67%
QUALITY CONTROL Total Phenolics in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	29410-7	3/6/09
Date analysed	-	[NT]	[NT]	29410-7	5/6/09
Total Phenolics (as Phenol)	mg/kg	[NT]	[NT]	29410-7	108%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	29410-37	3/06/2009 3/06/2009	29410-7	3/6/09
Date analysed	-	29410-37	4/06/2009 4/06/2009	29410-7	4/6/09
Arsenic	mg/kg	29410-37	7 7 RPD: 0	29410-7	108%
Cadmium	mg/kg	29410-37	<0.5 <0.5	29410-7	106%
Chromium	mg/kg	29410-37	17 18 RPD: 6	29410-7	114%
Copper	mg/kg	29410-37	1 1 RPD: 0	29410-7	115%
Lead	mg/kg	29410-37	12 12 RPD: 0	29410-7	107%
Mercury	mg/kg	29410-37	<0.1 <0.1	29410-7	104%
Nickel	mg/kg	29410-37	1 1 RPD: 0	29410-7	111%
Zinc	mg/kg	29410-37	2 2 RPD: 0	29410-7	110%

Report Comments:

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 30-40g of sample in its own container.

Trace Elements: the high %RPD of the duplicate results obtained for Chromium sample 1 is due to the non homogeneous nature of the sample for this particular element.

Asbestos was analysed by Approved Identifier: Joshua Lim

INS: Insufficient sample for this test

NT: Not tested

PQL: Practical Quantitation Limit

<: Less than

>: Greater than

RPD: Relative Percent Difference

NA: Test not required

LCS: Laboratory Control Sample

NR: Not requested

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike: A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample): This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria:

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

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for

SVOC and speciated phenols is acceptable.

Surrogates: 60-140% is acceptable for general organics and 10-140% for

SVOC and speciated phenols.

CHAIN OF CUSTODY

Project Name: <u>Preliminary Contamination Assessment</u>		To: Envirolab Services
Project No: <u>48610</u>	Sampler: <u>DBY</u>	12 Ashley St Chatswood 2067
Project Mgr: Jane Smalley	Mob. Phone: <u>0448 290 782</u>	Attn: Tania Notaras
Email: <u>jane.smalley@douglaspartners.com.au</u>		Phone: (02) 9910 6200 Fax: (02) 9910 6201
Date Required: <u>8 Jul</u>		Email: <u>tnotaras@envirolabservices.com.au</u>

Sample ID	Lab ID	Sampling Date	Sample Type	Container type	Analytes										Notes/preservation
			S - soil W - water	G - glass P - plastic	8 Heavy Metals	As Cd Cr Pb Hg Ni	TRH/ BTEX	PAH	Phenol	OCP/OPP PCB	VOC	asbestos	pH		
5/0-0.1	1	28/5/09	S	G/P	X		X	X	X	X		X			
5/0.2-0.25	2														
5/0.4-0.5	3														
5/0.8-1	4														
5/1.8-2	5														
5/2.8-3	6														
6/0-0.1	7				X		X	X	X	X		X			
6/0.4-0.5	8														
6/0.8-1	9														
6/1.3-1.5	10														
7/0-0.1	11	27/5			X		X	X	X	X		X			
7/0.3-0.5	12				X		X								
7/0.7-1	13														

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: 9910 6200

Job No: 29410
Date received: 1/6/09
Time received: 3:15
Received by: SS
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: PO Box 486, Unanderra NSW 2526	Phone: (02) 4271 1836 Fax: (02) 4271 1897	
Relinquished by: <u>JAS</u>	Transported to laboratory by:		
Signed: <u>[Signature]</u>	Date & Time: <u>16/09/09 2pm</u>	Received By: <u>[Signature]</u>	

CHAIN OF CUSTODY

Project Name: <u>Preliminary Contamination Assessment</u>		To: Envirolab Services
Project No: <u>48640</u>	Sampler: <u>DB</u>	12 Ashley St Chatswood 2067
Project Mgr: Jane Smalley	Mob. Phone: <u>0448280782</u>	Attn: Tania Notaras
Email: <u>jane.smalley@douglaspartners.com.au</u>		Phone: (02) 9910 6200 Fax: (02) 9910 6201
Date Required: <u>Std</u>		Email: <u>tnotaras@envirolabservices.com.au</u>

not received

Sample ID	Lab ID	Sampling Date	Sample Type	Container type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	8 Heavy Metals	As Cd Cr Pb Hg Ni	TRH/ BTEX	PAH	Phenol	OCP/OPP PCB	VOC	asbestos	pH	
7/13-15	14	27/5	S	G/P										
7/17-2	15													
7/25-28	16													
8/0-0.1	17					x	x	x	x		x			
9/0.3-0.5	18													
9/0.8-1	19													
8/13-15	20													
9/0-0.1	21				28/5		x	x	x	x		x		
9/0.4-0.5	22						x	x						
9/0.8-1	23													
9/1.8-2	24													
9/2.8-3	25													
10/0-0.1	26				x	x	x	x		x				

Lab Report No:		Send Results to: Douglas Partners Pty Ltd		Address: PO Box 486, Unanderra NSW 2526		Phone: (02) 4271 1836 Fax: (02) 4271 1897	
Relinquished by: <u>JAS</u>		Signed: <u>P</u>		Date & Time: <u>16/04 9am</u>		Transported to laboratory by:	
						Received By: <u>SS</u>	

CHAIN OF CUSTODY

Project Name: <u>Preliminary Contamination Assessment</u>		To: Envirolab Services
Project No: <u>42640</u>	Sampler: <u>DB</u>	12 Ashley St Chatswood 2067
Project Mgr: Jane Smalley	Mob. Phone: <u>0448280782</u>	Attn: Tania Notaras
Email: jane.smalley@douglaspartners.com.au		Phone: (02) 9910 6200 Fax: (02) 9910 6201
Date Required: <u>Std</u>		Email: tnotaras@envirolabservices.com.au

Sample ID	Lab ID	Sampling Date	Sample Type	Container type	Analytes										Notes/preservation
			S - soil W - water	G - glass P - plastic	8 Heavy Metals	As Cd Cr Pb Hg Ni	TRH/ BTEX	PAH	Phenol	OCP/OPP PCB	VOC	asbestos	pH		
10/0-0-05	27	29/5/04	S	G/P											
10/0-8-1	28														
10/1-8-2	29														
10/2-5-26	30														
11/0-0-1	31				X		X	X	X	X		X			
11/0-4-05	32				X		X								
11/0-8-1	33														
11/0-8-2	34														
11/3-3-3	35														
12/0-0-1	36	27/5			X		X	X	X	X		X			
12/0-3-0-5	37	1			X		X	X	X	X		X			
BD1-27/5/04	38	27/5			X		X								
BD1-28/5/04	39	28/5			X		X								

not received

Lab Report No:	
Send Results to: Douglas Partners Pty Ltd	Address: PO Box 486, Unanderra NSW 2526 Phone: (02) 4271 1836 Fax: (02) 4271 1897
Relinquished by: <u>JAS</u>	Transported to laboratory by:
Signed: <u>B</u>	Date & Time: <u>1/6/04 9am</u> Received By: <u>SS</u>

CHAIN OF CUSTODY

Project Name: <u>Preliminary Contamination Assessment</u>		To: Envirolab Services
Project No: <u>42640</u>		12 Ashley St Chatswood 2067
Project Mgr: Jane Smalley		Attn: Tania Notaras
Email: <u>jane.smalley@douglaspartners.com.au</u>		Phone: (02) 9910 6200 Fax: (02) 9910 6201
Date Required: <u>Std</u>		Email: <u>tnotaras@envirolabservices.com.au</u>
Sampler: <u>DB</u>		
Mob. Phone: <u>0448280782</u>		

Sample ID	Lab ID	Sampling Date	Sample Type S - soil W - water	Container type G - glass P - plastic	Analytes										Notes/preservation	
					8 Heavy Metals	As Cd Cr Pb Hg Ni	TRH/ BTEX	PAH	Phenol	OCP/OPP PCB	VOC	asbestos	pH			
12/08-1	40	27/5	S	G/P												
12/11-2-0	41	1														
12/12-3	42	1														
1/0-0-1	43	29/5														
1/03-05	44	1														
1/08-1	45	1														
1/1-9-2	46	1														
2/10-0-1	47	1														
2/04-05	48	1														
2/08-1	49	1														
2/06-2	50	1														
2/283	51	1														
FB 1	52	26/5	Fibre board												X	Lead paint

Lab Report No:		Address: PO Box 486, Unanderra NSW 2526		Phone: (02) 4271 1836 Fax: (02) 4271 1897	
Send Results to: Douglas Partners Pty Ltd		Relinquished by: <u>JHS</u>		Transported to laboratory by:	
Signed: <u>B</u>		Date & Time: <u>1/6/04 9am</u>		Received By: <u>SS</u>	

CHAIN OF CUSTODY

Project Name: <u>Preliminary Contamination Assessment</u>		To: Envirolab Services	
Project No: <u>48640</u>		12 Ashley St Chatswood 2067	
Project Mgr: Jane Smalley		Attn: Tania Notaras	
Email: jane.smalley@douglaspartners.com.au		Phone: (02) 9910 6200 Fax: (02) 9910 6201	
Date Required: <u>Std</u>		Email: tnotaras@envirolabservices.com.au	
Sampler: <u>DB</u>		Mob. Phone: <u>0448280782</u>	

Sample ID	Lab ID	Sampling Date	Sample Type	Container type	Analytes										Notes/preservation
			S - soil W - water	G - glass P - plastic	8 Heavy Metals	As Cd Cr Pb Hg Ni	TRH/ BTEX	PAH	Phenol	OCP/OPP PCB	VOC	asbestos	pH		
3/0-0-1	53	29/5	S	G P	x		x	x	x	x		x			
3/0.2-0.25	54														
3/0.4-0.5	55														
3/0.8-1	56														
3/1.8-2	57														
3/3-3.2	58														
4/0-0-1	59				x		x	x	x	x		x			
4/0.4-0.5	60														
4/1.8-2	61														
4/2-5.2-8	62														
4/0.8-1.0	63														
TB 1	64						x								
TB 2	65														
TB 3	66														

Lab Report No:		Address: PO Box 486, Unanderra NSW 2526		Phone: (02) 4271 1836 Fax: (02) 4271 1897	
Send Results to: Douglas Partners Pty Ltd		Relinquished by: <u>JAS</u>		Transported to laboratory by:	
Signed: <u>P</u>		Date & Time: <u>1/6/04 9am</u>		Received By: <u>S</u>	



Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 29956

Client:

Douglas Partners Unanderra
Unit 1, 1 Luso Drive
Unanderra
NSW 2526

Attention: Dean Young

Sample log in details:

Your Reference:	<u>48670, Tourist Development</u>
No. of samples:	9 Soils, 1 Paint
Date samples received:	19/06/09
Date completed instructions received:	19/06/09

Analysis Details:

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

Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by:	26/06/09
Date of Preliminary Report:	Not Issued
Issue Date:	25/06/09

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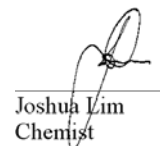
This document is issued in accordance with NATA's accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Tests not covered by NATA are denoted with *.

Results Approved By:


Jacinta Hurst
Operations Manager


Joshua Lim
Chemist

Envirolab Reference: 29956
Revision No: R 00



vTPH & BTEX in Soil						
Our Reference:	UNITS	29956-1	29956-2	29956-4	29956-5	29956-9
Your Reference	-----	13/0-0.1	13/0.5-0.7	18/0-0.1	18/0.5-0.7	TB1-18/6/09
Date Sampled	-----	18/06/2009	18/06/2009	18/06/2009	18/06/2009	18/06/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/06/2009	22/06/2009	22/06/2009	22/06/2009	22/06/2009
Date analysed	-	22/06/2009	22/06/2009	22/06/2009	22/06/2009	22/06/2009
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	89	98	97	93	97

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	29956-1	29956-2	29956-4	29956-5	29956-9
Your Reference	-----	13/0-0.1	13/0.5-0.7	18/0-0.1	18/0.5-0.7	TB1-18/6/09
Date Sampled	-----	18/06/2009	18/06/2009	18/06/2009	18/06/2009	18/06/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/06/2009	22/06/2009	22/06/2009	22/06/2009	22/06/2009
Date analysed	-	22/06/2009	22/06/2009	22/06/2009	22/06/2009	22/06/2009
TPH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TPH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TPH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	90	87	85	84	89

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	29956-1 13/0-0.1 18/06/2009 Soil	29956-2 13/0.5-0.7 18/06/2009 Soil	29956-4 18/0-0.1 18/06/2009 Soil	29956-5 18/0.5-0.7 18/06/2009 Soil
Date extracted	-	22/06/2009	22/06/2009	22/06/2009	22/06/2009
Date analysed	-	23/06/2009	23/06/2009	23/06/2009	23/06/2009
Naphthalene	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+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate p- Terphenyl-d ₁₄	%	97	104	99	100

Organochlorine Pesticides in soil					
Our Reference:	UNITS	29956-1	29956-2	29956-4	29956-5
Your Reference	-----	13/0-0.1	13/0.5-0.7	18/0-0.1	18/0.5-0.7
Date Sampled	-----	18/06/2009	18/06/2009	18/06/2009	18/06/2009
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	22/06/2009	22/06/2009	22/06/2009	22/06/2009
Date analysed	-	22/06/2009	22/06/2009	22/06/2009	22/06/2009
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	82	92	84	97

Organophosphorus Pesticides					
Our Reference:	UNITS	29956-1	29956-2	29956-4	29956-5
Your Reference	-----	13/0-0.1	13/0.5-0.7	18/0-0.1	18/0.5-0.7
Date Sampled	-----	18/06/2009	18/06/2009	18/06/2009	18/06/2009
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	22/06/2009	22/06/2009	22/06/2009	22/06/2009
Date analysed	-	22/06/2009	22/06/2009	22/06/2009	22/06/2009
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	82	92	84	97

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	29956-1 13/0-0.1 18/06/2009 Soil	29956-2 13/0.5-0.7 18/06/2009 Soil	29956-4 18/0-0.1 18/06/2009 Soil	29956-5 18/0.5-0.7 18/06/2009 Soil
Date extracted	-	22/06/2009	22/06/2009	22/06/2009	22/06/2009
Date analysed	-	22/06/2009	22/06/2009	22/06/2009	22/06/2009
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	82	92	84	97

Total Phenolics in Soil					
Our Reference:	UNITS	29956-1	29956-2	29956-4	29956-5
Your Reference	-----	13/0-0.1	13/0.5-0.7	18/0-0.1	18/0.5-0.7
Date Sampled	-----	18/06/2009	18/06/2009	18/06/2009	18/06/2009
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	23/06/2009	23/06/2009	23/06/2009	23/06/2009
Date analysed	-	24/06/2009	24/06/2009	24/06/2009	24/06/2009
Total Phenolics (as Phenol)	mg/kg	<5.0	<5.0	<5.0	<5.0

Acid Extractable metals in soil					
Our Reference:	UNITS	29956-1	29956-2	29956-4	29956-5
Your Reference	-----	13/0-0.1	13/0.5-0.7	18/0-0.1	18/0.5-0.7
Date Sampled	-----	18/06/2009	18/06/2009	18/06/2009	18/06/2009
Type of sample		Soil	Soil	Soil	Soil
Date digested	-	22/06/2009	22/06/2009	22/06/2009	22/06/2009
Date analysed	-	23/06/2009	23/06/2009	23/06/2009	23/06/2009
Arsenic	mg/kg	<4	8	<4	8
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	9	18	6	19
Copper	mg/kg	4	5	<1	1
Lead	mg/kg	11	14	7	14
Mercury	mg/kg	<0.1	0.1	<0.1	<0.1
Nickel	mg/kg	1	1	<1	<1
Zinc	mg/kg	10	4	<1	<1

Moisture						
Our Reference:	UNITS	29956-1	29956-2	29956-4	29956-5	29956-9
Your Reference	-----	13/0-0.1	13/0.5-0.7	18/0-0.1	18/0.5-0.7	TB1-18/6/09
Date Sampled	-----	18/06/2009	18/06/2009	18/06/2009	18/06/2009	18/06/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	22/06/2009	22/06/2009	22/06/2009	22/06/2009	22/06/2009
Date analysed	-	22/06/2009	22/06/2009	22/06/2009	22/06/2009	22/06/2009
Moisture	%	25	22	9.2	20	0.10

Asbestos ID - soils					
Our Reference:	UNITS	29956-1	29956-2	29956-4	29956-5
Your Reference	-----	13/0-0.1	13/0.5-0.7	18/0-0.1	18/0.5-0.7
Date Sampled	-----	18/06/2009	18/06/2009	18/06/2009	18/06/2009
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	24/06/2009	24/06/2009	24/06/2009	24/06/2009
Sample Description	-	40g soil	40g soil	40g soil	40g soil
Asbestos ID in soil	-	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected

Lead in Paint Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	29956-10 FB2 18/06/2009 Paint
Lead in paint	%w/w	0.21

Method ID	Methodology Summary
GC.16	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS.
GC.3	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
GC.12 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
GC-5	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
GC.8	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
GC-6	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
LAB.30	Total Phenolics - determined colorimetrically following distillation.
Metals.20 ICP-AES	Determination of various metals by ICP-AES.
Metals.21 CV-AAS	Determination of Mercury by Cold Vapour AAS.
LAB.8	Moisture content determined by heating at 105 deg C for a minimum of 4 hours.
ASB.1	Qualitative identification of asbestos type fibres in bulk using Polarised Light Microscopy and Dispersion Staining Techniques.
Metals.4	Digestion of Paint chips for Lead determination by ICP-AES.

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTPH & BTEX in Soil						Base II Duplicate II %RPD		
Date extracted	-			22/06/2009	29956-1	22/06/2009 22/06/2009	LCS-3	22/06/2009
Date analysed	-			22/06/2009	29956-1	22/06/2009 22/06/2009	LCS-3	22/06/2009
vTPH C ₆ - C ₉	mg/kg	25	GC.16	<25	29956-1	<25 <25	LCS-3	95%
Benzene	mg/kg	0.5	GC.16	<0.5	29956-1	<0.5 <0.5	LCS-3	88%
Toluene	mg/kg	0.5	GC.16	<0.5	29956-1	<0.5 <0.5	LCS-3	96%
Ethylbenzene	mg/kg	1	GC.16	<1.0	29956-1	<1.0 <1.0	LCS-3	97%
m+p-xylene	mg/kg	2	GC.16	<2.0	29956-1	<2.0 <2.0	LCS-3	97%
o-Xylene	mg/kg	1	GC.16	<1.0	29956-1	<1.0 <1.0	LCS-3	105%
Surrogate aaa-Trifluorotoluene	%		GC.16	98	29956-1	89 96 RPD: 8	LCS-3	100%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sTPH in Soil (C ₁₀ -C ₃₆)						Base II Duplicate II %RPD		
Date extracted	-			22/06/2009	29956-1	22/06/2009 22/06/2009	LCS-3	22/06/2009
Date analysed	-			22/06/2009	29956-1	22/06/2009 22/06/2009	LCS-3	22/06/2009
TPH C ₁₀ - C ₁₄	mg/kg	50	GC.3	<50	29956-1	<50 <50	LCS-3	86%
TPH C ₁₅ - C ₂₈	mg/kg	100	GC.3	<100	29956-1	<100 <100	LCS-3	94%
TPH C ₂₉ - C ₃₆	mg/kg	100	GC.3	<100	29956-1	<100 <100	LCS-3	93%
Surrogate o-Terphenyl	%		GC.3	86	29956-1	90 88 RPD: 2	LCS-3	86%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			22/06/2009	29956-1	22/06/2009 22/06/2009	LCS-3	22/06/2009
Date analysed	-			23/06/09	29956-1	23/06/2009 23/06/2009	LCS-3	23/06/09
Naphthalene	mg/kg	0.1	GC.12 subset	<0.1	29956-1	<0.1 <0.1	LCS-3	98%
Acenaphthylene	mg/kg	0.1	GC.12 subset	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	GC.12 subset	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	GC.12 subset	<0.1	29956-1	<0.1 <0.1	LCS-3	99%
Phenanthrene	mg/kg	0.1	GC.12 subset	<0.1	29956-1	<0.1 <0.1	LCS-3	107%
Anthracene	mg/kg	0.1	GC.12 subset	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	GC.12 subset	<0.1	29956-1	<0.1 <0.1	LCS-3	98%
Pyrene	mg/kg	0.1	GC.12 subset	<0.1	29956-1	<0.1 <0.1	LCS-3	105%

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QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Benzo(a)anthracene	mg/kg	0.1	GC.12 subset	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	GC.12 subset	<0.1	29956-1	<0.1 <0.1	LCS-3	98%
Benzo(b+k)fluoranthene	mg/kg	0.2	GC.12 subset	<0.2	29956-1	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	GC.12 subset	<0.05	29956-1	<0.05 <0.05	LCS-3	93%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	GC.12 subset	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	GC.12 subset	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	GC.12 subset	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		GC.12 subset	107	29956-1	97 99 RPD: 2	LCS-3	100%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organochlorine Pesticides in soil						Base II Duplicate II %RPD		
Date extracted	-			22/06/09	29956-1	22/06/2009 22/06/2009	LCS-3	22/06/09
Date analysed	-			22/06/09	29956-1	22/06/2009 22/06/2009	LCS-3	22/06/09
HCB	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	LCS-3	71%
gamma-BHC	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	LCS-3	111%
Heptachlor	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	LCS-3	72%
delta-BHC	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	LCS-3	76%
Heptachlor Epoxide	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	LCS-3	79%
gamma-Chlordane	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	LCS-3	122%
Dieldrin	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	LCS-3	81%
Endrin	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	LCS-3	80%
pp-DDD	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	LCS-3	120%
Endosulfan II	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	LCS-3	83%
Methoxychlor	mg/kg	0.1	GC-5	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%		GC-5	88	29956-1	82 100 RPD: 20	LCS-3	85%

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Revision No: R 00



QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organophosphorus Pesticides						Base II Duplicate II %RPD		
Date extracted	-			22/06/09	29956-1	22/06/2009 22/06/2009	LCS-3	22/06/09
Date analysed	-			22/06/09	29956-1	22/06/2009 22/06/2009	LCS-3	22/06/09
Diazinon	mg/kg	0.1	GC.8	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Dimethoate	mg/kg	0.1	GC.8	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	0.1	GC.8	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Ronnel	mg/kg	0.1	GC.8	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos	mg/kg	0.1	GC.8	<0.1	29956-1	<0.1 <0.1	LCS-3	102%
Fenitrothion	mg/kg	0.1	GC.8	<0.1	29956-1	<0.1 <0.1	LCS-3	127%
Bromophos-ethyl	mg/kg	0.1	GC.8	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Ethion	mg/kg	0.1	GC.8	<0.1	29956-1	<0.1 <0.1	LCS-3	91%
Surrogate TCLMX	%		GC.8	88	29956-1	82 100 RPD: 20	LCS-3	88%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	-			22/06/09	29956-1	22/06/2009 22/06/2009	LCS-3	22/06/09
Date analysed	-			22/06/09	29956-1	22/06/2009 22/06/2009	LCS-3	22/06/09
Arochlor 1016	mg/kg	0.1	GC-6	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	GC-6	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	GC-6	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	GC-6	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	GC-6	<0.1	29956-1	<0.1 <0.1	LCS-3	109%
Arochlor 1260	mg/kg	0.1	GC-6	<0.1	29956-1	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%		GC-6	88	29956-1	82 100 RPD: 20	LCS-3	88%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Total Phenolics in Soil						Base II Duplicate II %RPD		
Date extracted	-			23/06/2009	29956-1	23/06/2009 23/06/2009	LCS-2	23/06/2009
Date analysed	-			24/06/09	29956-1	24/06/2009 24/06/2009	LCS-2	23/06/2009
Total Phenolics (as Phenol)	mg/kg	5	LAB.30	<5.0	29956-1	<5.0 <5.0	LCS-2	93%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date digested	-			22/6/09	29956-1	22/06/2009 22/06/2009	LCS-1	22/6/09
Date analysed	-			23/6/09	29956-1	23/06/2009 23/06/2009	LCS-1	23/6/09
Arsenic	mg/kg	4	Metals.20 ICP-AES	<4	29956-1	<4 <4	LCS-1	91%
Cadmium	mg/kg	0.5	Metals.20 ICP-AES	<0.5	29956-1	<0.5 <0.5	LCS-1	91%
Chromium	mg/kg	1	Metals.20 ICP-AES	<1	29956-1	9 9 RPD: 0	LCS-1	93%
Copper	mg/kg	1	Metals.20 ICP-AES	<1	29956-1	4 4 RPD: 0	LCS-1	94%
Lead	mg/kg	1	Metals.20 ICP-AES	<1	29956-1	11 12 RPD: 9	LCS-1	93%
Mercury	mg/kg	0.1	Metals.21 CV-AAS	<0.1	29956-1	<0.1 <0.1	LCS-1	118%
Nickel	mg/kg	1	Metals.20 ICP-AES	<1	29956-1	1 1 RPD: 0	LCS-1	93%
Zinc	mg/kg	1	Metals.20 ICP-AES	<1	29956-1	10 10 RPD: 0	LCS-1	94%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Moisture				
Date prepared	-			22/06/2009
Date analysed	-			22/06/2009
Moisture	%	0.1	LAB.8	<0.10

QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Asbestos ID - soils				
Date analysed	-			[NT]

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Lead in Paint						Base II Duplicate II %RPD		
Lead in paint	%w/w	0.05	Metals.4	<0.05	[NT]	[NT]	LCS-1	91%

QUALITY CONTROL	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
vTPH & BTEX in Soil					
Date extracted	-	[NT]	[NT]	29956-2	22/06/2009
Date analysed	-	[NT]	[NT]	29956-2	22/06/2009
vTPH C ₆ - C ₉	mg/kg	[NT]	[NT]	29956-2	85%
Benzene	mg/kg	[NT]	[NT]	29956-2	82%
Toluene	mg/kg	[NT]	[NT]	29956-2	82%
Ethylbenzene	mg/kg	[NT]	[NT]	29956-2	88%
m+p-xylene	mg/kg	[NT]	[NT]	29956-2	87%

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QUALITY CONTROL vTPH & BTEX in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
o-Xylene	mg/kg	[NT]	[NT]	29956-2	93%
Surrogate aaa-Trifluorotoluene	%	[NT]	[NT]	29956-2	93%
QUALITY CONTROL sTPH in Soil (C10-C36)	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	29956-2	22/06/2009
Date analysed	-	[NT]	[NT]	29956-2	22/06/2009
TPH C10 - C14	mg/kg	[NT]	[NT]	29956-2	86%
TPH C15 - C28	mg/kg	[NT]	[NT]	29956-2	98%
TPH C29 - C36	mg/kg	[NT]	[NT]	29956-2	97%
Surrogate o-Terphenyl	%	[NT]	[NT]	29956-2	85%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	29956-2	22/06/2009
Date analysed	-	[NT]	[NT]	29956-2	23/06/09
Naphthalene	mg/kg	[NT]	[NT]	29956-2	91%
Acenaphthylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	[NT]	[NT]	29956-2	96%
Phenanthrene	mg/kg	[NT]	[NT]	29956-2	101%
Anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	[NT]	[NT]	29956-2	94%
Pyrene	mg/kg	[NT]	[NT]	29956-2	100%
Benzo(a)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	[NT]	[NT]	29956-2	102%
Benzo(b+k)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	[NT]	[NT]	29956-2	87%
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	[NT]	[NT]	29956-2	97%

Client Reference: 48670, Tourist Development

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	29956-2	22/06/09
Date analysed	-	[NT]	[NT]	29956-2	22/06/09
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	29956-2	101%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	29956-2	94%
Heptachlor	mg/kg	[NT]	[NT]	29956-2	105%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	29956-2	105%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	29956-2	109%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	29956-2	98%
Dieldrin	mg/kg	[NT]	[NT]	29956-2	109%
Endrin	mg/kg	[NT]	[NT]	29956-2	108%
pp-DDD	mg/kg	[NT]	[NT]	29956-2	93%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	29956-2	106%
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	29956-2	87%

Client Reference: 48670, Tourist Development

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	29956-2	22/06/09
Date analysed	-	[NT]	[NT]	29956-2	22/06/09
Diazinon	mg/kg	[NT]	[NT]	[NR]	[NR]
Dimethoate	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ronnel	mg/kg	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos	mg/kg	[NT]	[NT]	29956-2	73%
Fenitrothion	mg/kg	[NT]	[NT]	29956-2	92%
Bromophos-ethyl	mg/kg	[NT]	[NT]	[NR]	[NR]
Ethion	mg/kg	[NT]	[NT]	29956-2	62%
Surrogate TCLMX	%	[NT]	[NT]	29956-2	78%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	29956-2	22/06/09
Date analysed	-	[NT]	[NT]	29956-2	22/06/09
Arochlor 1016	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	mg/kg	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	mg/kg	[NT]	[NT]	29956-2	132%
Arochlor 1260	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	29956-2	78%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	[NT]	[NT]	29956-2	22/6/09
Date analysed	-	[NT]	[NT]	29956-2	23/6/09
Arsenic	mg/kg	[NT]	[NT]	29956-2	78%
Cadmium	mg/kg	[NT]	[NT]	29956-2	81%
Chromium	mg/kg	[NT]	[NT]	29956-2	83%
Copper	mg/kg	[NT]	[NT]	29956-2	91%
Lead	mg/kg	[NT]	[NT]	29956-2	82%
Mercury	mg/kg	[NT]	[NT]	29956-2	105%
Nickel	mg/kg	[NT]	[NT]	29956-2	82%
Zinc	mg/kg	[NT]	[NT]	29956-2	86%

Report Comments:

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample.

Envirolab recommends supplying 30-40g of sample in its own container.

Asbestos was analysed by Approved Identifier: Joshua Lim

INS: Insufficient sample for this test NT: Not tested PQL: Practical Quantitation Limit <: Less than >: Greater than

RPD: Relative Percent Difference NA: Test not required LCS: Laboratory Control Sample NR: Not requested

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike: A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample): This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria:

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

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for

SVOC and speciated phenols is acceptable.

Surrogates: 60-140% is acceptable for general organics and 10-140% for

SVOC and speciated phenols.

Project Name: Prop. Res. and Tourist Development
Project No: 48670 Sampler: Dean Young
Project Mgr: JAS Mob. Phone: 0448 280 782
Email: Dean.Young@douglaspartners.com.au
Date Required: Steel Lab Quote No. _____

To: Envirolab Services
12 Ashley St Chatswood 2067
Attn: Tania Notaras
Phone: (02) 9910 6200 Fax: (02) 9910 6201
Email: tnotaras@envirolabservices.com.au

Sample ID	Lab ID	Sampling Date	Sample Type S - soil W - water	Container type G - glass P - plastic	Analytes									Notes/preservation
					HM8	As Cd Cr Pb Hg Ni	TRH/ BTEX	PAH	phenol/ OCP/OPP PCB	VOC	asbestos	pH	LEAD paint	
13/0-0.1	1	18/6/09	S	G, P	X		X	X	X		X			
13/0.5-0.7	2				X		X	X	X		X			
13/1-1.3	3													
18/0-0.1	4				X		X	X	X		X			
18/0.5-0.7	5				X		X	X	X		X			
18/1-1.2	6													
18/2-2.2	7													
18/3-3.1	8													
TB1-18/6/09	9			G			X							
FB2	10		M	P									X	

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: 9910 6200
Job No: 29956
Date received: 19/6/19
Time received: 11
Received by: SS
Temp: Room/Ambient
Cooling: Ice/icepack
Security: Intact/Broken/None

Lab Report No. _____ Phone: (02) 4271 1836
Send Results to: Douglas Partners Address: 1/1 Luse Drive, Unanderra NSW 2526 Fax: (02) 4271 1897
Relinquished by: DBY Signed: D. Young Date & Time: 18/6/09 Transported to laboratory by: Clippers
Received By: Simon Date & Time: 19/6/19



Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 30515

Client:

Douglas Partners Unanderra
Unit 1, 1 Luso Drive
Unanderra
NSW 2526

Attention: Jane Smalley

Sample log in details:

Your Reference:	<u>48670, Contam Assessment</u>
No. of samples:	35 Soils
Date samples received:	03/07/09
Date completed instructions received:	03/07/09

Analysis Details:

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

Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by:	10/07/09
Date of Preliminary Report:	Not issued
Issue Date:	9/07/09

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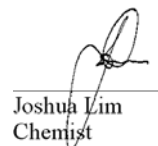
This document is issued in accordance with NATA's accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Tests not covered by NATA are denoted with *.

Results Approved By:


Jacinta Hurst
Operations Manager


Joshua Lim
Chemist

Envirolab Reference: 30515
Revision No: R 00



vTPH & BTEX in Soil	UNITS	30515-1	30515-3	30515-5	30515-8	30515-9
Our Reference:	-----	14/0-0.2	14/1.0-1.3	15/0-0.2	16/0-0.2	16/1.0-1.2
Your Reference	-----	1/07/2009	1/07/2009	1/07/2009	2/07/2009	2/07/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	100	108	102	98	97

vTPH & BTEX in Soil	UNITS	30515-11	30515-14	30515-15	30515-16	30515-17
Our Reference:	-----	17/0-0.2	BD1/1/07/09	BD2/1/07/09	BD1/2/07/09	19/0-0.2
Your Reference	-----	2/07/2009	1/07/2009	1/07/2009	2/07/2009	2/07/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	94	95	96	100	97

vTPH & BTEX in Soil	UNITS	30515-20	30515-23	30515-26	30515-27	30515-29
Our Reference:	-----	20/0-0.2	21/0-0.2	22/0-0.2	23/0-0.2	24/0-0.2
Your Reference	-----	1/07/2009	1/07/2009	1/07/2009	1/07/2009	1/07/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	94	95	105	97	107

vTPH & BTEX in Soil				
Our Reference:	UNITS	30515-31	30515-34	30515-35
Your Reference	-----	25/0-0.2	TB11-2/07/09	Z2/1.5-1.7
Date Sampled	-----	1/07/2009	1/07/2009	1/07/2009
Type of sample		Soil	Soil	Soil
Date extracted	-	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009	6/07/2009	6/07/2009
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	102	98	108

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	30515-1	30515-3	30515-5	30515-8	30515-9
Your Reference	-----	14/0-0.2	14/1.0-1.3	15/0-0.2	16/0-0.2	16/1.0-1.2
Date Sampled	-----	1/07/2009	1/07/2009	1/07/2009	2/07/2009	2/07/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
TPH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100	190	<100
TPH C29 - C36	mg/kg	130	<100	110	360	<100
Surrogate o-Terphenyl	%	105	98	99	108	100

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	30515-11	30515-14	30515-15	30515-16	30515-17
Your Reference	-----	17/0-0.2	BD1/1/07/09	BD2/1/07/09	BD1/2/07/09	19/0-0.2
Date Sampled	-----	2/07/2009	1/07/2009	1/07/2009	2/07/2009	2/07/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	7/07/2009
TPH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TPH C29 - C36	mg/kg	160	100	<100	<100	<100
Surrogate o-Terphenyl	%	96	98	102	99	95

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	30515-20	30515-23	30515-26	30515-27	30515-29
Your Reference	-----	20/0-0.2	21/0-0.2	22/0-0.2	23/0-0.2	24/0-0.2
Date Sampled	-----	1/07/2009	1/07/2009	1/07/2009	1/07/2009	1/07/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	7/07/2009	7/07/2009	6/07/2009	6/07/2009	7/07/2009
TPH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TPH C29 - C36	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	96	94	86	85	85

sTPH in Soil (C10-C36)				
Our Reference:	UNITS	30515-31	30515-34	30515-35
Your Reference	-----	25/0-0.2	TB11-2/07/09	Z2/1.5-1.7
Date Sampled	-----	1/07/2009	1/07/2009	1/07/2009
Type of sample		Soil	Soil	Soil
Date extracted	-	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	7/07/2009	7/07/2009	7/07/2009
TPH C10 - C14	mg/kg	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100
TPH C29 - C36	mg/kg	<100	<100	<100
Surrogate o-Terphenyl	%	84	85	84

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	30515-1 14/0-0.2 1/07/2009 Soil	30515-5 15/0-0.2 1/07/2009 Soil	30515-8 16/0-0.2 2/07/2009 Soil	30515-11 17/0-0.2 2/07/2009 Soil	30515-17 19/0-0.2 2/07/2009 Soil
Date extracted	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	7/07/2009	7/07/2009	7/07/2009	7/07/2009	7/07/2009
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	127	122	125	122	124

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	30515-20 20/0-0.2 1/07/2009 Soil	30515-23 21/0-0.2 1/07/2009 Soil	30515-26 22/0-0.2 1/07/2009 Soil	30515-27 23/0-0.2 1/07/2009 Soil	30515-29 24/0-0.2 1/07/2009 Soil
Date extracted	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	7/07/2009	7/07/2009	7/07/2009	7/07/2009	7/07/2009
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	124	122	119	119	122

PAHs in Soil		
Our Reference:	UNITS	30515-31
Your Reference	-----	25/0-0.2
Date Sampled	-----	1/07/2009
Type of sample		Soil
Date extracted	-	6/07/2009
Date analysed	-	7/07/2009
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Surrogate p- Terphenyl-d ₁₄	%	121

Organochlorine Pesticides in soil						
Our Reference:	UNITS	30515-1	30515-5	30515-8	30515-11	30515-17
Your Reference	-----	14/0-0.2	15/0-0.2	16/0-0.2	17/0-0.2	19/0-0.2
Date Sampled	-----	1/07/2009	1/07/2009	2/07/2009	2/07/2009	2/07/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	107	82	111	111	95

Organochlorine Pesticides in soil						
Our Reference:	UNITS	30515-20	30515-23	30515-26	30515-27	30515-29
Your Reference	-----	20/0-0.2	21/0-0.2	22/0-0.2	23/0-0.2	24/0-0.2
Date Sampled	-----	1/07/2009	1/07/2009	1/07/2009	1/07/2009	1/07/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	93	97	87	101	86

Organochlorine Pesticides in soil		
Our Reference:	UNITS	30515-31
Your Reference	-----	25/0-0.2
Date Sampled	-----	1/07/2009
Type of sample		Soil
Date extracted	-	6/07/2009
Date analysed	-	6/07/2009
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Surrogate TCLMX	%	87

Organophosphorus Pesticides	UNITS	30515-1	30515-5	30515-8	30515-11	30515-17
Our Reference:	-----	14/0-0.2	15/0-0.2	16/0-0.2	17/0-0.2	19/0-0.2
Your Reference	-----	1/07/2009	1/07/2009	2/07/2009	2/07/2009	2/07/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	107	82	111	111	95

Organophosphorus Pesticides	UNITS	30515-20	30515-23	30515-26	30515-27	30515-29
Our Reference:	-----	20/0-0.2	21/0-0.2	22/0-0.2	23/0-0.2	24/0-0.2
Your Reference	-----	1/07/2009	1/07/2009	1/07/2009	1/07/2009	1/07/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date extracted	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	93	97	87	101	86

Organophosphorus Pesticides		
Our Reference:	UNITS	30515-31
Your Reference	-----	25/0-0.2
Date Sampled	-----	1/07/2009
Type of sample		Soil
Date extracted	-	6/07/2009
Date analysed	-	6/07/2009
Diazinon	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Chlorpyrifos	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Ethion	mg/kg	<0.1
Surrogate TCLMX	%	87

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	30515-1 14/0-0.2 1/07/2009 Soil	30515-5 15/0-0.2 1/07/2009 Soil	30515-8 16/0-0.2 2/07/2009 Soil	30515-11 17/0-0.2 2/07/2009 Soil	30515-17 19/0-0.2 2/07/2009 Soil
Date extracted	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	107	82	111	111	95

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	30515-20 20/0-0.2 1/07/2009 Soil	30515-23 21/0-0.2 1/07/2009 Soil	30515-26 22/0-0.2 1/07/2009 Soil	30515-27 23/0-0.2 1/07/2009 Soil	30515-29 24/0-0.2 1/07/2009 Soil
Date extracted	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	93	97	87	101	86

PCBs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	30515-31 25/0-0.2 1/07/2009 Soil
Date extracted	-	6/07/2009
Date analysed	-	6/07/2009
Arochlor 1016	mg/kg	<0.1
Arochlor 1232	mg/kg	<0.1
Arochlor 1242	mg/kg	<0.1
Arochlor 1248	mg/kg	<0.1
Arochlor 1254	mg/kg	<0.1
Arochlor 1260	mg/kg	<0.1
Surrogate TCLMX	%	87

Total Phenolics in Soil						
Our Reference:	UNITS	30515-1	30515-5	30515-8	30515-11	30515-17
Your Reference	-----	14/0-0.2	15/0-0.2	16/0-0.2	17/0-0.2	19/0-0.2
Date Sampled	-----	1/07/2009	1/07/2009	2/07/2009	2/07/2009	2/07/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	8/07/2009	8/07/2009	8/07/2009	8/07/2009	8/07/2009
Date analysed	-	9/07/2009	9/07/2009	9/07/2009	9/07/2009	9/07/2009
Total Phenolics (as Phenol)	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0

Total Phenolics in Soil						
Our Reference:	UNITS	30515-20	30515-23	30515-26	30515-27	30515-29
Your Reference	-----	20/0-0.2	21/0-0.2	22/0-0.2	23/0-0.2	24/0-0.2
Date Sampled	-----	1/07/2009	1/07/2009	1/07/2009	1/07/2009	1/07/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	8/07/2009	8/07/2009	8/07/2009	8/07/2009	8/07/2009
Date analysed	-	9/07/2009	9/07/2009	9/07/2009	9/07/2009	9/07/2009
Total Phenolics (as Phenol)	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0

Total Phenolics in Soil		
Our Reference:	UNITS	30515-31
Your Reference	-----	25/0-0.2
Date Sampled	-----	1/07/2009
Type of sample		Soil
Date extracted	-	8/07/2009
Date analysed	-	9/07/2009
Total Phenolics (as Phenol)	mg/kg	<5.0

Acid Extractable metals in soil	UNITS	30515-1	30515-3	30515-5	30515-8	30515-9
Our Reference:	-----	14/0-0.2	14/1.0-1.3	15/0-0.2	16/0-0.2	16/1.0-1.2
Your Reference	-----	1/07/2009	1/07/2009	1/07/2009	2/07/2009	2/07/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date digested	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	7/07/2009	7/07/2009	7/07/2009	7/07/2009	7/07/2009
Arsenic	mg/kg	<4	6	11	12	5
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	4	10	19	17	14
Copper	mg/kg	<1	<1	<1	3	4
Lead	mg/kg	4	14	11	13	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	<1	<1	<1
Zinc	mg/kg	2	<1	1	2	1

Acid Extractable metals in soil	UNITS	30515-11	30515-14	30515-15	30515-16	30515-17
Our Reference:	-----	17/0-0.2	BD1/1/07/09	BD2/1/07/09	BD1/2/07/09	19/0-0.2
Your Reference	-----	2/07/2009	1/07/2009	1/07/2009	2/07/2009	2/07/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date digested	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	7/07/2009	7/07/2009	7/07/2009	7/07/2009	7/07/2009
Arsenic	mg/kg	<4	12	7	5	5
Cadmium	mg/kg	<0.5	0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	3	28	14	15	18
Copper	mg/kg	1	<1	4	3	4
Lead	mg/kg	7	15	16	10	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	<1	2	3	3
Zinc	mg/kg	3	1	5	6	6

Acid Extractable metals in soil	UNITS	30515-20	30515-23	30515-26	30515-27	30515-29
Our Reference:	-----	20/0-0.2	21/0-0.2	22/0-0.2	23/0-0.2	24/0-0.2
Your Reference	-----	1/07/2009	1/07/2009	1/07/2009	1/07/2009	1/07/2009
Date Sampled		Soil	Soil	Soil	Soil	Soil
Type of sample						
Date digested	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	7/07/2009	7/07/2009	7/07/2009	7/07/2009	7/07/2009
Arsenic	mg/kg	13	5	<4	6	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	43	7	8	21	6
Copper	mg/kg	<1	3	8	2	1
Lead	mg/kg	13	13	15	12	8
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	1	<1	<1	<1
Zinc	mg/kg	2	3	24	4	7

Acid Extractable metals in soil			
Our Reference:	UNITS	30515-31	30515-35
Your Reference	-----	25/0-0.2	Z2/1.5-1.7
Date Sampled	-----	1/07/2009	1/07/2009
Type of sample		Soil	Soil
Date digested	-	6/07/2009	6/07/2009
Date analysed	-	7/07/2009	7/07/2009
Arsenic	mg/kg	<4	5
Cadmium	mg/kg	<0.5	<0.5
Chromium	mg/kg	6	7
Copper	mg/kg	<1	10
Lead	mg/kg	7	13
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	1	<1
Zinc	mg/kg	1	2

Moisture Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	30515-1 14/0-0.2 1/07/2009 Soil	30515-3 14/1.0-1.3 1/07/2009 Soil	30515-5 15/0-0.2 1/07/2009 Soil	30515-8 16/0-0.2 2/07/2009 Soil	30515-9 16/1.0-1.2 2/07/2009 Soil
Date prepared	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009 6/07/2009 7/2009	6/07/2009 6/07/2009 7/2009	6/07/2009 6/07/2009 7/2009	6/07/2009 6/07/2009 7/2009	6/07/2009 6/07/2009 7/2009
Moisture	%	7.1	11	13	16	17

Moisture Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	30515-11 17/0-0.2 2/07/2009 Soil	30515-14 BD1/1/07/09 1/07/2009 Soil	30515-15 BD2/1/07/09 1/07/2009 Soil	30515-16 BD1/2/07/09 2/07/2009 Soil	30515-17 19/0-0.2 2/07/2009 Soil
Date prepared	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009 6/07/2009 7/2009	6/07/2009 6/07/2009 7/2009	6/07/2009 6/07/2009 7/2009	6/07/2009 6/07/2009 7/2009	6/07/2009 6/07/2009 7/2009
Moisture	%	14	13	11	13	12

Moisture Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	30515-20 20/0-0.2 1/07/2009 Soil	30515-23 21/0-0.2 1/07/2009 Soil	30515-26 22/0-0.2 1/07/2009 Soil	30515-27 23/0-0.2 1/07/2009 Soil	30515-29 24/0-0.2 1/07/2009 Soil
Date prepared	-	6/07/2009	6/07/2009	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009 6/07/2009 7/2009	6/07/2009 6/07/2009 7/2009	6/07/2009 6/07/2009 7/2009	6/07/2009 6/07/2009 7/2009	6/07/2009 6/07/2009 7/2009
Moisture	%	27	11	5.7	17	4.4

Moisture Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	30515-31 25/0-0.2 1/07/2009 Soil	30515-34 TB11-2/07/09 1/07/2009 Soil	30515-35 Z2/1.5-1.7 1/07/2009 Soil
Date prepared	-	6/07/2009	6/07/2009	6/07/2009
Date analysed	-	6/07/2009 6/07/2009 7/2009	6/07/2009 6/07/2009 7/2009	6/07/2009 6/07/2009 7/2009
Moisture	%	12	0.10	11

Asbestos ID - soils						
Our Reference:	UNITS	30515-1	30515-5	30515-8	30515-11	30515-17
Your Reference	-----	14/0-0.2	15/0-0.2	16/0-0.2	17/0-0.2	19/0-0.2
Date Sampled	-----	1/07/2009	1/07/2009	2/07/2009	2/07/2009	2/07/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	7/07/2009	7/07/2009	7/07/2009	7/07/2009	7/07/2009
Sample Description	-	40g sand	40g sand	40g sand	40g sand	40g sand
Asbestos ID in soil	-	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected

Asbestos ID - soils						
Our Reference:	UNITS	30515-20	30515-23	30515-26	30515-27	30515-29
Your Reference	-----	20/0-0.2	21/0-0.2	22/0-0.2	23/0-0.2	24/0-0.2
Date Sampled	-----	1/07/2009	1/07/2009	1/07/2009	1/07/2009	1/07/2009
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	7/07/2009	7/07/2009	7/07/2009	7/07/2009	7/07/2009
Sample Description	-	40g sand	40g sand	40g sand	40g sand	40g sand
Asbestos ID in soil	-	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected

Asbestos ID - soils		
Our Reference:	UNITS	30515-31
Your Reference	-----	25/0-0.2
Date Sampled	-----	1/07/2009
Type of sample		Soil
Date analysed	-	7/07/2009
Sample Description	-	40g sand
Asbestos ID in soil	-	No asbestos found at reporting limit of 0.1g/kg
Trace Analysis	-	Respirable fibres not detected

Method ID	Methodology Summary
GC.16	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS.
GC.3	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
GC.12 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
GC-5	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
GC.8	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
GC-6	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
LAB.30	Total Phenolics - determined colorimetrically following distillation.
Metals.20 ICP-AES	Determination of various metals by ICP-AES.
Metals.21 CV-AAS	Determination of Mercury by Cold Vapour AAS.
LAB.8	Moisture content determined by heating at 105 deg C for a minimum of 4 hours.
ASB.1	Qualitative identification of asbestos type fibres in bulk using Polarised Light Microscopy and Dispersion Staining Techniques.

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTPH & BTEX in Soil						Base II Duplicate II %RPD		
Date extracted	-			6/07/2009	30515-1	6/07/2009 6/07/2009	LCS-5	6/07/2009
Date analysed	-			6/07/2009	30515-1	6/07/2009 6/07/2009	LCS-5	6/07/2009
vTPH C ₆ - C ₉	mg/kg	25	GC.16	<25	30515-1	<25 <25	LCS-5	84%
Benzene	mg/kg	0.5	GC.16	<0.5	30515-1	<0.5 <0.5	LCS-5	97%
Toluene	mg/kg	0.5	GC.16	<0.5	30515-1	<0.5 <0.5	LCS-5	91%
Ethylbenzene	mg/kg	1	GC.16	<1.0	30515-1	<1.0 <1.0	LCS-5	78%
m+p-xylene	mg/kg	2	GC.16	<2.0	30515-1	<2.0 <2.0	LCS-5	77%
o-Xylene	mg/kg	1	GC.16	<1.0	30515-1	<1.0 <1.0	LCS-5	82%
Surrogate aaa-Trifluorotoluene	%		GC.16	96	30515-1	100 104 RPD: 4	LCS-5	102%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sTPH in Soil (C ₁₀ -C ₃₆)						Base II Duplicate II %RPD		
Date extracted	-			6/7/09	30515-1	6/07/2009 6/07/2009	LCS-5	6/7/09
Date analysed	-			6/7/09	30515-1	6/07/2009 6/07/2009	LCS-5	6/7/09
TPH C ₁₀ - C ₁₄	mg/kg	50	GC.3	<50	30515-1	<50 <50	LCS-5	94%
TPH C ₁₅ - C ₂₈	mg/kg	100	GC.3	<100	30515-1	<100 <100	LCS-5	99%
TPH C ₂₉ - C ₃₆	mg/kg	100	GC.3	<100	30515-1	130 130 RPD: 0	LCS-5	97%
Surrogate o-Terphenyl	%		GC.3	102	30515-1	105 97 RPD: 8	LCS-5	95%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			6/7/09	30515-1	6/07/2009 6/07/2009	LCS-5	6/7/09
Date analysed	-			7/7/09	30515-1	7/07/2009 7/07/2009	LCS-5	7/7/09
Naphthalene	mg/kg	0.1	GC.12 subset	<0.1	30515-1	<0.1 <0.1	LCS-5	116%
Acenaphthylene	mg/kg	0.1	GC.12 subset	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	GC.12 subset	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	GC.12 subset	<0.1	30515-1	<0.1 <0.1	LCS-5	116%
Phenanthrene	mg/kg	0.1	GC.12 subset	<0.1	30515-1	<0.1 <0.1	LCS-5	119%
Anthracene	mg/kg	0.1	GC.12 subset	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	GC.12 subset	<0.1	30515-1	<0.1 <0.1	LCS-5	112%
Pyrene	mg/kg	0.1	GC.12 subset	<0.1	30515-1	<0.1 <0.1	LCS-5	120%
Benzo(a)anthracene	mg/kg	0.1	GC.12 subset	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]

Client Reference: 48670, Contam Assessment

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Chrysene	mg/kg	0.1	GC.12 subset	<0.1	30515-1	<0.1 <0.1	LCS-5	128%
Benzo(b+k)fluoranthene	mg/kg	0.2	GC.12 subset	<0.2	30515-1	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	GC.12 subset	<0.05	30515-1	<0.05 <0.05	LCS-5	104%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	GC.12 subset	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	GC.12 subset	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	GC.12 subset	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		GC.12 subset	121	30515-1	127 119 RPD: 7	LCS-5	117%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organochlorine Pesticides in soil						Base II Duplicate II %RPD		
Date extracted	-			6/07/2009	30515-1	6/07/2009 6/07/2009	LCS-5	6/07/2009
Date analysed	-			6/07/2009	30515-1	6/07/2009 6/07/2009	LCS-5	6/07/2009
HCB	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	LCS-5	98%
gamma-BHC	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	LCS-5	102%
Heptachlor	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	LCS-5	107%
delta-BHC	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	LCS-5	84%
Heptachlor Epoxide	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	LCS-5	98%
gamma-Chlordane	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	LCS-5	100%
Dieldrin	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	LCS-5	100%
Endrin	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	LCS-5	98%
pp-DDD	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	LCS-5	105%
Endosulfan II	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	LCS-5	100%
Methoxychlor	mg/kg	0.1	GC-5	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%		GC-5	79	30515-1	107 103 RPD: 4	LCS-5	90%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organophosphorus Pesticides						Base II Duplicate II %RPD		
Date extracted	-			6/07/2009	30515-1	6/07/2009 6/07/2009	LCS-5	6/07/2009
Date analysed	-			6/07/2009	30515-1	6/07/2009 6/07/2009	LCS-5	6/07/2009
Diazinon	mg/kg	0.1	GC.8	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Dimethoate	mg/kg	0.1	GC.8	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	0.1	GC.8	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Ronnel	mg/kg	0.1	GC.8	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos	mg/kg	0.1	GC.8	<0.1	30515-1	<0.1 <0.1	LCS-5	101%
Fenitrothion	mg/kg	0.1	GC.8	<0.1	30515-1	<0.1 <0.1	LCS-5	133%
Bromophos-ethyl	mg/kg	0.1	GC.8	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Ethion	mg/kg	0.1	GC.8	<0.1	30515-1	<0.1 <0.1	LCS-5	117%
Surrogate TCLMX	%		GC.8	79	30515-1	107 103 RPD: 4	LCS-5	120%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Soil						Base II Duplicate II %RPD		
Date extracted	-			6/07/2009	30515-1	6/07/2009 6/07/2009	LCS-5	6/07/2009
Date analysed	-			6/07/2009	30515-1	6/07/2009 6/07/2009	LCS-5	6/07/2009
Arochlor 1016	mg/kg	0.1	GC-6	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	GC-6	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	GC-6	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	GC-6	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	GC-6	<0.1	30515-1	<0.1 <0.1	LCS-5	127%
Arochlor 1260	mg/kg	0.1	GC-6	<0.1	30515-1	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%		GC-6	79	30515-1	107 103 RPD: 4	LCS-5	90%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Total Phenolics in Soil						Base II Duplicate II %RPD		
Date extracted	-			8/07/2009	30515-1	8/07/2009 8/07/2009	LCS-2	8/07/2009
Date analysed	-			9/07/2009	30515-1	9/07/2009 9/07/2009	LCS-2	9/07/2009
Total Phenolics (as Phenol)	mg/kg	5	LAB.30	<5.0	30515-1	<5.0 <5.0	LCS-2	89%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date digested	-			06/07/09	30515-1	6/07/2009 6/07/2009	LCS-3	06/07/09
Date analysed	-			07/07/09	30515-1	7/07/2009 7/07/2009	LCS-3	07/07/09
Arsenic	mg/kg	4	Metals.20 ICP-AES	<4	30515-1	<4 <4	LCS-3	101%
Cadmium	mg/kg	0.5	Metals.20 ICP-AES	<0.5	30515-1	<0.5 <0.5	LCS-3	106%
Chromium	mg/kg	1	Metals.20 ICP-AES	<1	30515-1	4 3 RPD: 29	LCS-3	103%
Copper	mg/kg	1	Metals.20 ICP-AES	<1	30515-1	<1 <1	LCS-3	103%
Lead	mg/kg	1	Metals.20 ICP-AES	<1	30515-1	4 5 RPD: 22	LCS-3	101%
Mercury	mg/kg	0.1	Metals.21 CV-AAS	<0.1	30515-1	<0.1 <0.1	LCS-3	102%
Nickel	mg/kg	1	Metals.20 ICP-AES	<1	30515-1	<1 <1	LCS-3	102%
Zinc	mg/kg	1	Metals.20 ICP-AES	<1	30515-1	2 2 RPD: 0	LCS-3	103%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Moisture				
Date prepared	-			6/07/2009
Date analysed	-			6/07/2009
Moisture	%	0.1	LAB.8	<0.10

QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Asbestos ID - soils				
Date analysed	-			8/07/2009

QUALITY CONTROL	UNITS	Dup. Sm#	Duplicate	Spike Sm#	Spike % Recovery
vTPH & BTEX in Soil			Base + Duplicate + %RPD		
Date extracted	-	30515-20	6/07/2009 6/07/2009	30515-5	6/07/2009
Date analysed	-	30515-20	6/07/2009 6/07/2009	30515-5	6/07/2009
vTPH C ₆ - C ₉	mg/kg	30515-20	<25 <25	30515-5	83%
Benzene	mg/kg	30515-20	<0.5 <0.5	30515-5	89%
Toluene	mg/kg	30515-20	<0.5 <0.5	30515-5	90%
Ethylbenzene	mg/kg	30515-20	<1.0 <1.0	30515-5	74%
m+p-xylene	mg/kg	30515-20	<2.0 <2.0	30515-5	80%
o-Xylene	mg/kg	30515-20	<1.0 <1.0	30515-5	85%
Surrogate aaa-Trifluorotoluene	%	30515-20	94 93 RPD: 1	30515-5	105%

Client Reference: 48670, Contam Assessment

QUALITY CONTROL sTPH in Soil (C10-C36)	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	30515-20	6/07/2009 6/07/2009	30515-5	6/7/09
Date analysed	-	30515-20	7/07/2009 7/07/2009	30515-5	6/7/09
TPH C10 - C14	mg/kg	30515-20	<50 <50	30515-5	97%
TPH C15 - C28	mg/kg	30515-20	<100 <100	30515-5	107%
TPH C29 - C36	mg/kg	30515-20	<100 <100	30515-5	120%
Surrogate o-Terphenyl	%	30515-20	96 96 RPD: 0	30515-5	97%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	30515-20	6/07/2009 6/07/2009	30515-5	6/7/09
Date analysed	-	30515-20	7/07/2009 7/07/2009	30515-5	7/7/09
Naphthalene	mg/kg	30515-20	<0.1 <0.1	30515-5	118%
Acenaphthylene	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	30515-20	<0.1 <0.1	30515-5	124%
Phenanthrene	mg/kg	30515-20	<0.1 <0.1	30515-5	122%
Anthracene	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	30515-20	<0.1 <0.1	30515-5	118%
Pyrene	mg/kg	30515-20	<0.1 <0.1	30515-5	125%
Benzo(a)anthracene	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	30515-20	<0.1 <0.1	30515-5	126%
Benzo(b+k)fluoranthene	mg/kg	30515-20	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	30515-20	<0.05 <0.05	30515-5	114%
Indeno(1,2,3-c,d)pyrene	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	30515-20	124 123 RPD: 1	30515-5	119%

Client Reference: 48670, Contam Assessment

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	30515-20	6/07/2009 6/07/2009	30515-5	6/07/2009
Date analysed	-	30515-20	6/07/2009 6/07/2009	30515-5	6/07/2009
HCB	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	30515-20	<0.1 <0.1	30515-5	112%
gamma-BHC	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	30515-20	<0.1 <0.1	30515-5	122%
Heptachlor	mg/kg	30515-20	<0.1 <0.1	30515-5	109%
delta-BHC	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	30515-20	<0.1 <0.1	30515-5	99%
Heptachlor Epoxide	mg/kg	30515-20	<0.1 <0.1	30515-5	113%
gamma-Chlordane	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	30515-20	<0.1 <0.1	30515-5	112%
Dieldrin	mg/kg	30515-20	<0.1 <0.1	30515-5	111%
Endrin	mg/kg	30515-20	<0.1 <0.1	30515-5	114%
pp-DDD	mg/kg	30515-20	<0.1 <0.1	30515-5	124%
Endosulfan II	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	30515-20	<0.1 <0.1	30515-5	110%
Methoxychlor	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%	30515-20	93 93 RPD: 0	30515-5	98%

Client Reference: 48670, Contam Assessment

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	30515-20	6/07/2009 6/07/2009	30515-5	6/07/2009
Date analysed	-	30515-20	6/07/2009 6/07/2009	30515-5	6/07/2009
Diazinon	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Dimethoate	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos-methyl	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Ronnel	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Chlorpyrifos	mg/kg	30515-20	<0.1 <0.1	30515-5	106%
Fenitrothion	mg/kg	30515-20	<0.1 <0.1	30515-5	135%
Bromophos-ethyl	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Ethion	mg/kg	30515-20	<0.1 <0.1	30515-5	121%
Surrogate TCLMX	%	30515-20	93 93 RPD: 0	30515-5	94%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	30515-20	6/07/2009 6/07/2009	30515-5	6/07/2009
Date analysed	-	30515-20	6/07/2009 6/07/2009	30515-5	6/07/2009
Arochlor 1016	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	30515-20	<0.1 <0.1	30515-5	118%
Arochlor 1260	mg/kg	30515-20	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%	30515-20	93 93 RPD: 0	30515-5	116%
QUALITY CONTROL Total Phenolics in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	30515-5	8/07/2009
Date analysed	-	[NT]	[NT]	30515-5	9/07/2009
Total Phenolics (as Phenol)	mg/kg	[NT]	[NT]	30515-5	94%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	30515-20	6/07/2009 6/07/2009	30515-5	06/07/09
Date analysed	-	30515-20	7/07/2009 7/07/2009	30515-5	07/07/09
Arsenic	mg/kg	30515-20	13 13 RPD: 0	30515-5	89%
Cadmium	mg/kg	30515-20	<0.5 <0.5	30515-5	96%
Chromium	mg/kg	30515-20	43 43 RPD: 0	30515-5	98%
Copper	mg/kg	30515-20	<1 <1	30515-5	101%
Lead	mg/kg	30515-20	13 14 RPD: 7	30515-5	91%
Mercury	mg/kg	30515-20	<0.1 <0.1	30515-5	107%
Nickel	mg/kg	30515-20	2 2 RPD: 0	30515-5	96%
Zinc	mg/kg	30515-20	2 3 RPD: 40	30515-5	96%

Report Comments:

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample.

Envirolab recommends supplying 30-40g of sample in its own container.

Asbestos was analysed by Approved Identifier: Joshua Lim

INS: Insufficient sample for this test NT: Not tested PQL: Practical Quantitation Limit <: Less than >: Greater than

RPD: Relative Percent Difference NA: Test not required LCS: Laboratory Control Sample NR: Not requested

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike: A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample): This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria:

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

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for

SVOC and speciated phenols is acceptable.

Surrogates: 60-140% is acceptable for general organics and 10-140% for

SVOC and speciated phenols.

CHAIN OF CUSTODY

Project Name: Preliminary Contamination Assessment		To: Envirolab Services	
Project No: 4670	Sampler: AAW	12 Ashley St Chatswood 2067	
Project Mgr: Jane Smalley	Mob. Phone: 0413 886055	Attn: Tania Notaras	
Email: jane.smalley@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: 8/2		Email: tnotaras@envirolabservices.com.au	

Sample ID	Lab ID	Sampling Date	Sample Type	Container type	Analytes										Notes/preservation
			S - soil W - water	G - glass P - plastic	8 Heavy Metals	As Cd Cr Pb Hg Ni	TRH/ BTEX	PAH	Phenol	OCP/OPP PCB	VOC	asbestos	pH		
14/0-0.2	1	1/7/09	S	G, P	X		X	X	X	X		X			
14/0.5-0.8	2														
14/1.0-1.3	3				X		X								
14/1.5-1.8	4														
15/0-0.2	5				X		X	X	X	X		X			
15/0.5-0.7	6														
15/2.0-2.2	7														
16/0-0.2	8	2/7/09			X		X	X	X	X		X			
16/1.0-1.2	9	2/7/09			X		X								
16/2.5-2.7	10	2/7/09													
17/0-0.2	11	2/7/09			X		X	X	X	X		X			
17/1.0-1.2	12	2/7/09													
17/2.0-2.2	13	2/7/09													

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: 9910 6200

Job No: 30515

Date received: 3/7/09
Time received: 3:30

Received by: JHL

Temp: Cool/Ambient

Cooling: Ice/Coolpack

Security: Intact/Broken/None

Lab Report No:		Send Results to: Douglas Partners Pty Ltd		Address: PO Box 486, Unanderra NSW 2526		Phone: (02) 4271 1836 Fax: (02) 4271 1897	
Relinquished by: JAS				Transported to laboratory by: Clippers			
Signed: [Signature]		Date & Time: 3/7/09 9am		Received By: [Signature]			

Project Name: Preliminary Contamination Assessment		To: Envirolab Services	
Project No: 48670		12 Ashley St Chatswood 2067	
Project Mgr: Jane Smalley		Sampler: AAH	
Email: jane.smalley@douglaspartners.com.au		Mob. Phone: 0413 886055	
Date Required: 8/10/09		Attn: Tania Notaras	
		Phone: (02) 9910 6200 Fax: (02) 9910 6201	
		Email: tnotaras@envirolabservices.com.au	

Sample ID	Lab ID	Sampling Date	Sample Type	Container type	Analytes										Notes/preservation	
			S - soil W - water	G - glass P - plastic	8 Heavy Metals	As Cd Cr Pb Hg Ni	TRH/ BTEX	PAH	Phenol	OCP/OPP PCB	VOC	asbestos	pH			
BD1/1/01/09	14	1/7/09	S	G, P	x		x									
BD2/2/07/09	15	17/7/09			x		x									
BD1/2/07/09	16	2/7/09			x		x									
19/0-0.2	17	2/7/09			x		x	x	x	x			x			
19/0.5-0.7	18	2/7/09														
19/1.5-1.7	19	2/7/09														
20/0-0.2	20	1/4/09			x		x	x	x	x			x			
20/0.5-0.7	21															
20/1.5-1.7	22															
21/0-0.2	23				x		x	x	x	x			x			
21/0.5-0.7	24															
21/1.5-1.7	25															
22/0-0.2	26				x		x	x	x	x			x			

Lab Report No:		Send Results to: Douglas Partners Pty Ltd		Address: PO Box 486, Unanderra NSW 2526		Phone: (02) 4271 1836 Fax: (02) 4271 1897	
Relinquished by: JAS		Transported to laboratory by: Clippers		Received By: JAS			
Signed: [Signature]		Date & Time: 3/7/09 9am					

CHAIN OF CUSTODY

Project Name: <u>Preliminary Contamination Assessment</u>		To: Envirolab Services
Project No: <u>48670</u>	Sampler: <u>AAW</u>	12 Ashley St Chatswood 2067
Project Mgr: Jane Smalley	Mob. Phone: <u>0413 886055</u>	Attn: Tania Notaras
Email: <u>jane.smalley@douglaspartners.com.au</u>		Phone: (02) 9910 6200 Fax: (02) 9910 6201
Date Required: <u>8td</u>		Email: <u>tnotaras@envirolabservices.com.au</u>

Sample ID	Lab ID	Sampling Date	Sample Type	Container type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	8 Heavy Metals	As Cd Cr Pb Hg Ni	TRH/ BTEX	PAH	Phenol	OCP/OPP PCB	VOC	asbestos	pH	
23/0-0.2	27	1/7/09	S	G, P	X		X	X	X	X		X		
23/1-0.2	28													
29/0-0.2	29				X		X	X	X	X		X		
29/0.5-0.7	30													
25/0-0.2	31				X		X	X	X	X		X		
25/0.5-0.7	32													
25/2.5-2.7	33													
TB1-2/7/09	34						X							
22/1.5-1.7	35				X		X							

Lab Report No:		Send Results to: Douglas Partners Pty Ltd		Address: PO Box 486, Unanderra NSW 2526		Phone: (02) 4271 1836 Fax: (02) 4271 1897	
Relinquished by: <u>JAS</u>		Transported to laboratory by: <u>Clippers</u>					
Signed: <u>[Signature]</u>		Date & Time: <u>3/7/09 9am</u>		Received By: <u>[Signature]</u>			



EnviroLab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 30812

Client:

Douglas Partners Unanderra
Unit 1, 1 Luso Drive
Unanderra
NSW 2526

Attention: Aidan Wright

Sample log in details:

Your Reference:	<u>48670, Prelim. Contam. Assess.</u>
No. of samples:	3 Waters
Date samples received:	13/07/09
Date completed instructions received:	13/07/09

Analysis Details:

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

Report Details:

Date results requested by:	20/07/09
Date of Preliminary Report:	Not Issued
Issue Date:	17/07/09

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Accredited for compliance with ISO/IEC 17025.
Tests not covered by NATA are denoted with *.

Results Approved By:


Jacinta Hurst
Operations Manager

EnviroLab Reference: 30812
Revision No: R 00



vTPH & BTEX in Water			
Our Reference:	UNITS	30812-1	30812-3
Your Reference	-----	GW/28	TB/100709
Date Sampled	-----	10/07/2009	10/07/2009
Type of sample		Water	Water
Date extracted	-	15/07/2009	15/07/2009
Date analysed	-	15/07/2009	15/07/2009
TPH C ₆ - C ₉	µg/L	<10	<10
Benzene	µg/L	<1.0	<1.0
Toluene	µg/L	<1.0	<1.0
Ethylbenzene	µg/L	<1.0	<1.0
m+p-xylene	µg/L	<2.0	<2.0
o-xylene	µg/L	<1.0	<1.0
Surrogate Dibromofluoromethane	%	101	93
Surrogate toluene-d8	%	99	97
Surrogate 4-BFB	%	75	83

sTPH in Water (C10-C36)		
Our Reference:	UNITS	30812-1
Your Reference	-----	GW/28
Date Sampled	-----	10/07/2009
Type of sample		Water
Date extracted	-	15/07/2009
Date analysed	-	15/07/2009
TPH C ₁₀ - C ₁₄	µg/L	<50
TPH C ₁₅ - C ₂₈	µg/L	220
TPH C ₂₉ - C ₃₆	µg/L	<100
Surrogate o-Terphenyl	%	84

PAHs in Water Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	30812-1 GW/28 10/07/2009 Water	30812-2 BD1/100709 10/07/2009 Water
Date extracted	-	15/07/2009	15/07/2009
Date analysed	-	16/07/2009	16/07/2009
Naphthalene	µg/L	<1	<1
Acenaphthylene	µg/L	<1	<1
Acenaphthene	µg/L	<1	<1
Fluorene	µg/L	<1	<1
Phenanthrene	µg/L	<1	<1
Anthracene	µg/L	<1	<1
Fluoranthene	µg/L	<1	<1
Pyrene	µg/L	<1	<1
Benzo(a)anthracene	µg/L	<1	<1
Chrysene	µg/L	<1	<1
Benzo(b+k)fluoranthene	µg/L	<2	<2
Benzo(a)pyrene	µg/L	<1	<1
Indeno(1,2,3-c,d)pyrene	µg/L	<1	<1
Dibenzo(a,h)anthracene	µg/L	<1	<1
Benzo(g,h,i)perylene	µg/L	<1	<1
Surrogate p-Terphenyl-d ₁₄	%	106	113

OCP in water		
Our Reference:	UNITS	30812-1
Your Reference	-----	GW/28
Date Sampled	-----	10/07/2009
Type of sample		Water
Date extracted	-	15/07/2009
Date analysed	-	16/07/2009
HCB	µg/L	<0.2
alpha-BHC	µg/L	<0.2
gamma-BHC	µg/L	<0.2
beta-BHC	µg/L	<0.2
Heptachlor	µg/L	<0.2
delta-BHC	µg/L	<0.2
Aldrin	µg/L	<0.2
Heptachlor Epoxide	µg/L	<0.2
gamma-Chlordane	µg/L	<0.2
alpha-Chlordane	µg/L	<0.2
Endosulfan I	µg/L	<0.2
pp-DDE	µg/L	<0.2
Dieldrin	µg/L	<0.2
Endrin	µg/L	<0.2
pp-DDD	µg/L	<0.2
Endosulfan II	µg/L	<0.2
DDT	µg/L	<0.2
Endrin Aldehyde	µg/L	<0.2
Endosulfan Sulphate	µg/L	<0.2
Methoxychlor	µg/L	<0.2
Surrogate TCLMX	%	86

OP Pesticides in water		
Our Reference:	UNITS	30812-1
Your Reference	-----	GW/28
Date Sampled	-----	10/07/2009
Type of sample		Water
Date extracted	-	15/07/2009
Date analysed	-	16/07/2009
Diazinon	µg/L	<0.2
Dimethoate	µg/L	<0.2
Chlorpyrifos-methyl	µg/L	<0.2
Ronnel	µg/L	<0.2
Chlorpyrifos	µg/L	<0.2
Fenitrothion	µg/L	<0.2
Bromophos ethyl	µg/L	<0.2
Ethion	µg/L	<0.2
Surrogate TCLMX	%	86

PCBs in Water Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	30812-1 GW/28 10/07/2009 Water
Date extracted	-	15/07/2009
Date analysed	-	16/07/2009
Arochlor 1016	µg/L	<2
Arochlor 1232	µg/L	<2
Arochlor 1242	µg/L	<2
Arochlor 1248	µg/L	<2
Arochlor 1254	µg/L	<2
Arochlor 1260	µg/L	<2
Surrogate TCLMX	%	86

Total Phenolics in Water		
Our Reference:	UNITS	30812-1
Your Reference	-----	GW/28
Date Sampled	-----	10/07/2009
Type of sample		Water
Date extracted	-	16/07/2009
Date analysed	-	17/07/2009
Total Phenolics (as Phenol)	mg/L	0.14

HM in water - dissolved			
Our Reference:	UNITS	30812-1	30812-2
Your Reference	-----	GW/28	BD1/100709
Date Sampled	-----	10/07/2009	10/07/2009
Type of sample		Water	Water
Date prepared	-	14/07/2009	14/07/2009
Date analysed	-	15/07/2009	15/07/2009
Arsenic-Dissolved	µg/L	<1.0	<1.0
Cadmium-Dissolved	µg/L	0.40	0.50
Chromium-Dissolved	µg/L	<1.0	1.0
Copper-Dissolved	µg/L	<1.0	<1.0
Lead-Dissolved	µg/L	<1.0	<1.0
Mercury-Dissolved	µg/L	<0.50	<0.50
Nickel-Dissolved	µg/L	160	170
Zinc-Dissolved	µg/L	220	250

Miscellaneous Inorganics		
Our Reference:	UNITS	30812-1
Your Reference	-----	GW/28
Date Sampled	-----	10/07/2009
Type of sample		Water
Date prepared	-	16/07/2009
Date analysed	-	16/07/2009
Calcium - Dissolved	mg/L	33
Magnesium - Dissolved	mg/L	76
Hardness by calculation	mgCaCO ₃ /L	400

Method ID	Methodology Summary
GC.16	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS.
GC.3	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
GC.12 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
GC-5	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
GC.8	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
GC-6	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
LAB.30	Total Phenolics - determined colorimetrically following distillation.
Metals.22 ICP-MS	Determination of various metals by ICP-MS.
Metals.21 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Metals.20 ICP-AES	Determination of various metals by ICP-AES.

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTPH & BTEX in Water						Base II Duplicate II %RPD		
Date extracted	-			15/07/2009	[NT]	[NT]	LCS-W1	15/07/2009
Date analysed	-			15/07/2009	[NT]	[NT]	LCS-W1	15/07/2009
TPH C ₆ - C ₉	µg/L	10	GC.16	<10	[NT]	[NT]	LCS-W1	85%
Benzene	µg/L	1	GC.16	<1.0	[NT]	[NT]	LCS-W1	81%
Toluene	µg/L	1	GC.16	<1.0	[NT]	[NT]	LCS-W1	82%
Ethylbenzene	µg/L	1	GC.16	<1.0	[NT]	[NT]	LCS-W1	87%
m+p-xylene	µg/L	2	GC.16	<2.0	[NT]	[NT]	LCS-W1	87%
o-xylene	µg/L	1	GC.16	<1.0	[NT]	[NT]	LCS-W1	87%
Surrogate	%		GC.16	100	[NT]	[NT]	LCS-W1	103%
Dibromofluoromethane								
Surrogate toluene-d8	%		GC.16	97	[NT]	[NT]	LCS-W1	94%
Surrogate 4-BFB	%		GC.16	68	[NT]	[NT]	LCS-W1	91%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sTPH in Water (C10-C36)						Base II Duplicate II %RPD		
Date extracted	-			15/07/2009	[NT]	[NT]	LCS-W1	15/07/2009
Date analysed	-			15/07/2009	[NT]	[NT]	LCS-W1	15/07/2009
TPH C ₁₀ - C ₁₄	µg/L	50	GC.3	<50	[NT]	[NT]	LCS-W1	82%
TPH C ₁₅ - C ₂₈	µg/L	100	GC.3	<100	[NT]	[NT]	LCS-W1	110%
TPH C ₂₉ - C ₃₆	µg/L	100	GC.3	<100	[NT]	[NT]	LCS-W1	108%
Surrogate o-Terphenyl	%		GC.3	84	[NT]	[NT]	LCS-W1	95%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Water						Base II Duplicate II %RPD		
Date extracted	-			15/07/2009	[NT]	[NT]	LCS-W1	15/07/2009
Date analysed	-			16/07/09	[NT]	[NT]	LCS-W1	16/07/09
Naphthalene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	LCS-W1	137%
Acenaphthylene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	[NR]	[NR]
Acenaphthene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	[NR]	[NR]
Fluorene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	LCS-W1	134%
Phenanthrene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	LCS-W1	128%
Anthracene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	[NR]	[NR]

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Water						Base II Duplicate II %RPD		
Fluoranthene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	LCS-W1	124%
Pyrene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	LCS-W1	129%
Benzo(a)anthracene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	[NR]	[NR]
Chrysene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	LCS-W1	134%
Benzo(b+k)fluoranthene	µg/L	2	GC.12 subset	<2	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	LCS-W1	128%
Indeno(1,2,3-c,d)pyrene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	µg/L	1	GC.12 subset	<1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		GC.12 subset	96	[NT]	[NT]	LCS-W1	104%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
OCP in water						Base II Duplicate II %RPD		
Date extracted	-			15/07/2009	[NT]	[NT]	LCS-W1	15/07/2009
Date analysed	-			16/07/09	[NT]	[NT]	LCS-W1	16/07/09
HCB	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
alpha-BHC	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	100%
gamma-BHC	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
beta-BHC	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	116%
Heptachlor	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	104%
delta-BHC	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
Aldrin	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	103%
Heptachlor Epoxide	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	104%
gamma-Chlordane	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
alpha-Chlordane	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
Endosulfan I	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
pp-DDE	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	116%
Dieldrin	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	105%
Endrin	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	109%
pp-DDD	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	118%
Endosulfan II	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
DDT	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	LCS-W1	104%

Client Reference: 48670, Prelim. Contam. Assess.

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
OCP in water						Base II Duplicate II %RPD		
Methoxychlor	µg/L	0.2	GC-5	<0.2	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		GC-5	90	[NT]	[NT]	LCS-W1	106%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
OP Pesticides in water						Base II Duplicate II %RPD		
Date extracted	-			15/07/2009	[NT]	[NT]	LCS-W1	15/07/2009
Date analysed	-			16/07/09	[NT]	[NT]	LCS-W1	16/07/09
Diazinon	µg/L	0.2	GC.8	<0.2	[NT]	[NT]	[NR]	[NR]
Dimethoate	µg/L	0.2	GC.8	<0.2	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos-methyl	µg/L	0.2	GC.8	<0.2	[NT]	[NT]	[NR]	[NR]
Ronnel	µg/L	0.2	GC.8	<0.2	[NT]	[NT]	[NR]	[NR]
Chlorpyrifos	µg/L	0.2	GC.8	<0.2	[NT]	[NT]	LCS-W1	71%
Fenitrothion	µg/L	0.2	GC.8	<0.2	[NT]	[NT]	LCS-W1	118%
Bromophos ethyl	µg/L	0.2	GC.8	<0.2	[NT]	[NT]	[NR]	[NR]
Ethion	µg/L	0.2	GC.8	<0.2	[NT]	[NT]	LCS-W1	85%
Surrogate TCLMX	%		GC.8	90	[NT]	[NT]	LCS-W1	77%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PCBs in Water						Base II Duplicate II %RPD		
Date extracted	-			15/07/2009	[NT]	[NT]	LCS-W1	15/07/2009
Date analysed	-			16/07/09	[NT]	[NT]	LCS-W1	16/07/09
Arochlor 1016	µg/L	2	GC-6	<2	[NT]	[NT]	[NR]	[NR]
Arochlor 1232	µg/L	2	GC-6	<2	[NT]	[NT]	[NR]	[NR]
Arochlor 1242	µg/L	2	GC-6	<2	[NT]	[NT]	[NR]	[NR]
Arochlor 1248	µg/L	2	GC-6	<2	[NT]	[NT]	[NR]	[NR]
Arochlor 1254	µg/L	2	GC-6	<2	[NT]	[NT]	LCS-W1	83%
Arochlor 1260	µg/L	2	GC-6	<2	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%		GC-6	90	[NT]	[NT]	LCS-W1	93%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Total Phenolics in Water						Base II Duplicate II %RPD		
Date extracted	-			16/07/2009	[NT]	[NT]	LCS-W1	16/07/2009
Date analysed	-			17/07/09	[NT]	[NT]	LCS-W1	17/07/09
Total Phenolics (as Phenol)	mg/L	0.05	LAB.30	<0.050	[NT]	[NT]	LCS-W1	85%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
HM in water - dissolved						Base II Duplicate II %RPD		
Date prepared	-			14/07/09	[NT]	[NT]	LCS-W2	14/07/09
Date analysed	-			15/07/2009	[NT]	[NT]	LCS-W2	15/07/2009
Arsenic-Dissolved	µg/L	1	Metals.22 ICP-MS	<1.0	[NT]	[NT]	LCS-W2	102%
Cadmium-Dissolved	µg/L	0.1	Metals.22 ICP-MS	<0.10	[NT]	[NT]	LCS-W2	104%
Chromium-Dissolved	µg/L	1	Metals.22 ICP-MS	<1.0	[NT]	[NT]	LCS-W2	102%
Copper-Dissolved	µg/L	1	Metals.22 ICP-MS	<1.0	[NT]	[NT]	LCS-W2	97%
Lead-Dissolved	µg/L	1	Metals.22 ICP-MS	<1.0	[NT]	[NT]	LCS-W2	99%
Mercury-Dissolved	µg/L	0.5	Metals.21 CV-AAS	<0.50	[NT]	[NT]	LCS-W2	100%
Nickel-Dissolved	µg/L	1	Metals.22 ICP-MS	<1.0	[NT]	[NT]	LCS-W2	98%
Zinc-Dissolved	µg/L	1	Metals.22 ICP-MS	<1.0	[NT]	[NT]	LCS-W2	96%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Miscellaneous Inorganics						Base II Duplicate II %RPD		
Date prepared	-			16/07/09	[NT]	[NT]	LCS-W1	16/07/09
Date analysed	-			16/07/09	[NT]	[NT]	LCS-W1	16/07/09
Calcium - Dissolved	mg/L	0.03	Metals.20 ICP-AES	<0.030	[NT]	[NT]	LCS-W1	103%
Magnesium - Dissolved	mg/L	0.03	Metals.20 ICP-AES	<0.030	[NT]	[NT]	LCS-W1	102%
Hardness by calculation	mgCaCO ₃ /L	1	Metals.20 ICP-AES	<1	[NT]	[NT]	[NR]	[NR]

Report Comments:

Asbestos was analysed by Approved Identifier: Not applicable for this job

INS: Insufficient sample for this test NT: Not tested PQL: Practical Quantitation Limit <: Less than >: Greater than

RPD: Relative Percent Difference NA: Test not required LCS: Laboratory Control Sample NR: Not requested

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike: A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample): This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria:

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

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for

SVOC and speciated phenols is acceptable. Surrogates: 60-140% is acceptable for general organics and 10-140% for SVOC and speciated phenols.



Douglas Partners
Geotechnical • Environment • Groundwater

CHAIN OF CUSTODY

Project Name: Preliminary Contamination Assessment		To: Envirolab Services	
Project No: 48670		12 Ashley St Chatswood 2067	
Project Mgr: Jane Smalley		Mob. Phone: 0412754162	
Email: Aidan.Wright@douglaspartners.com.au		Phone: 9910 6200 Fax: 9910 6201	
Date Required: standard			



Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: 9910 6200

Job No: 30812

Date received: 3/7/09

Time received: 1430

Received by: 

Temp: Cool/Ambient

Cooling: Ice/Cepak

Security: ☒ Intact/☐ Broken/☐ None[illegible]

Form COC

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