ENVIRONMENTAL LOG

Maunsell Australia Pty Ltd
Level 6, 100 Pirie Street
Adelaide, S.A. , 5000

Client: Adelaide City Council

Project: Central West Precinct

Location: Franklin St Bus Station and Carparks

Bore No. MW 6 (B) cont.

maunsell

Excav. Type: Bore Hole | **Length:** 22.0 m

Equipment: Solid Auger | **Width:** mm

Job no: 40032004.00

Date: 24/08/2004

Logged: SDG

RL Surface: 43.151 m

Datum: AHD

Water	Samples/ Tests	GW Bore	Depth (m)	Graphic Log	Material Description:	Remarks:
		Collapsed Sand				
		Screen	19.0			
		End Cap	20.0		hard drilling, presume sandstone	
			21.0		softer drilling SAND, minor silt, wet, sand variable medium to very coarse	
			22.0		Gravelly Clayey SAND, yellow tan, gravel is crushed sandstone, wet, drilling becoming harder	Sample from auger
					END OF HOLE	
			23.0			
			24.0			

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Note: original in colour

ENVIRONMENTAL LOG

Maunsell Australia Pty Ltd
Level 6, 100 Pirie Street
Adelaide, S.A. , 5000

Client: Adelaide City Council

Project: Central West Precinct

Location: Franklin St Bus Station and Carparks

Bore No. MW 7

maunsell

Excav. Type: Bore Hole **Length:** 21.9 m

Equipment: Solid Auger **Width:** mm

Job no: 40032004.00

Date: 23/08 & 25/8/2004

Logged: TG

RL TOC: 43.772 m

Datum: AHD

Water	Samples/ Tests	GW Bore	Depth (m)	Graphic Log	Material Description:
			Concrete		ASPHALT
					Gravelly SAND, light grey / cream tan, slightly moist, sand variable fine to very coarse grained, gravel subangular to 15mm
			Bentonite		
			1.0		CLAY, tan slightly moist
			2.0		CLAY, olive grey, slightly moist, with orange inclusions / streaks, very minor fine sand (very fine)
			3.0		CLAY, olive grey, slightly moist, increasing orange inclusions / streaks, very minor fine sand (very fine)
			4.0		CLAY, olive grey, slightly moist, red streaks, very minor fine sand (very fine)
			5.0		CLAY, olive grey, slightly moist, less red streaks, very minor fine sand (very fine)
			6.0		CLAY, olive grey with increasing tan, slightly moist, very minor fine sand (very fine)

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INOICATES CLAY
- INOICATES GRAVEL

Note: original in colour

ENVIRONMENTAL LOG

Maunsell Australia Pty Ltd
Level 6, 100 Pirie Street
Adelaide, S.A. , 5000

Client: Adelaide City Council

Project: Central West Precinct

Location: Franklin St Bus Station and Carparks

Bore No. MW 7 cont.

maunsell

Job no: 40032004.00

Date: 23/08 & 25/8/2004

Logged: TG

RL TOC: 43.772 m

Datum: AHD

Excav. Type: Bore Hole — **Length:** 21.9 m

Equipment: Solid Auger — **Width:** mm

Water	Samples/ Tests	GW Bore	Depth (m)	Graphic Log	Material Description:
		Bentonite	7.0		CLAY, olive grey, increasing tan colour, increasing moisture, softer, red streaks, very minor fine sand (very fine)
			8.0		CLAY, olive grey, increasing tan colour, not as soft / moist, red streaks, very minor fine sand (very fine)
			9.0		CLAY, olive grey, increasing tan colour, slightly more moist, red streaks, very minor fine sand (very fine)
		Concrete	10.0		CLAY, olive grey, increasing tan colour, slightly more moist, red streaks, very minor fine sand (very fine)
			11.0		colour change orange tan, slightly softer, moisture increasing, minor sand, fine
			12.0		CLAY, orange tan, soft, slightly moist, minor sand, coarse

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Note: original in colour

ENVIRONMENTAL LOG

Maunsell Australia Pty Ltd
Level 6, 100 Pirie Street
Adelaide, S.A. , 5000

Client: Adelaide City Council

Project: Central West Precinct

Location: Franklin St Bus Station and Carparks

Bore No. MW 7 cont.

maunsell

Job no: 40032004.00

Date: 23/08 & 25/8/2004

Logged: TG

RL TOC: 43.772 m

Datum: AHD

Excav. Type: Bore Hole — **Length:** 21.9 m

Equipment: Solid Auger — **Width:** mm

Water	Samples/ Tests	GW Bore	Depth (m)	Graphic Log	Material Description:	Remarks:
		Concrete				
			13.0		CLAY, orange tan, not as soft, slightly moist, minor sand, coarse	
			14.0		CLAY, orange tan, slightly softer, slightly moist, minor coarse sand minor silt	
			15.0		CLAY, orange tan, slightly softer, slightly moist, minor coarse sand minor silt	Drilling suspended Continued 25/8/04
		Bentonite				
			16.0		CLAY, grey, dry, firm	
		Added Sand				
			17.0		CLAY, slighlty darker grey, dry, firm	
		Screen				
		Collapsed Sand				
Standing			18.0		softer drilling, SAND, yellow, wet, medium to coarse grained	

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Note: original in colour

ENVIRONMENTAL LOG

Maunsell Australia Pty Ltd
Level 6, 100 Pirie Street
Adelaide, S.A. , 5000

Client: Adelaide City Council

Project: Central West Precinct

Location: Franklin St Bus Station and Carparks

Bore No. MW 7 cont.

maunsell

Job no: 40032004.00

Date: 23/08 & 25/8/2004

Logged: TG

RL TOC: 43.772 m

Datum: AHD

Excav. Type: Bore Hole — **Length:** 21.9 m

Equipment: Solid Auger — **Width:** mm

Water	Samples/ Tests	GW Bore	Depth (m)	Graphic Log	Material Description:
		Collapsed Sand			
			19.0		SAND, yellow, wet, medium to coarse grained
		End Cap			
			20.0		
			21.0		
					END OF HOLE
			22.0		
			23.0		
			24.0		

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Harder drilling @ 200 - 300mm, possibly sandstone

Hard drilling, presume sandstone

Note: original in colour

ENVIRONMENTAL LOG

Maunsell Australia Pty Ltd
Level 6, 100 Pirie Street
Adelaide, S.A. , 5000

Client: Adelaide City Council

Project: Central West Precinct

Location: Franklin St Bus Station and Carparks

Bore No. MW 8

maunsell

Job no: 40032004.00

Date: 26/08/2004

Logged: SDG

RL TOC: 43.758m

Datum: AHD

Excav. Type: Bore Hole **Length:** 19.6 m

Equipment: Solid Auger **Width:** mm

Remarks:

Water	Samples/ Tests	GW Bore	Depth (m)	Graphic Log	Material Description:
		Concrete			ASPHALT
					Gravelly SAND, tan, slightly moist, sand variable fine to very coarse, gravel subangular to 15mm
		Bentonite			colour change red / ochre
			1.0		Gravelly Sandy CLAY, brown, slightly moist, gravel subangular to 5mm, sand variable fine to coarse
			2.0		CLAY, light grey / green, slightly moist, stiff
			3.0		CLAY, light grey / green, slightly moist, stiff
			4.0		CLAY, light grey / green, tan streaks, slightly moist, stiff
			5.0		CLAY, light grey / green, red streaks, slightly moist, stiff
			6.0		CLAY, light grey / green, tan and red streaks, slightly moist, stiff

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Note: original in colour

ENVIRONMENTAL LOG

Maunsell Australia Pty Ltd
Level 6, 100 Pirie Street
Adelaide, S.A. , 5000

Client: Adelaide City Council

Project: Central West Precinct

Location: Franklin St Bus Station and Carparks

Bore No. MW 8 cont.

maunsell

Job no: 40032004.00
Date: 26/08/2004
Logged: SDG
RL TOC: 43.758m
Datum: AHD

Excav. Type: Bore Hole
Equipment: Solid Auger
Length: 19.6 m
Width: mm

Water	Samples/ Tests	GW Bore	Depth (m)	Graphic Log	Material Description:	Remarks:
		Bentonite	7.0		CLAY, light grey / green, tan and red streaks, slightly moist, stiff	
			8.0		CLAY, light grey / green, tan and red streaks, slightly moist, stiff	
			9.0		CLAY, olive green / brown tan layers, tan and red streaks, slightly moist, stiff	9.7 hard drilling
			10.0		Sandy CLAY, yellow tan, slightly moist, stiff, sand medium to coarse	10.5 softens
			11.0		Sandy CLAY, yellow tan, slightly moist, stiff, sand medium grained, content slightly decreased	tight drilling at around 11m
			12.0		CLAY, olive tan, stiff, slightly moist, minor fine to medium grained sand, tan and light grey / green streaks	

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Note: original in colour

ENVIRONMENTAL LOG

Maunsell Australia Pty Ltd
Level 6, 100 Pirie Street
Adelaide, S.A. , 5000

Client: Adelaide City Council

Project: Central West Precinct

Location: Franklin St Bus Station and Carparks

Bore No. MW 8 cont.

maunsell

Job no: 40032004.00
Date: 26/08/2004
Logged: SDG
RL TOC: 43.758m
Datum: AHD

Excav. Type: Bore Hole
Equipment: Solid Auger
Length: 19.6 m
Width: mm

Water	Samples/ Tests	GW Bore	Depth (m)	Graphic Log	Material Description:
			Concrete		
			13.0		CLAY, olive tan, stiff, slightly softer, slightly moist, minor fine to medium grained sand, tan and light grey / green streaks
			14.0		CLAY, olive tan, stiff, slightly softer, slightly moist, minor fine to medium grained sand, tan and light grey / green streaks
		Bentonite			
			15.0		colour change olive, sand content decreased, appears to be becoming dark grey
		Added Sand			
			16.0		grading into Sandy CLAY / Clayey SAND, olive tan, slightly moist, sticky, sand fine to coarse grained
		Screen			
			17.0		then grading into SAND, olive tan, moist, appears to become Clayey SAND, then back to SAND
▼ Standing			18.0		

Remarks:

Key To Graphic Log

- INOICATES SILT
- INDICATES SAND
- INOICATES ASPHALT/CONCRETE
- INOICATES ROCK
- INDICATES CLAY
- INOICATES GRAVEL

15.5 change in drilling - 200mm rocky or sandy

15.8/9 - change again
Minimal recovery 16 - end of hole

drilling softens
very little resistance

Note: original in colour

ENVIRONMENTAL LOG

Maunsell Australia Pty Ltd
Level 6, 100 Pirie Street
Adelaide, S.A. , 5000

Client: Adelaide City Council

Project: Central West Precinct

Location: Franklin St Bus Station and Carparks

Bore No. MW 8 cont.

maunsell

Job no: 40032004.00
Date: 26/08/2004
Logged: SDG
RL TOC: 43.758m
Datum: AHD

Excav. Type: Bore Hole
Equipment: Solid Auger
Length: 19.6 m
Width: mm

Water	Samples/ Tests	GW Bore	Depth (m)	Graphic Log	Material Description:
		Added Sand			grading into SAND, yellow tan, medium, wet
		Screen			
		Collapsed Sand / End Cap	19.0		presume sandstone, very hard drilling
					END OF HOLE
			20.0		
			21.0		
			22.0		
			23.0		
			24.0		

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

18.9 hard drilling
Presume rock 100mm, drilling eases, alternating hard and eased drilling

Note: original in colour

ENVIRONMENTAL LOG

Maunsell Australia Pty Ltd
Level 6, 100 Pirie Street
Adelaide, S.A. , 5000

Client: Adelaide City Council

Project: Central West Precinct

Location: Franklin St Bus Station and Carparks

Bore No. MW 9

maunsell

Job no: 40032004.00

Date: 23/8 & 25/8/2004

Logged: SDG

RL TOC: 43.300m

Datum: AHD

Excav. Type: Bore Hole — **Length:** 19.3 m

Equipment: Solid Auger — **Width:** mm

Water	Samples/ Tests	GW Bore	Depth (m)	Graphic Log	Material Description:
		Concrete			ASPHALT
					Gravelly SAND, yellow, dry, sand coarse grained
		Bentonite			
			1.0		
					Sandy Silty CLAY, cream tan, slightly moist sand is medium to coarse grained
			2.0		
					CLAY, light grey / green, slightly moist, stiff, minor organic material in layer, tan streaks, black specks
			3.0		CLAY, light grey / green, slightly moist, stiff, tan streaks, black specks
			4.0		CLAY, light grey / green, slightly moist, stiff, tan streaks, black specks
			5.0		CLAY, light grey / green, slightly moist, stiff, tan streaks, black specks
			6.0		CLAY, light grey / green, slightly moist, stiff, slightly softer, tan streaks, black specks

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Note: original in colour

ENVIRONMENTAL LOG

Maunsell Australia Pty Ltd
Level 6, 100 Pirie Street
Adelaide, S.A. , 5000

Client: Adelaide City Council

Project: Central West Precinct

Location: Franklin St Bus Station and Carparks

Bore No. MW 9 cont.

maunsell

Excav. Type: Bore Hole
Equipment: Solid Auger

Length: 19.3 m
Width: mm

Job no: 40032004.00
Date: 23/8 & 25/8/2004
Logged: SDG
RL TOC: 43.300m
Datum: AHD

Water	Samples/ Tests	GW Bore	Depth (m)	Graphic Log	Material Description:	Remarks:
		Bentonite	7.0		CLAY, light grey / green, slightly moist, stiff, red and tan streaks	
			8.0		CLAY, red / brown predominantly over grey / green, minor medium to fine grained sand, slightly moist, stiff	
			9.0		sand content slightly increases, medium to very coarse, slightly softer, red ochre	
			10.0		slightly softer, sand content slightly increased	Tight drilling
			11.0		sand diminished to minor, colour change tan	
			12.0		CLAY, tan, minor sand, stiff	Drilling feel change

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Note: original in colour

ENVIRONMENTAL LOG

Maunsell Australia Pty Ltd
Level 6, 100 Pirie Street
Adelaide, S.A. , 5000

Client: Adelaide City Council

Project: Central West Precinct

Location: Franklin St Bus Station and Carparks

Bore No. MW 9 cont.

maunsell

Job no: 40032004.00

Date: 23/8 & 25/8/2004

Logged: SDG

RL TOC: 43.300m

Datum: AHD

Excav. Type: Bore Hole

Equipment: Solid Auger

Length: 19.3 m

Width: mm

Water	Samples/ Tests	GW Bore	Depth (m)	Graphic Log	Material Description:	Remarks:
			Concrete			
			13.0		CLAY, olive green / tan with red streaks, minor sand, stiff	
		Bentonite	14.0		CLAY, stiff, slightly moist, light tan grey / green (olive) with tan streaks, minor fine to medium grained sand	
			15.0		CLAY, stiff, slightly moist, light tan grey / green (olive) with tan streaks, minor fine to medium grained sand, calcrete on drill head, ground up by auger, white	Drilling suspended 23/8, continued 25/8
		Added Sand			SAND	15.7 drilling gripping, suspected sand
			16.0		ROCK, Sandstone based on gravel fragments	Hard drilling at 16m
						Medium - hard drilling to 19
		Screen				Soft drilling
Standing			17.0			
			18.0			

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Note: original in colour

ENVIRONMENTAL LOG

Maunsell Australia Pty Ltd
Level 6, 100 Pirie Street
Adelaide, S.A. , 5000

Client: Adelaide City Council

Project: Central West Precinct

Location: Franklin St Bus Station and Carparks

Bore No. MW 9 cont.

maunsell

Job no: 40032004.00

Date: 23/8 & 25/8/2004

Logged: SDG

RL TOC: 43.300m

Datum: AHD

Excav. Type: Bore Hole — **Length:** 19.3 m

Equipment: Solid Auger — **Width:** mm

Water	Samples/ Tests	GW Bore	Depth (m)	Graphic Log	Material Description:
		Added Sand			
		Screen			
		Collapsed Sand			
			19.0		
		End Cap			END OF HOLE
			20.0		
			21.0		
			22.0		
			23.0		
			24.0		

GW 1

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

19.2 hard again
19.3 hard as elsewhere at sandstone

Note: original in colour

Appendix C – Summary of Analytical and Quality Sampling Spreadsheet

maunsell

Central West Precinct - Franklin Street Bus Station and Car Parks

Laboratory	MGT				ALS		CoC Number	Date Collected (2004)	Date Analysed (2004)	Holding Time (days)	Laboratory Report (MGT/ALS)
Sample Name	VIC EPA	pH	PAH	Heid	VIC EPA	pH					
BUS1-A	X	X						18-Aug	21-Aug	3	
BUS1-B	X	X						18-Aug	21-Aug	3	
BUS2-A	X	X					S015	19-Aug	21-Aug	2	A174918
BUS2-B	X	X						19-Aug	21-Aug	2	
BUS3-A	X	X						19-Aug	21-Aug	2	
BUS3-B			X				S027	19-Aug	26-Oct	68	A176799
BUS4-A	X	X						18-Aug	21-Aug	3	
BUS4-B				X				18-Aug	21-Aug	3	
BUS5-A	X	X						18-Aug	21-Aug	3	
BUS5-B				X			S015	18-Aug	21-Aug	3	
BUS6-A	X	X						18-Aug	21-Aug	3	A174918
BUS6-AA	X	X						18-Aug	21-Aug	3	
BUS6-B	X	X						18-Aug	21-Aug	3	
BUS6-C	X	X					S017	18-Aug	21-Aug	3	
BUS7-A	X	X					S015	18-Aug	21-Aug	3	
BUS7-AA*	X	X			X	X	S015/S016	18-Aug	24-Aug	6	A174918/EM26163
BUS7-B	X	X						18-Aug	21-Aug	3	
BUS7-C	X	X						18-Aug	21-Aug	3	
BUS8-A	X	X					S015	18-Aug	21-Aug	3	A174918
BUS8-B				X				18-Aug	21-Aug	3	
BUS9-A	X	X						18-Aug	21-Aug	3	
BUS9-B			X				S027	18-Aug	26-Oct	69	A176799
BUS10-A	X	X						18-Aug	21-Aug	3	
BUS10-B	X	X						18-Aug	21-Aug	3	
BUS11-A	X	X					S015	18-Aug	21-Aug	3	A174918
BUS11-B				X				18-Aug	21-Aug	3	
BUS12-A	X	X						18-Aug	21-Aug	3	
BUS12-AA*	X	X			X	X	S015/S016	18-Aug	24-Aug	6	A174918/EM26163
BUS12-B	X	X						18-Aug	21-Aug	3	
BUS13-A	X	X						18-Aug	21-Aug	3	
BUS13-B	X	X						18-Aug	21-Aug	3	
BUS14-A	X	X						18-Aug	21-Aug	3	
BUS14-B				X			S015	18-Aug	21-Aug	3	A174918
BUS15-A	X	X						18-Aug	21-Aug	3	
BUS15-B	X	X						18-Aug	21-Aug	3	
BUS16-A	X	X						18-Aug	21-Aug	3	
BUS16-B			X				S027	18-Aug	26-Oct	69	A176799
BUS17-A	X	X						18-Aug	21-Aug	3	
BUS17-B	X	X					S015	18-Aug	21-Aug	3	A174918
BUS18-A	Not collected as site inaccessible										
BUS18-B	Not collected as site inaccessible										
BUS19-A	X	X						18-Aug	21-Aug	3	
BUS19-B				X			S015	18-Aug	21-Aug	3	A174918
BUS20-A	X	X						19-Aug	21-Aug	2	
BUS20-AA*	X	X			X	X	S015/S016	19-Aug	24-Aug	5	A174918/EM26163
BUS20-B	X	X						19-Aug	21-Aug	2	
BUS21-A	X	X						19-Aug	21-Aug	2	
BUS21-B				X			S015	19-Aug	21-Aug	2	A174918
BUS22-A	X	X						19-Aug	21-Aug	2	
BUS22-B	X	X						19-Aug	21-Aug	2	
MW-5	X	X						23-Sep	30-Sep	7	
MW-6	X	X						23-Sep	30-Sep	7	
MW-7	X	X					S023	23-Sep	30-Sep	7	A176122
MW-8	X	X						23-Sep	30-Sep	7	
MW-9	X	X						23-Sep	30-Sep	7	

Duplicate Soil Samples
Groundwater Samples

* the holding time for duplicates is calculated on the latest date analysed by either laboratory, implying that the other laboratory conducted their analysis within this holding time

Number of Samples Collected	Number of Samples Tested						
	MGT				ALS		
	VIC EPA	pH	PAH	Held	VIC EPA	pH	
56							Total Samples (Soil, Water & Duplicates)
44	34	34	3	7			Total Soil Samples (A, B & C)
21	21	21	0	0			Total A Samples
21	11	11	3	7			Total B Samples
2	2	2	0	0			Total C Samples
4	4	4					Total MGT Duplicates
	11%	11%					% MGT Duplicates/Total Soil Samples Tested
3					3	3	Total ALS Duplicates
					8%	8%	% ALS Duplicates/Total Soil Samples Tested
5	5	5	0	0			Total Water Samples

Appendix D – Groundwater Purging & Development Records

Developing and Purging Records

Well Development

Based on the following construction details:

Radius of well (r) = 25mm
Radius of borehole (R) = 55mm
Porosity of annulus = 0.3

Volume/meter = $(\pi R^2 - \pi r^2) \times 0.3 + \pi r^2 = (\pi 0.055^2 - \pi 0.025^2) \times 0.3 + \pi 0.025^2 = 0.0042233 m^3 = 4.2L$

Well	Date Developed	Depth of Well (m)	Meters of Water	Volume to be removed (L[1])	Volume Removed (L)
MW5	30/08/2004	19.5	2.25	47.25	50
MW6	30/08/2004	19.7	2.3	48.3	50
MW7	30/08/2004	20.0	2.25	47.25	50
MW8	30/08/2004	19.1	1.4	29.4	15[2]
MW9	31/08/2004	19.35	2.35	49.35	50

1 Development volume calculated by multiplying the 'meters of water' by 5Xvolumes/meter (21L)

2 The well was purged dry

Well Purging

Well	Date Purged	Depth of Well (m)	Depth to Water (m)	Meters of Water	Volume to be Removed (L[3])	Volume Removed (L)	Conductivity (mS/cm)	pH	Temp. (°C)	Sample Taken[4]
MW5	23/9/04	19.5	17.25	2.25	28.35	0	4.49	7.3	20.1	
						10	4.50	7.13	20.1	
						20	4.50	7.14	20.1	
						30	4.50	7.14	20.1	✓
MW6	23/9/04	19.7	17.45	2.3	28.98	0	4.59	7.3	19.7	
						10	4.56	7.25	20.4	
						20	4.54	7.24	20.4	
						30	4.54	7.24	20.4	✓
MW7	23/9/04	20.0	17.75	2.25	28.35	0	4.35	7.01	19.7	
						10	4.41	6.97	20.4	
						20	4.07	7.10	20.3	
						30	4.06	7.10	20.3	✓
MW8	23/9/04	19.1	17.7	1.4	17.64	0	3.73	7.3	19.8	
						5	3.65	7.31	19.4	
						dry	3.64	7.30	19.4	✓
MW9	23/9/04	19.35	17.0	2.35	29.61	0	5.29	7.22	20.0	
						10	5.30	7.16	19.7	
						20	5.29	7.09	19.9	
						30	5.29	7.10	20.1	
						40	5.29	7.11	20.1	✓

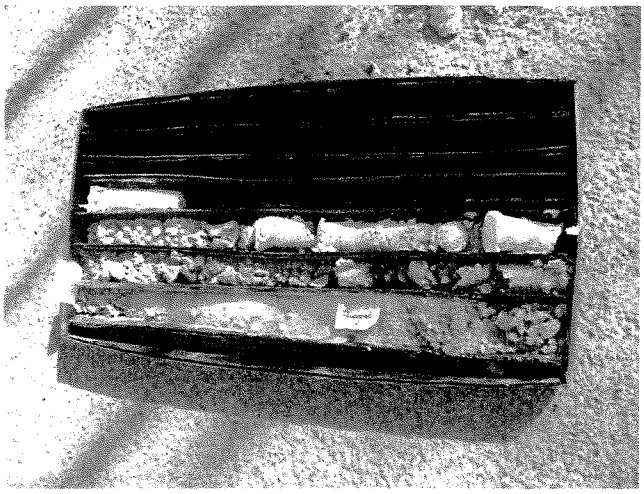
3 Purging volume calculated by multiplying the 'meters of water' by 3Xvolumes/meter (12.6L)

4 A sample was collected once conductivity, pH and temperature had stabilised

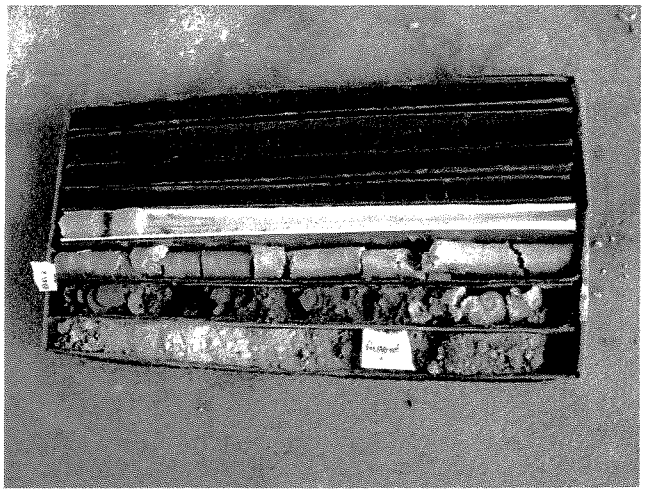
Appendix E - Photographs

Central West Precinct – Franklin Street Bus Station – Soil Investigation

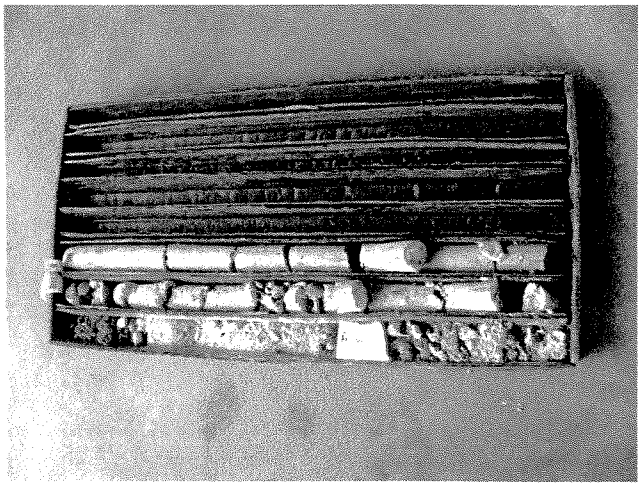
Soil Core Trays



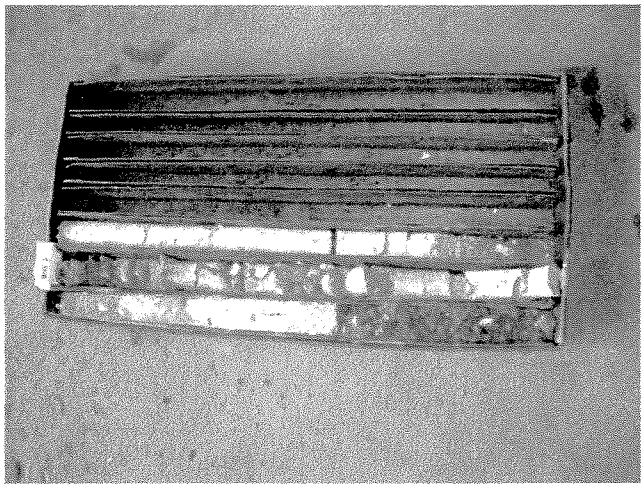
BUS 1



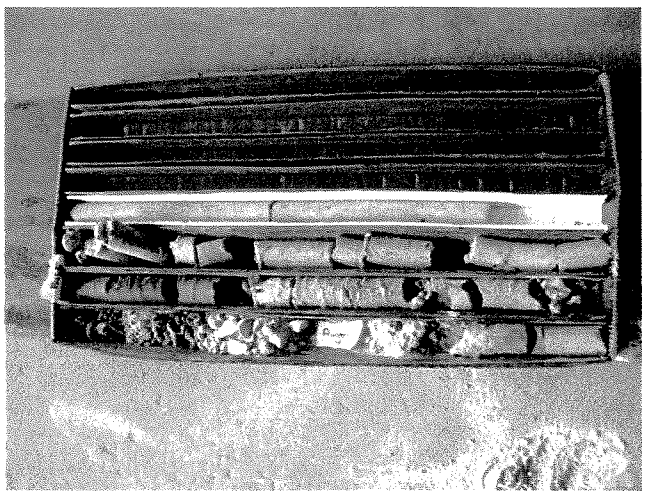
BUS 2



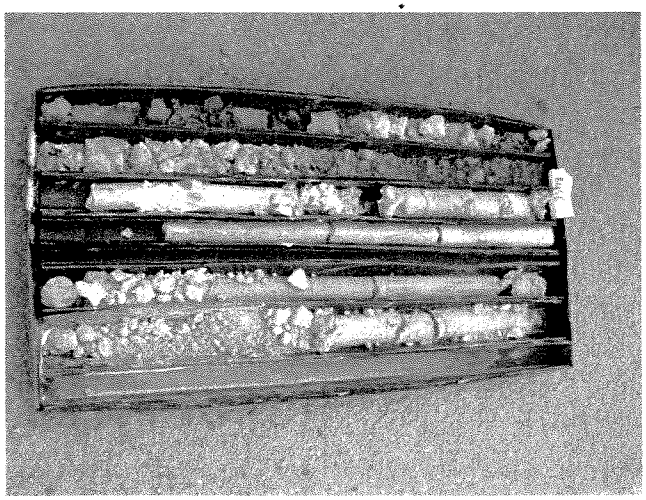
BUS 3



BUS 4



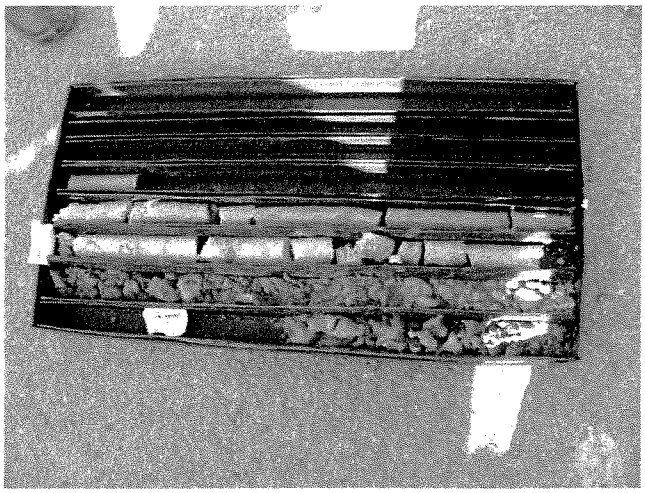
BUS 5



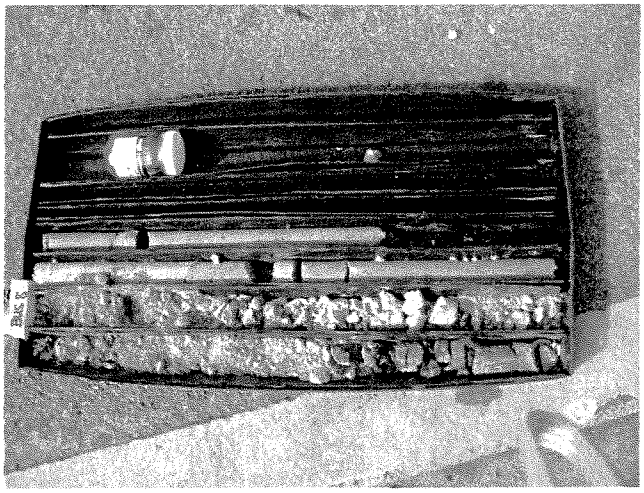
BUS 6

Central West Precinct – Franklin Street Bus Station – Soil Investigation

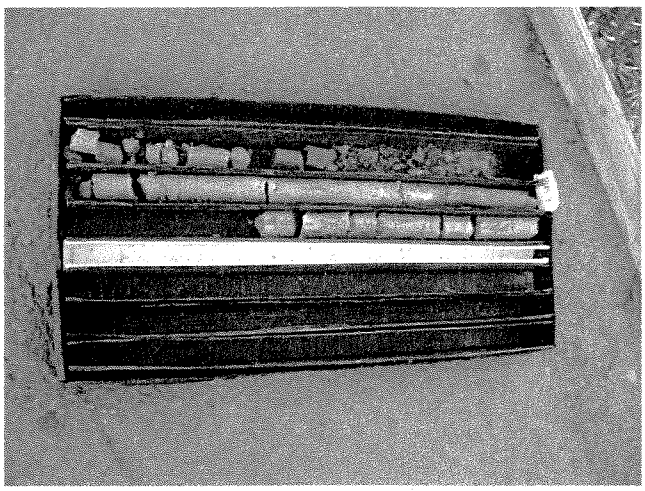
Soil Core Trays



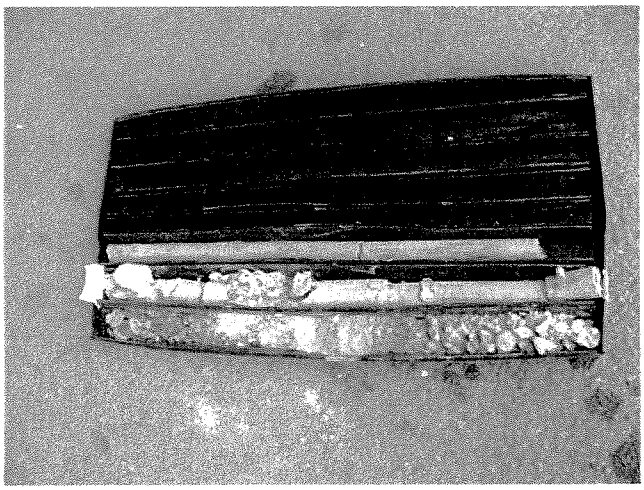
BUS 7



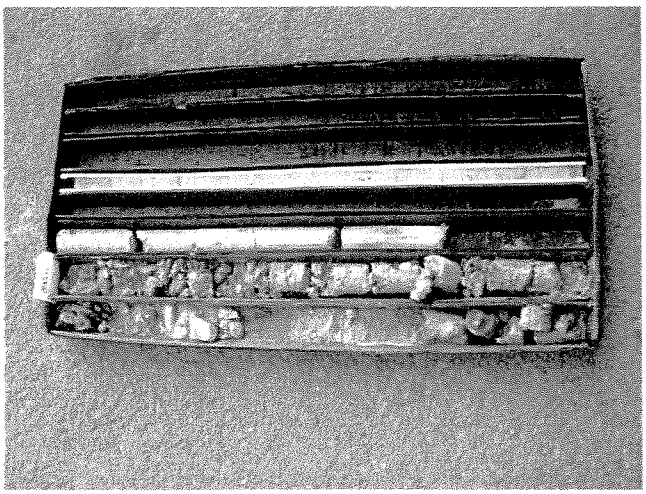
BUS 8



BUS 9



BUS 10

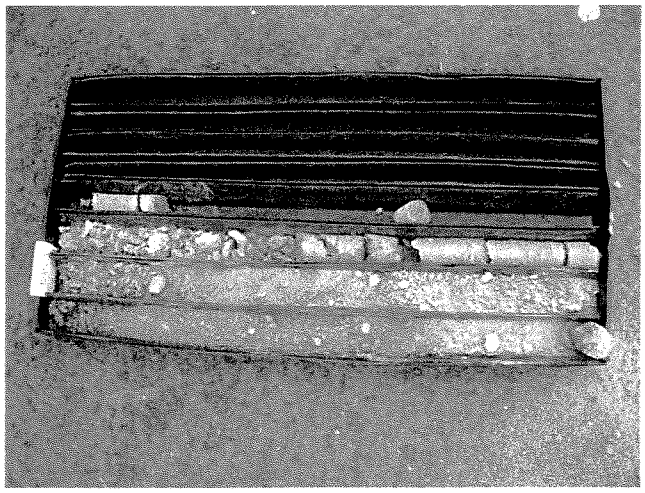


BUS 11

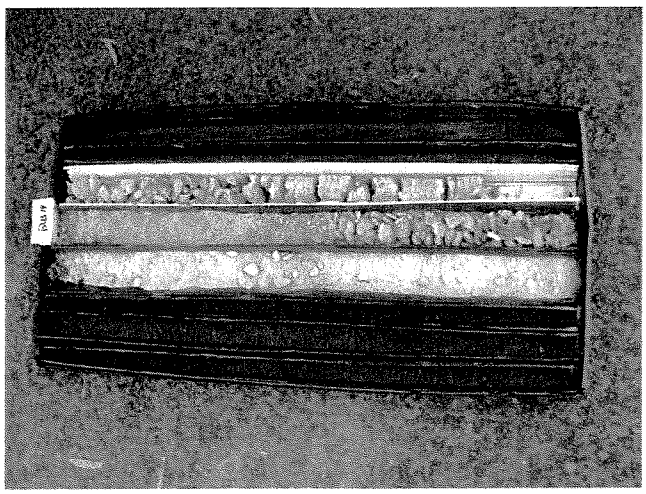
BUS 12

Central West Precinct – Franklin Street Bus Station – Soil Investigation

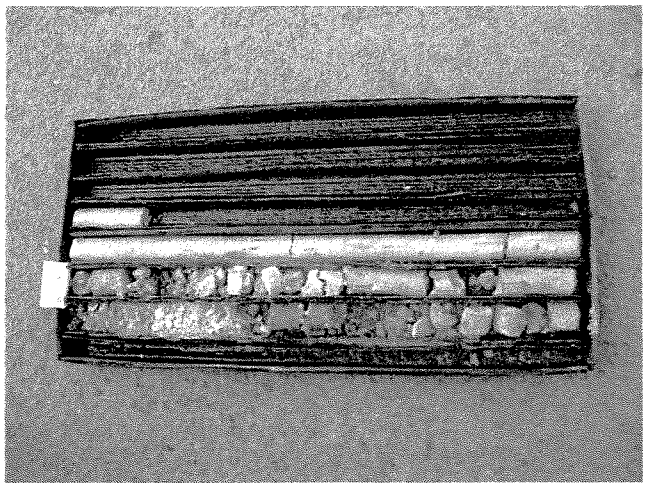
Soil Core Trays



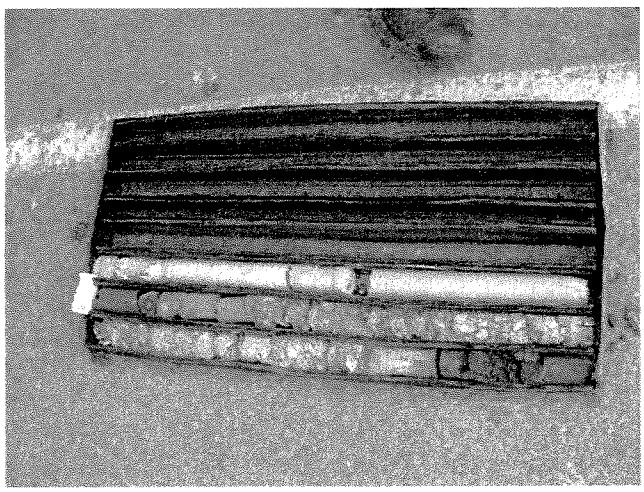
BUS 13



BUS 14

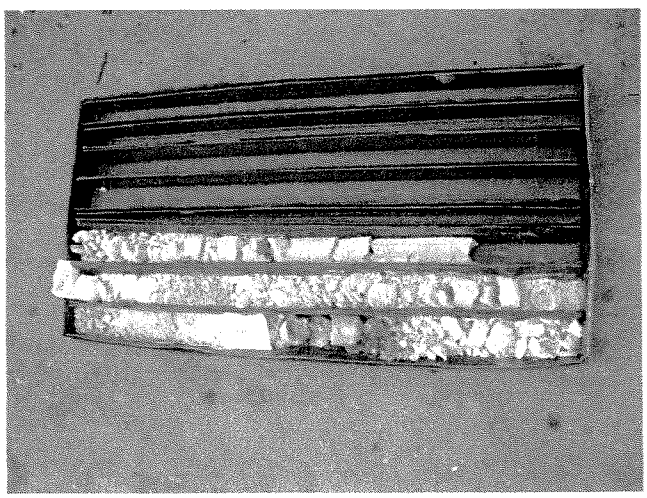


BUS 15



BUS 19

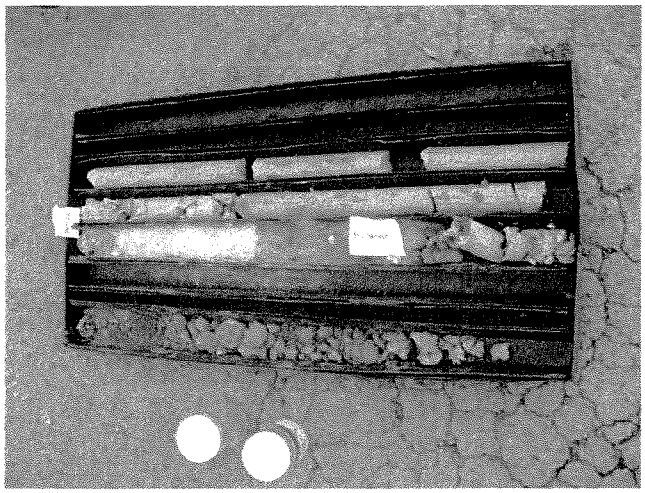
BUS 20



BUS 21

Central West Precinct – Franklin Street Bus Station – Soil Investigation

Soil Core Trays



BUS 22

Appendix F – Quality Assessment Data

Sample Number	BUS6-A	BUS6-AA		BUS7-A	BUS7-AA	BUS7-AA			BUS12-A	BUS12-AA	BUS12-AA		
Laboratory Number//RPD Calc^{n}	AU3095	AU3096	RPD	AU3098	AU3099	1	RPD	RPD	AU3107	AU3108	2	RPD	RPD
Testing Laboratory	MGT	MGT		MGT	MGT	ALS	MGT	ALS	MGT	MGT	ALS	MGT	ALS
Chlorinated Hydrocarbons	<LOR	<LOR		<LOR	<LOR	<LOR			<LOR	<LOR	<LOR		
Metals													
Antimony	<10	<10		<10	<10	<1			<10	<10	<1		
Arsenic	<2	<2		<2	<2	<1			<2	<2	<1		
Beryllium	<2	<2		<2	<2	<1			<2	<2	<1		
Cadmium	*0.25*	0.55	75%	<0.5	<0.5	<1			<0.5	<0.5	<1		
Chromium	17	24	34%	19	27	19	35%	0%	16	18	18	12%	12%
Cobalt	<5	<5		<5	<5	<1			*2.5*	*2.5*	2	0%	22%
Copper	11	9.3	17%	*2.5*	*2.5*	3	0%	18%	21	16	19	27%	10%
Lead	6	5.5	9%	*2.5*	*2.5*	5	0%	67%	8.7	20	28	79%	105%
Mercury	<0.1	<0.1		<0.1	<0.1	<0.1			<0.1	<0.1	<0.1		
Molybdenum	<10	<10		*5*	*5*	1	0%	133%	<10	<10	<1		
Nickel	10	12	18%	*2.5*	*2.5*	2	0%	22%	*2.5*	*2.5*	1	0%	86%
Selenium	<2	<2		<2	<2	<1			<2	<2	<1		
Tin	<10	<10		<10	<10	<1			*5*	*5*	2	0%	86%
Zinc	15	18	18%	6	6.4	10	6%	50%	19	18	18	5%	5%
pH													
pH (unitless)	9	8.6		9	9.1	9.3			9.3	9.2	9.3		
Cyanide	<LOR	<LOR		<LOR	<LOR	<LOR			<LOR	<LOR	<LOR		
MAHs	<LOR	<LOR		<LOR	<LOR	<LOR			<LOR	<LOR	<LOR		
Organochlorine Pesticides	<LOR	<LOR		<LOR	<LOR	<LOR			<LOR	<LOR	<LOR		
PAHs													
Naphthalene	*0.05*	*0.05*		*0.1*	*0.1*	*0.25*			*0.1*	*0.1*	*0.25*		
Acenaphthylene	*0.05*	*0.05*		*0.1*	*0.1*	*0.25*			*0.1*	*0.1*	*0.25*		
Acenaphthene	*0.05*	*0.05*		*0.1*	*0.1*	*0.25*			*0.1*	*0.1*	*0.25*		
Fluorene	*0.05*	*0.05*		*0.1*	*0.1*	*0.25*			*0.1*	*0.1*	*0.25*		
Phenanthrene	*0.05*	*0.05*		*0.1*	*0.1*	*0.25*			*0.1*	*0.1*	*0.25*		
Anthracene	*0.05*	*0.05*		*0.1*	*0.1*	*0.25*			*0.1*	*0.1*	*0.25*		
Fluoranthrene	*0.05*	*0.05*		*0.1*	*0.1*	*0.25*			*0.1*	*0.1*	*0.25*		
Pyrene	*0.05*	*0.05*		*0.1*	*0.1*	*0.25*			*0.1*	*0.1*	*0.25*		
Benzo(a)anthracene	*0.05*	*0.05*		*0.1*	*0.1*	*0.25*			*0.1*	*0.1*	*0.25*		
Chrysene	*0.05*	*0.05*		*0.1*	*0.1*	*0.25*			*0.1*	*0.1*	*0.25*		
Benzo(b)fluoranthene	*0.05*	*0.05*		*0.1*	*0.1*	*0.5*			*0.1*	*0.1*	*0.5*		
Benzo(k)fluoranthene	*0.05*	*0.05*		*0.1*	*0.1*				*0.1*	*0.1*			
Benzo(a)pyrene	*0.05*	*0.05*		*0.1*	*0.1*	*0.25*			*0.1*	*0.1*	*0.25*		
Dibenzo(a,h)anthracene	*0.05*	*0.05*		*0.1*	*0.1*	*0.25*			*0.1*	*0.1*	*0.25*		
Benzo(g,h,i)perylene	*0.05*	*0.05*		*0.1*	*0.1*	*0.25*			*0.1*	*0.1*	*0.25*		
Indeno(1,2,3-cd)pyrene	*0.05*	*0.05*		*0.1*	*0.1*	*0.25*			*0.1*	*0.1*	*0.25*		
Total PAH's	0.8	0.8		1.6	1.6	4.0			1.6	1.6	4.0		
PCBs	<LOR	<LOR		<LOR	<LOR	<LOR			<LOR	<LOR	<LOR		
Phenols & Cresols	<LOR	<LOR		<LOR	<LOR	<LOR			<LOR	<LOR	<LOR		
TRHs	<LOR	<LOR		<LOR	<LOR	<LOR			<LOR	<LOR	<LOR	*	
T.R.H. C15-C28 Fraction by GC	<100	<100		*250*	*250*	190	0%	27%	<100	<100	<100		
T.R.H. C29-C36 Fraction by GC	<100	<100		*250*	*250*	569	0%	78%	*50*	*50*	194	0%	118%

All concentrations are mg/kg unless otherwise stated

<LOR indicates all analytes in the category were below the limit of detection, and so not shown

<LOR indicates some analytes in the category were below the limit of detection, and so not shown

Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for

Soil Quality Samples

maunsell

Sample Number	BUS20-A	BUS20-AA	BUS20-AA		
Laboratory Number//RPD Calc^{n}	AU3119	AU3120	3	RPD	RPD
Testing Laboratory	MGT	MGT	ALS	MGT	ALS
Chlorinated Hydrocarbons	<LOR	<LOR	<LOR		
Metals					
Antimony	<10	<10	<1		
Arsenic	*1*	*1*	1	0%	0%
Beryllium	<2	<2	<1		
Cadmium	<0.5	<0.5	<1		
Chromium	6.4	10	12	44%	61%
Cobalt	*2.5*	*2.5*	2	0%	22%
Copper	*2.5*	*2.5*	4	0%	46%
Lead	7.9	14	13	56%	49%
Mercury	<0.1	<0.1	<0.1		
Molybdenum	<10	<10	<1		
Nickel	*2.5*	*2.5*	2	0%	22%
Selenium	<2	<2	<1		
Tin	<10	<10	<1		
Zinc	5.9	11	12	60%	68%
pH					
pH (unitless)	9.4	9.5	9.4		
Cyanide	<LOR	<LOR	<LOR		
MAHs	<LOR	<LOR	<LOR		
Organochlorine Pesticides	<LOR	<LOR	<LOR		
PAHs					
Naphthalene	*0.05*	*0.05*	*0.25*	0%	133%
Acenaphthylene	*0.05*	*0.05*	*0.25*	0%	133%
Acenaphthene	*0.05*	*0.05*	*0.25*	0%	133%
Fluorene	*0.05*	*0.05*	*0.25*	0%	133%
Phenanthrene	0.1	0.13	*0.25*	26%	86%
Anthracene	*0.05*	*0.05*	*0.25*	0%	133%
Fluoranthrene	0.18	0.4	*0.25*	76%	33%
Pyrene	0.21	0.41	*0.25*	65%	17%
Benzo(a)anthracene	0.12	0.21	*0.25*	55%	70%
Chrysene	0.15	0.26	*0.25*	54%	50%
Benzo(b)fluoranthene	0.16	0.4	*0.5*	86%	103%
Benzo(k)fluoranthene	0.12	0.18		40%	200%
Benzo(a)pyrene	0.19	0.36	*0.25*	62%	27%
Dibenzo(a,h)anthracene	*0.05*	*0.05*	*0.25*	0%	133%
Benzo(g,h,i)perylene	*0.05*	0.2	*0.25*	120%	133%
Indeno(1,2,3-cd)pyrene	*0.05*	0.19	*0.25*	117%	133%
Total PAH's	1.63	3.04	4.0	60%	84%
PCBs	<LOR	<LOR	<LOR		
Phenols & Cresols	<LOR	<LOR	<LOR		
TRHs	<LOR	<LOR	<LOR		
T.R.H. C15-C28 Fraction by GC	<100	<100	<100		
T.R.H. C29-C36 Fraction by GC	110	*50*	204	75%	60%

Appendix G – Summary Results

Central West Precinct - Franklin Street Bus Station

A Samples

maunsell

Sample Number	BUS1-A	BUS2-A	BUS3-A	BUS4-A	BUS5-A	BUS6-A	BUS7-A	BUS8-A	BUS9-A	BUS10-A	BUS11-A	BUS12-A	BUS13-A	BUS14-A	BUS15-A	BUS16-A	BUS17-A	BUS19-A
Laboratory Number	**AU3088**	**AU3090**	**AU3092**	**AU3093**	**AU3094**	**AU3095**	**AU3098**	**AU3102**	**AU3103**	**AU3104**	**AU3106**	**AU3107**	**AU3110**	**AU3112**	**AU3113**	**AU3115**	**AU3116**	**AU3118**
Chlorinated Hydrocarbons	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
Metals																		
Antimony	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Arsenic	*1*	*1*	2.3	*1*	*1*	*1*	*1*	2.8	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Beryllium	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Cadmium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	18	10	*2.5*	17	9	17	19	*2.5*	9.5	*2.5*	20	16	8.7	*2.5*	13	7	15	11
Cobalt	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Copper	*2.5*	11	5.4	6.5	*2.5*	11	*2.5*	*2.5*	19	*2.5*	12	21	13	*2.5*	*2.5*	34	690	*2.5*
Lead	*2.5*	21	20	9.2	7.9	6	*2.5*	*2.5*	80	*2.5*	12	8.7	16	*2.5*	8.2	28	40	15
Mercury	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.15	*0.05*	0.28	*0.05*	*0.05*	*0.05*	0.19	*0.05*	0.35	*0.05*
Molybdenum	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	*2.5*	5.6	*2.5*	5.4	*2.5*	10	*2.5*	*2.5*	*2.5*	*2.5*	8.5	*2.5*	*2.5*	*2.5*	5.7	*2.5*	6.3	*2.5*
Selenium	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Tin	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	13	*5*	*5*	*5*	*5*
Zinc	*2.5*	72	39	19	30	15	6	8	75	5	23	19	26	7.8	11	44	25	13
pH																		
pH (unitless)	10	8.9	9.4	9.6	9	9	9	8.9	8.3	8.9	8.7	9.3	9.1	9.3	9	9	8.9	9.5
Cyanide																		
Cyanide (total)	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	22	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*
MAHs	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
Xylenes	*0.025*	0.62	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
Organochlorine Pesticides	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
4,4'-DDD	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05
4,4'-DDE	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05
4,4'-DDT	*0.025*	0.25	*0.025*	*0.025*	*0.1*	*0.025*	*0.1*	*0.025*	0.07	*0.025*	*0.025*	*0.05*	*0.025*	*0.025*	*0.025*	*0.1*	*0.025*	*0.025*
PAHs																		
Naphthalene	*0.05*	*0.05*	0.19	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	0.46	*0.05*	*0.05*
Acenaphthylene	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	0.38	*0.05*	*0.05*
Acenaphthene	*0.05*	*0.05*	0.35	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	0.82	*0.05*	*0.05*
Fluorene	*0.05*	*0.05*	0.28	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	0.61	*0.05*	*0.05*
Phenanthrene	*0.05*	0.15	2	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.24	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	9.9	*0.05*	*0.05*
Anthracene	*0.05*	*0.05*	0.44	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	2.2	*0.05*	*0.05*
Fluoranthrene	*0.05*	0.38	1.6	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.73	*0.05*	0.11	*0.1*	0.14	*0.05*	0.15	16	0.17	*0.05*
Pyrene	*0.05*	0.35	1.4	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.86	*0.05*	0.11	*0.1*	0.15	*0.05*	0.15	17	0.2	*0.05*
Benzo(a)anthracene	*0.05*	0.19	0.71	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.47	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	11	0.18	*0.05*
Chrysene	*0.05*	0.21	0.71	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.47	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	8.7	0.15	*0.05*
Benzo(b)fluoranthene	*0.05*	0.26	0.72	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.57	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	11	0.18	*0.05*
Benzo(k)fluoranthene	*0.05*	0.16	0.37	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.32	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	7.9	0.12	*0.05*
Benzo(a)pyrene	*0.05*	0.32	0.75	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.66	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	12	0.16	*0.05*
Dibenzo(a,h)anthracene	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	2	*0.05*	*0.05*
Benzo(g,h,i)perylene	*0.05*	*0.05*	0.54	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.29	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	6.6	*0.05*	*0.05*
Indeno(1,2,3-cd)pyrene	*0.05*	*0.05*	0.46	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.21	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	6.9	*0.05*	*0.05*
Total PAH's	**0.8**	**2.42**	**10.62**	**0.8**	**1.6**	**0.8**	**1.6**	**0.8**	**5.12**	**0.8**	**0.92**	**1.6**	**0.99**	**0.8**	**1**	**113.5**	**1.61**	**0.8**
PCBs	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
Phenols & Cresols	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
TRHs	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
T.R.H. C15-C28 Fraction by GC	*50*	*50*	110	*50*	*50*	*50*	*250*	*50*	110	*50*	*50*	*50*	*50*	*50*	*50*	300	*50*	*50*
T.R.H. C29-C36 Fraction by GC	*50*	*50*	*50*	*50*	160	*50*	*250*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	310	*50*	*50*

All concentrations are mg/kg unless otherwise stated
<LOR indicates all analytes in the category were below the limit of detection, and so not shown
<LOR indicates some analytes in the category were below the limit of detection, and so not shown
Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

According to Michael Wright, sample 7A had elevated limit of detection due to matrix inteference affects due to tannins

maunsell

A Samples

Sample Number	BUS20-A	BUS21-A	BUS22-A	STATISTICS					CRITERIA	
Laboratory Number	AU3119	AU3122	AU3123							
Chlorinated Hydrocarbons	<LOR	<LOR	<LOR	Count	Max	Mean	Std Dev	95% UCL	NEPM D	NEPM F
Metals										
Antimony	<10	<10	<10							
Arsenic	*1*	*1*	*1*	21	2.8	1.1	0.5	1.3	400	500
Beryllium	<2	<2	<2						80	100
Cadmium	<0.5	<0.5	<0.5						80	100
Chromium	6.4	10	20	21	20	11	6	14	400	500
Cobalt	<5	<5	<5						400	500
Copper	*2.5*	6.4	*2.5*	21	690	41	149	104	4000	5000
Lead	7.9	32	*2.5*	21	80	16	18	23	1200	1500
Mercury	*0.05*	0.25	*0.05*	21	0.35	0.10	0.09	0.14	40	50
Molybdenum	<10	<10	<10							
Nickel	*2.5*	*2.5*	*2.5*	21	10	3.8	2.3	4.7	2400	3000
Selenium	<2	<2	<2							
Tin	*5*	*5*	*5*	21	13	5	2	6		
Zinc	5.9	39	5	21	75	23	21	32	28000	35000
pH										
pH (unitless)	9.4	8.8	11	21	11					
Cyanide										
Cyanide (total)	*2.5*	*2.5*	*2.5*	21	22	3.4	4.3	5.2	1000	1250
MAHs	<LOR	<LOR	<LOR							
Xylenes	*0.025*	*0.025*	*0.025*	21	0.62	0.05	0.13	0.11		
Organochlorine Pesticides	<LOR	<LOR	<LOR							
4,4'-DDD	<0.05	<0.05	<0.05							
4,4'-DDE	<0.05	<0.05	<0.05						800	1000
4,4'-DDT	*0.025*	*0.025*	*0.025*	21	0.25	0.05	0.05	0.07		
PAHs										
Naphthalene	*0.05*	*0.05*	*0.05*	21	0.46	0.08	0.09	0.12		
Acenaphthylene	*0.05*	*0.05*	*0.05*	21	0.38	0.07	0.07	0.10		
Acenaphthene	*0.05*	*0.05*	*0.05*	21	0.82	0.11	0.18	0.18		
Fluorene	*0.05*	*0.05*	*0.05*	21	0.61	0.09	0.13	0.15		
Phenanthrene	0.1	0.1	*0.05*	21	9.9	0.64	2.16	1.56		
Anthracene	*0.05*	*0.05*	*0.05*	21	2.2	0.18	0.47	0.38		
Fluoranthrene	0.18	0.49	*0.05*	21	16	0.98	3.46	2.46		
Pyrene	0.21	0.52	*0.05*	21	17	1.03	3.67	2.60		
Benzo(a)anthracene	0.12	0.3	*0.05*	21	11	0.66	2.38	1.67		
Chrysene	0.15	0.31	*0.05*	21	8.7	0.55	1.87	1.35		
Benzo(b)fluoranthene	0.16	0.35	*0.05*	21	11	0.67	2.37	1.69		
Benzo(k)fluoranthene	0.12	0.23	*0.05*	21	7.9	0.48	1.70	1.21		
Benzo(a)pyrene	0.19	0.3	*0.05*	21	12	0.73	2.59	1.83	4	5
Dibenzo(a,h)anthracene	*0.05*	*0.05*	*0.05*	21	2	0.15	0.42	0.33		
Benzo(g,h,i)perylene	*0.05*	0.15	*0.05*	21	6.6	0.41	1.42	1.02		
Indeno(1,2,3-cd)pyrene	*0.05*	0.14	*0.05*	21	6.9	0.41	1.49	1.05		
Total PAH's	**1.63**	**3.19**	**0.8**	21	113.5	7.25	24.44	17.70	80	100
PCBs	<LOR	<LOR	<LOR							
Phenols & Cresols	<LOR	<LOR	<LOR							
TRHs	<LOR	<LOR	<LOR							
T.R.H. C15-C28 Fraction by GC	*50*	*50*	*50*	21	300	77	69	107		
T.R.H. C29-C36 Fraction by GC	110	*50*	*50*	21	310	80	72	111		

All concentrations are mg/kg unless otherwise stated

<LOR indicates all analytes in the category were below the limit of detection, and so not shown

<LOR indicates some analytes in the category were below the limit of detection, and so not shown

Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Criteria for Chromium is for Chromium VI

Criteria for Mercury is for Methyl mercury

Criteria for Cyanide is for Free Cyanides

Central West Precinct - Franklin Street Bus Station

B Samples

maunsell

Sample Number	BUS1-B	BUS2-B	BUS3-B	BUS6-B	BUS7-B	BUS9-B	BUS10-B	BUS12-B	BUS13-B	BUS15-B	BUS16-B	BUS17-B	BUS20-B	BUS22-B	STATISTICS					CRITERIA	
Laboratory Number	**AU3089**	**AU3091**	**OC2947**	**AU3097**	**AU3100**	**OC2948**	**AU3105**	**AU3109**	**AU3111**	**AU3114**	**OC2949**	**AU3117**	**AU3121**	**AU3124**							
Chlorinated Hydrocarbons	<LOR	<LOR		<LOR	<LOR		<LOR	<LOR	<LOR	<LOR		<LOR	<LOR	<LOR	Count	Max	Mean	Std Dev	95% UCL	NEPM D	NEPM F
Metals																					
Antimony	<10	<10		<10	<10		<10	<10	<10	<10		<10	<10	<10							
Arsenic	*1*	*1*		2.4	*1*		*1*	*1*	*1*	3		*1*	*1*	2.5	11	3	1.4	0.8	1.9	400	500
Beryllium	<2	<2		<2	<2		<2	<2	<2	<2		<2	<2	<2						80	100
Cadmium	*0.25*	*0.25*		*0.25*	*0.25*		*0.25*	*0.25*	*0.25*	*0.25*		*0.25*	0.6	*0.25*	11	0.6	0.3	0.1	0.3	80	100
Chromium	8.9	11		12	17		10	18	8.7	14		9	28	20	11	28	14.2	6.0	17.8	400	500
Cobalt	*2.5*	*2.5*		*2.5*	*2.5*		*2.5*	*2.5*	*2.5*	*2.5*		*2.5*	7.2	5.80	11	7.2	3.2	1.6	4.2	400	500
Copper	*2.5*	*2.5*		*2.5*	6.7		*2.5*	12	5.2	*2.5*		*2.5*	11	*2.5*	11	12	4.8	3.6	6.9	4000	5000
Lead	*2.5*	*2.5*		*2.5*	*2.5*		*2.5*	13	*2.5*	*2.5*		*2.5*	5.7	*2.5*	11	13	3.7	3.2	5.6	1200	1500
Mercury	*0.05*	*0.05*		*0.05*	*0.05*		*0.05*	0.14	*0.05*	*0.05*		*0.05*	*0.05*	*0.05*	11	0.14	0.06	0.03	0.07	40	50
Molybdenum	<10	<10		<10	<10		<10	<10	<10	<10		<10	<10	<10							
Nickel	5.7	6.3		6.4	8.6		6.9	8.5	5.7	7		5.7	12	5.6	11	12	7.1	1.9	8.3	2400	3000
Selenium	<2	<2		<2	<2		<2	<2	<2	<2		<2	<2	<2							
Tin	<10	<10		<10	<10		<10	<10	<10	<10		<10	<10	<10							
Zinc	7.5	7.5		9	13		7.6	13	7.3	8.6		6	18	12	11	18	10.0	3.6	12.1	28000	35000
pH																					
pH (unitless)	9.8	9.5		9	8.4		8.9	9.2	9.1	9		9.2	9.3	9.6	11	9.8					
Cyanide																					
Cyanide (total)	*2.5*	*2.5*		*2.5*	*2.5*		*2.5*	*2.5*	7	*2.5*		*2.5*	*2.5*	*2.5*	11	7	2.91	1.36	3.71	1000	1250
MAHs	<LOR	<LOR		<LOR	<LOR		<LOR	<LOR	<LOR	<LOR		<LOR	<LOR	<LOR							
Organochlorine Pesticides	<LOR	<LOR		<LOR	<LOR		<LOR	<LOR	<LOR	<LOR		<LOR	<LOR	<LOR							
PAHs																					
Naphthalene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*							
Acenaphthylene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*							
Acenaphthene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*							
Fluorene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*							
Phenanthrene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.11	*0.05*	*0.05*	*0.05*	14	0.11	0.05	0.02	0.06		
Anthracene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*							
Fluoranthrene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.18	*0.05*	*0.05*	*0.05*	14	0.18	0.06	0.03	0.08		
Pyrene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.19	*0.05*	*0.05*	*0.05*	14	0.19	0.06	0.04	0.08		
Benzo(a)anthracene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.12	*0.05*	*0.05*	*0.05*	14	0.12	0.06	0.02	0.06		
Chrysene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.14	*0.05*	*0.05*	*0.05*	14	0.14	0.06	0.02	0.07		
Benzo(b)fluoranthene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.11	*0.05*	*0.05*	*0.05*	14	0.11	0.05	0.02	0.06		
Benzo(k)fluoranthene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*							
Benzo(a)pyrene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.15	*0.05*	*0.05*	*0.05*	14	0.15	0.06	0.03	0.07	4	5
Dibenzo(a,h)anthracene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*							
Benzo(g,h,i)perylene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*							
Indeno(1,2,3-cd)pyrene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*							
Total PAH's	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**1.45**	**0.8**	**0.8**	**0.8**	14	1.45	0.85	0.17	0.94	80	100
PCBs	<LOR	<LOR		<LOR	<LOR		<LOR	<LOR	<LOR	<LOR		<LOR	<LOR	<LOR							
Phenols & Cresols	<LOR	<LOR		<LOR	<LOR		<LOR	<LOR	<LOR	<LOR		<LOR	<LOR	<LOR							
TRHs	<LOR	<LOR		<LOR	<LOR		<LOR	<LOR	<LOR	<LOR		<LOR	<LOR	<LOR							

All concentrations are mg/kg unless otherwise stated
<LOR indicates all analytes in the category were below the limit of detection, and so not shown
<LOR indicates some analytes in the category were below the limit of detection, and so not shown
Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics
Samples BUS3-B, BUS9-B and BUS16-B were analysed for PAH only

Criteria for Chromium is for Chromium VI
Criteria for Mercury is for Methyl mercury
Criteria for Cyanide is for Free Cyanides

maunsell

Tank (C) Samples

Sample Number	BUS6-A	BUS6-B	BUS6-C	BUS7-A	BUS7-B	BUS7-C	CRITERIA	
Laboratory Number	AU3095	AU3097	AU3219	AU3098	AU3100	AU3101		
Chlorinated Hydrocarbons	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	NEPM D	NEPM F
Metals								
Antimony	<10	<10	<10	<10	<10	<10		
Arsenic	<2	2.4	3.1	<2	<2	7.4	400	500
Beryllium	<2	<2	<2	<2	<2	<2	80	100
Cadmium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	80	100
Chromium	17	12	16	19	17	18	400	500
Cobalt	<5	<5	<5	<5	<5	<5	400	500
Copper	11	<5	<5	<5	6.7	5	4000	5000
Lead	6	<5	<5	<5	<5	<5	1200	1500
Mercury	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	40	50
Molybdenum	<10	<10	<10	<10	<10	<10		
Nickel	10	6.4	6.2	<5	8.6	6.8	2400	3000
Selenium	<2	<2	<2	<2	<2	<2		
Tin	<10	<10	<10	<10	<10	<10		
Zinc	15	9	12	6	13	16	28000	35000
pH								
pH (unitless)	9	9	9.2	9	8.4	9.2		
Cyanide	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR		
MAHs								
Benzene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Toluene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Ethyl Benzene	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05		
Xylenes	<0.05	<0.05	0.14	<0.05	<0.1	<0.05		
Organochlorine Pesticides	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR		
PAHs								
Naphthalene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*		
Acenaphthylene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*		
Acenaphthene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*		
Fluorene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*		
Phenanthrene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*		
Anthracene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*		
Fluoranthrene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*		
Pyrene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*		
Benzo(a)anthracene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*		
Chrysene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*		
Benzo(b)fluoranthene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*		
Benzo(k)fluoranthene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*		
Benzo(a)pyrene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	4	5
Dibenzo(a,h)anthracene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*		
Benzo(g,h,i)perylene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*		
Indeno(1,2,3-cd)pyrene	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*		
Total PAH's	0.8	0.8	0.8	1.6	0.8	0.8	80	100
PCBs	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR		
Phenols & Cresols	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR		
TRHs	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR		

All concentrations are mg/kg unless otherwise stated
<LOR indicates all analytes in the category were below the limit of detection, and so not shown
<LOR indicates some analytes in the category were below the limit of detection, and so not shown
Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Criteria for Chromium is for Chromium VI
Criteria for Mercury is for Methyl mercury

Groundwater Investigation

maunsell

Sample Number	MW-5	MW-6	MW-7	MW-8	MW-9	STATISTICS					CRITERIA	
Laboratory Number	SE3692	SE3693	SE3694	SE3695	SE3696							
Chlorinated Hydrocarbons	<LOR	<LOR	<LOR	<LOR	<LOR	Count	Max	Mean	Std Dev	95% UCL	Potable	Irrigation
1,2-Dichlorobenzene	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005						1.5	
1,4-Dichlorobenzene	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005						0.04	
Hexachlorobutadiene	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005						0.0007	
1,2,3-Trichlorobenzene	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005						0.03	
1,3,5-Trichlorobenzene	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005							
1,2,4-Trichlorobenzene	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005							
Metals												
Antimony	<0.01	<0.01	<0.01	<0.01	<0.01						0.003	
Arsenic	0.004	0.003	0.004	0.003	0.003	5	0.004	0.003	0.001	0.004	0.007	0.1
Beryllium	<0.001	<0.001	<0.001	<0.001	<0.001							0.1
Cadmium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						0.002	0.01
Chromium	0.003	0.003	0.003	0.003	0.003	5	0.003	0.003	0.000	0.003	0.05*1	1*2
Cobalt	*0.0005*	0.001	*0.0005*	*0.0005*	0.002	5	0.002	0.001	0.001	0.001		0.05
Copper	<0.001	<0.001	<0.001	<0.001	<0.001						2	0.2
Lead	<0.001	<0.001	<0.001	<0.001	<0.001						0.01	0.2
Mercury	*0.00005*	0.0003	*0.00005*	*0.00005*	*0.00005*	5	0.0003	0.0001	0.0001	0.0002	0.001	0.002
Molybdenum	*0.0025*	*0.0025*	*0.0025*	0.006	0.01	5	0.010	0.005	0.003	0.008	0.05	0.01
Nickel	<0.001	<0.001	<0.001	<0.001	<0.001						0.02	0.2
Selenium	0.005	0.006	0.005	*0.0025*	0.007	5	0.007	0.005	0.002	0.007	0.01	0.02
Tin	<0.005	<0.005	<0.005	<0.005	<0.005							
Zinc	0.03	0.03	0.01	0.01	0.01	5	0.03	0.02	0.01	0.03		2
pH												
pH (unitless)	7.1	7.1	7	7.3	7.1	5	7.3				6.5-8.5	4.5-9
Cyanide												
Cyanide (total)	<0.005	<0.005	<0.005	<0.005	<0.005						0.08	
MAHs												
Benzene	<0.001	<0.001	<0.001	<0.001	<0.001						0.001	
Toluene	<0.001	<0.001	<0.001	<0.001	<0.001						0.8	
Ethyl Benzene	<0.001	<0.001	<0.001	<0.001	<0.001						0.3	
Xylenes	<0.001	<0.001	<0.001	<0.001	<0.001						0.6	
Organochlorine Pesticides	<LOR	<LOR	<LOR	<LOR	<LOR						0*3	
PAHs												
Naphthalene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Acenaphthylene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Acenaphthene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Fluorene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Phenanthrene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Anthracene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Fluoranthrene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Pyrene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Benzo(a)anthracene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Chrysene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Benzo(b)fluoranthene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Benzo(k)fluoranthene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Benzo(a)pyrene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Dibenzo(a,h)anthracene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Benzo(g,h,i)perylene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Indeno(1,2,3-cd)pyrene	*0.0001*	*0.0001*	*0.00005*	*0.00005*	*0.00005*							
Total PAH's	0.0016	0.0016	0.0008	0.0008	0.0008						0.00001	
PCBs	<LOR	<LOR	<LOR	<LOR	<LOR							
Phenols & Cresols	<LOR	<LOR	<LOR	<LOR	<LOR							
TRHs	<LOR	<LOR	<LOR	<LOR	<LOR							
Field Observations												
Conductivity (mS)	4.5	4.54	4.06	3.64	5.29							
TDS (mg/L)	3060.0	3087.2	2760.8	2475.2	3597.2	5	3597.2	2996.1	418.5	3362.9		

All concentrations are mg/L unless otherwise stated
<LOR indicates all analytes in the category were below the limit of detection, and so not shown
<LOR indicates some analytes in the category were below the limit of detection, and so not shown
Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

**1 Criteria for Chromium is for Chromium VI*
**2 Criteria for Chromium is for Total Chromium*
**3 Zero means that the pollutant must not be detectable when measured by a method approved by the Authority*

Central West Precinct - Franklin Street Bus Station

Rust PPK 1997 Investigation Results - Fill Samples

maunsell

Sample Number	BH1	BH4	BH6	BH7	BH12	BH13	BH14	BH16	BH18	BH19	BH20	STATISTICS					CRITERIA	
Sample Depth (m)	0.06-0.3	0.45-0.6	0.65-0.75	0.4-0.5	0.55-0.7	0.7-0.9	0.55-0.7	0.4-0.5	0.4-0.5	0.55-0.7	0.05-0.2							
Metals												Count	Max	Mean	Std Dev	95% UCL	NEPM D	NEPM F
Antimony		<5				<5												
Arsenic	*2.5*	7.6	5.6	*2.5*	*2.5*	5.1	19	9.5		*2.5*	7.6	10	19	6.4	5.1	9.6	400	500
Beryllium		1.2				1.1						2	1.2	1.2			80	100
Cadmium	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1						80	100
Chromium	9.2	31	22	13	29	29	18	29		23	33	10	33	23.6	8.1	28.6	400	500
Cobalt		8				7.7						2	8	7.9			400	500
Copper	9.5	32	24	4.6	10	16	450	10		8.9	31	10	450	59.6	137.5	144.8	4000	5000
Lead	*2.5*	446	45	*2.5*	11	43	1600	11		28	140	10	1600	232.9	499.0	542.2	1200	1500
Mercury	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5						40	50
Molybdenum		<5				<5												
Nickel		15				15						2	15	15			2400	3000
Selenium		<5				<5												
Tin		28				2.8						2	28	15.4				
Zinc	8.7	280	69	17	17	32	2000	21		17	410	10	2000	287.2	617.3	669.7	28000	35000
Manganese		200				260						2	260	230			6000	7500
pH																		
pH (unitless)	9.5		9.4	9.8	9.2		11	9.7	9.4	9.1	9.5	9	11					
PAHs																		
Naphthalene		*0.05*	*0.05*		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*							
Acenaphthylene		*0.05*	0.10		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.3	9	0.3	0.1	0.1	0.1		
Acenaphthene		*0.05*	*0.05*		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*							
Fluorene		*0.05*	*0.05*		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*							
Phenanthrene		*0.05*	0.20		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.3	9	0.3	0.1	0.1	0.2		
Anthracene		*0.05*	0.1		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.2	9	0.2	0.1	0.1	0.1		
Fluoranthrene		0.10	0.9		*0.05*	0.1	0.2	*0.05*	*0.05*	*0.05*	2.1	9	2.1	0.4	0.7	0.9		
Pyrene		0.10	0.9		*0.05*	0.1	0.2	*0.05*	*0.05*	*0.05*	2.2	9	2.2	0.4	0.7	0.9		
Benzo(a)anthracene		*0.05*	0.5		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	1.3	9	1.3	0.2				
Chrysene		*0.05*	0.4		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	1.3	9	1.3	0.2				
Benzo(b)fluoranthene		0.10	0.4		*0.05*	0.1	0.1	*0.05*	*0.05*	*0.05*	1.3	9	1.3	0.2	0.4	0.5		
Benzo(k)fluoranthene		*0.05*	0.4		*0.05*	*0.05*	0.1	*0.05*	*0.05*	*0.05*	1.5	9	1.5	0.3	0.5			
Benzo(a)pyrene		0.10	0.6		*0.05*	*0.05*	0.1	*0.05*	*0.05*	*0.05*	1.7	9	1.7	0.3	0.6	0.7	4	5
Dibenzo(a,h)anthracene		*0.05*	*0.05*		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.3	9	0.3	0.1	0.1	0.1		
Benzo(g,h,i)perylene		*0.05*	0.4		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	1.3	9	1.3	0.2	0.4	0.5		
Indeno(1,2,3-cd)pyrene		*0.05*	0.4		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	1.3	9	1.3	0.2	0.4	0.5		
Total PAH's		1.00	5.50		0.80	0.95	1.25	0.80	0.80	0.80	15.25	9	15.25	3.0	4.8	6.2	80	100

All concentrations are mg/kg unless otherwise stated
Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics
Maunsell has calculated the Total PAH and not displayed the value as reported the in the PPK report

Criteria for Chromium is for Chromium VI
Criteria for Mercury is for Methyl mercury

Rust PPK 1997 Investigation Results - Natural Samples

maunsell

Sample Number	BH2	BH3	BH5	BH8	BH9	BH10	BH11	BH15*	BH17	STATISTICS					CRITERIA	
Sample Depth (m)	1.8-2.0	0.8-1.0	0.8-1.0	0.8-1.0	2-2.1	0.7-0.85	0.8-1.0	0.7-0.85	0.8-1.0	Count	Max	Mean	Std Dev	95% UCL	NEPM D	NEPM F
Metals																
Antimony																
Arsenic	9.4	7.4		10	9.3	5	8.9	*2.5*	11	8	11	7.9	2.9	9.9	400	500
Beryllium															80	100
Cadmium	<1	<1		<1	<1	<1	<1	<1	<1						80	100
Chromium	29	31		17	16	46	11	26	13	8	46	23.6	11.7	31.8	400	500
Cobalt															400	500
Copper	7.0	7.3		9	5.5	18	5.7	9.9	7.3	8	18	8.7	4.0	11.5	4000	5000
Lead	7.5	10		5.3	5.3	13	*2.5*	11	*2.5*	8	13	7.1	3.9	9.9	1200	1500
Mercury	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5						40	50
Molybdenum																
Nickel															2400	3000
Selenium																
Tin																
Zinc	19	21		15	14	30	9.8	14	11	8	30	16.7	6.5	21.2	28000	35000
pH																
pH (unitless)		9.5	9.5	10		8.8	9.3	9.3	9.8	7	10					
PAHs																
Naphthalene			<0.1													
Acenaphthylene			<0.1													
Acenaphthene			<0.1													
Fluorene			<0.1													
Phenanthrene			<0.1													
Anthracene			<0.1													
Fluoranthrene			<0.1													
Pyrene			<0.1													
Benzo(a)anthracene			<0.1													
Chrysene			<0.1													
Benzo(b)fluoranthene			<0.1													
Benzo(k)fluoranthene			<0.1													
Benzo(a)pyrene			<0.1												4	5
Dibenzo(a,h)anthracene			<0.1													
Benzo(g,h,i)perylene			<0.1													
Indeno(1,2,3-cd)pyrene			<0.1													
Total PAH's			<1.6												80	100

All concentrations are mg/kg unless otherwise stated
Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics
* Disturbed natural soil

Criteria for Chromium is for Chromium VI
Criteria for Mercury is for Methyl mercury

Sample Number	BUS1-A	BUS2-A	BUS3-A	BUS4-A	BUS5-A	BUS6-A	BUS7-A	BUS8-A	BUS9-A	BUS10-A	BUS11-A	BUS12-A	BUS13-A	BUS14-A	BUS15-A	BUS16-A	BUS17-A	BUS19-A
Laboratory Number/Depth (m)	**AU3088**	**AU3090**	**AU3092**	**AU3093**	**AU3094**	**AU3095**	**AU3098**	**AU3102**	**AU3103**	**AU3104**	**AU3106**	**AU3107**	**AU3110**	**AU3112**	**AU3113**	**AU3115**	**AU3116**	**AU3118**
Metals																		
Antimony	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Arsenic	*1*	*1*	2.3	*1*	*1*	*1*	*1*	2.8	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Beryllium	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Cadmium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	18	10	*2.5*	17	9	17	19	*2.5*	9.5	*2.5*	20	16	8.7	*2.5*	13	7	15	11
Cobalt	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*
Copper	*2.5*	11	5.4	6.5	*2.5*	11	*2.5*	*2.5*	19	*2.5*	12	21	13	*2.5*	*2.5*	34	690	*2.5*
Lead	*2.5*	21	20	9.2	7.9	6	*2.5*	*2.5*	80	*2.5*	12	8.7	16	*2.5*	8.2	28	40	15
Mercury	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.15	*0.05*	0.28	*0.05*	*0.05*	*0.05*	0.19	*0.05*	0.35	*0.05*
Molybdenum	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	*2.5*	5.6	*2.5*	5.4	*2.5*	10	*2.5*	*2.5*	*2.5*	*2.5*	8.5	*2.5*	*2.5*	*2.5*	5.7	*2.5*	6.3	*2.5*
Selenium	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Tin	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	13	*5*	*5*	*5*	*5*
Zinc	*2.5*	72	39	19	30	15	6	8	75	5	23	19	26	7.8	11	44	25	13
Manganese																		
pH																		
pH (unitless)	10	8.9	9.4	9.6	9	9	9	8.9	8.3	8.9	8.7	9.3	9.1	9.3	9	9	8.9	9.5
PAHs																		
Naphthalene	*0.05*	*0.05*	0.19	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	0.46	*0.05*	*0.05*
Acenaphthylene	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	0.38	*0.05*	*0.05*
Acenaphthene	*0.05*	*0.05*	0.35	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	0.82	*0.05*	*0.05*
Fluorene	*0.05*	*0.05*	0.28	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	0.61	*0.05*	*0.05*
Phenanthrene	*0.05*	0.15	2	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.24	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	9.9	*0.05*	*0.05*
Anthracene	*0.05*	*0.05*	0.44	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	2.2	*0.05*	*0.05*
Fluoranthrene	*0.05*	0.38	1.6	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.73	*0.05*	0.11	*0.1*	0.14	*0.05*	0.15	16	0.17	*0.05*
Pyrene	*0.05*	0.35	1.4	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.86	*0.05*	0.11	*0.1*	0.15	*0.05*	0.15	17	0.2	*0.05*
Benzo(a)anthracene	*0.05*	0.19	0.71	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.47	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	11	0.18	*0.05*
Chrysene	*0.05*	0.21	0.71	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.47	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	8.7	0.15	*0.05*
Benzo(b)fluoranthene	*0.05*	0.26	0.72	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.57	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	11	0.18	*0.05*
Benzo(k)fluoranthene	*0.05*	0.16	0.37	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.32	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	7.9	0.12	*0.05*
Benzo(a)pyrene	*0.05*	0.32	0.75	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.66	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	12	0.16	*0.05*
Dibenzo(a,h)anthracene	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	2	*0.05*	*0.05*
Benzo(g,h,i)perylene	*0.05*	*0.05*	0.54	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.29	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	6.6	*0.05*	*0.05*
Indeno(1,2,3-cd)pyrene	*0.05*	*0.05*	0.46	*0.05*	*0.1*	*0.05*	*0.1*	*0.05*	0.21	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	6.9	*0.05*	*0.05*
Total PAH's	**0.8**	**2.42**	**10.62**	**0.8**	**1.6**	**0.8**	**1.6**	**0.8**	**5.12**	**0.8**	**0.92**	**1.6**	**0.99**	**0.8**	**1**	**113.5**	**1.61**	**0.8**

All concentrations are mg/kg unless otherwise stated

Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

The samples with the **BUS** prefix were from the investigation Maunsell undertook in 2004.

The samples with the **BH** prefix were from the investigation Rust PPK undertook in 1997.

Maunsell A and PPK Fill Samples

maunsell

Sample Number	BUS20-A	BUS21-A	BUS22-A	BH1	BH4	BH6	BH7	BH12	BH13	BH14	BH16	BH18	BH19	BH20
Laboratory Number/Depth (m)	AU3119	AU3122	AU3123	0.06-0.3	0.45-0.6	0.65-0.75	0.4-0.5	0.55-0.7	0.7-0.9	0.55-0.7	0.4-0.5	0.4-0.5	0.55-0.7	0.05-0.2
Metals														
Antimony	<10	<10	<10		<5				<5					
Arsenic	*1*	*1*	*1*	*2.5*	7.6	5.6	*2.5*	*2.5*	5.1	19	9.5		*2.5*	7.6
Beryllium	*1*	*1*	*1*		1.2				1.1					
Cadmium	<0.5	<0.5	<0.5	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1
Chromium	6.4	10	20	9.2	31	22	13	29	29	18	29		23	33
Cobalt	*2.5*	*2.5*	*2.5*		8				7.7					
Copper	*2.5*	6.4	*2.5*	9.5	32	24	4.6	10	16	450	10		8.9	31
Lead	7.9	32	*2.5*	*2.5*	446	45	*2.5*	11	43	1600	11		28	140
Mercury	*0.05*	0.25	*0.05*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*		*0.25*	*0.25*
Molybdenum	<10	<10	<10		<5				<5					
Nickel	*2.5*	*2.5*	*2.5*		15				15					
Selenium	<2	<2	<2		<5				<5					
Tin	*5*	*5*	*5*		28				2.8					
Zinc	5.9	39	5	8.7	280	69	17	17	32	2000	21		17	410
Manganese					200				260					
pH														
pH (unitless)	9.4	8.8	11	9.5		9.4	9.8	9.2		11	9.7	9.4	9.1	9.5
PAHs														
Naphthalene	*0.05*	*0.05*	*0.05*		*0.05*	*0.05*		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Acenaphthylene	*0.05*	*0.05*	*0.05*		*0.05*	0.10		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.3
Acenaphthene	*0.05*	*0.05*	*0.05*		*0.05*	*0.05*		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Fluorene	*0.05*	*0.05*	*0.05*		*0.05*	*0.05*		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Phenanthrene	0.1	0.1	*0.05*		*0.05*	0.20		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.3
Anthracene	*0.05*	*0.05*	*0.05*		*0.05*	0.1		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.2
Fluoranthrene	0.18	0.49	*0.05*		0.10	0.9		*0.05*	0.1	0.2	*0.05*	*0.05*	*0.05*	2.1
Pyrene	0.21	0.52	*0.05*		0.10	0.9		*0.05*	0.1	0.2	*0.05*	*0.05*	*0.05*	2.2
Benzo(*a*)anthracene	0.12	0.3	*0.05*		*0.05*	0.5		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	1.3
Chrysene	0.15	0.31	*0.05*		*0.05*	0.4		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	1.3
Benzo(b)fluoranthene	0.16	0.35	*0.05*		0.10	0.4		*0.05*	0.1	0.1	*0.05*	*0.05*	*0.05*	1.3
Benzo(k)fluoranthene	0.12	0.23	*0.05*		*0.05*	0.4		*0.05*	*0.05*	0.1	*0.05*	*0.05*	*0.05*	1.5
Benzo(*a*)pyrene	0.19	0.3	*0.05*		0.10	0.6		*0.05*	*0.05*	0.1	*0.05*	*0.05*	*0.05*	1.7
Dibenzo(*a*,h)anthracene	*0.05*	*0.05*	*0.05*		*0.05*	*0.05*		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.3
Benzo(g,h,i)perylene	*0.05*	0.15	*0.05*		*0.05*	0.4		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	1.3
Indeno(1,2,3-cd)pyrene	*0.05*	0.14	*0.05*		*0.05*	0.4		*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	1.3
Total PAH's	**1.63**	**3.19**	**0.8**		**1**	**5.5**		**0.8**	**0.95**	**1.25**	**0.8**	**0.8**	**0.8**	**15.25**

All concentrations are mg/kg unless otherwise stated

Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

The samples with the **BUS** prefix were from the investigation Maunsell undertook in 2004.

The samples with the **BH** prefix were from the investigation Rust PPK undertook in 1997.

Maunsell has calculated the Total PAH and not displayed the value as reported the in the PPK report

Maunsell A and PPK Fill Samples

maunsell

	STATISTICS					CRITERIA	
	Count	Max	Mean	Std Dev	95% UCL	NEPM D	NEPM F
Metals							
Antimony							
Arsenic	31	19	2.9	3.8	4.2	400	500
Beryllium	23	1.2	1.0	0.0	1.0	80	100
Cadmium						80	100
Chromium	31	33	15.3	8.8	18.4	400	500
Cobalt	23	8	3.0	1.5	3.6	400	500
Copper	31	690	46.8	143.4	97.3	4000	5000
Lead	31	1600	85.7	292.6	188.7	1200	1500
Mercury	31	0.35	0.1	0.1	0.2	40	50
Molybdenum							
Nickel	23	15	4.7	3.9	6.3	2400	3000
Selenium							
Tin	23	28	6.3	5.1	8.3		
Zinc	31	2000	108	361	236	28000	35000
Manganese	2	260	230			6000	7500
pH							
pH (unitless)	30	11					
PAHs							
Naphthalene	30	0.46	0.1	0.1	0.1		
Acenaphthylene	30	0.38	0.1	0.1	0.1		
Acenaphthene	30	0.82	0.1	0.1	0.1		
Fluorene	30	0.61	0.1	0.1	0.1		
Phenanthrene	30	9.9	0.5	1.8	1.1		
Anthracene	30	2.2	0.1	0.4	0.3		
Fluoranthrene	30	16	0.8	2.9	1.8		
Pyrene	30	17	0.8	3.1	2.0		
Benzo(a)anthracene	30	11	0.5	2.0	1.2		
Chrysene	30	8.7	0.5	1.6	1.0		
Benzo(b)fluoranthene	30	11	0.5	2.0	1.3		
Benzo(k)fluoranthene	30	7.9	0.4	1.4	0.9		
Benzo(a)pyrene	30	12	0.6	2.2	1.4	4	5
Dibenzo(a,h)anthracene	30	2	0.1	0.4	0.3		
Benzo(g,h,i)perylene	30	6.6	0.4	1.2	0.8		
Indeno(1,2,3-cd)pyrene	30	6.9	0.4	1.3	0.8		
Total PAH's	30	113.5	6.0	20.6	13.3	80	100

All concentrations are mg/kg unless otherwise stated

Criteria for Chromium is for Chromium VI
Criteria for Mercury is for Methyl mercury

Central West Precinct - Franklin Street Bus Station

Maunsell B and PPK Natural Samples

maunsell

Sample Number	BUS1-B	BUS2-B	BUS3-B	BUS6-B	BUS7-B	BUS9-B	BUS10-B	BUS12-B	BUS13-B	BUS15-B	BUS16-B	BUS17-B	BUS20-B	BUS22-B	BH2	BH3	BH5	BH8	BH9	BH10
Laboratory Number	**AU3089**	**AU3091**	**OC2947**	**AU3097**	**AU3100**	**OC2948**	**AU3105**	**AU3109**	**AU3111**	**AU3114**	**OC2949**	**AU3117**	**AU3121**	**AU3124**	**1.8-2.0**	**0.8-1.0**	**0.8-1.0**	**0.8-1.0**	**2-2.1**	**0.7-0.85**
Chlorinated Hydrocarbons	<LOR	<LOR		<LOR	<LOR		<LOR	<LOR	<LOR	<LOR		<LOR	<LOR	<LOR						
Metals																				
Antimony	<10	<10		<10	<10		<10	<10	<10	<10		<10	<10	<10						
Arsenic	*1*	*1*		2.4	*1*		*1*	*1*	*1*	3		*1*	*1*	2.5	9.4	7.4		10	9.3	5
Beryllium	<2	<2		<2	<2		<2	<2	<2	<2		<2	<2	<2						
Cadmium	*0.25*	*0.25*		*0.25*	*0.25*		*0.25*	*0.25*	*0.25*	*0.25*		*0.25*	0.6	*0.25*	*0.5*	*0.5*		*0.5*	*0.5*	*0.5*
Chromium	8.9	11		12	17		10	18	8.7	14		9	28	20	29	31		17	16	46
Cobalt	*2.5*	*2.5*		*2.5*	*2.5*		*2.5*	*2.5*	*2.5*	*2.5*		*2.5*	7.2	5.80						
Copper	*2.5*	*2.5*		*2.5*	6.7		*2.5*	12	5.2	*2.5*		*2.5*	11	*2.5*	7.0	7.3		9	5.5	18
Lead	*2.5*	*2.5*		*2.5*	*2.5*		*2.5*	13	*2.5*	*2.5*		*2.5*	5.7	*2.5*	7.5	10		5.3	5.3	13
Mercury	*0.05*	*0.05*		*0.05*	*0.05*		*0.05*	0.14	*0.05*	*0.05*		*0.05*	*0.05*	*0.05*	*0.25*	*0.25*		*0.25*	*0.25*	*0.25*
Molybdenum	<10	<10		<10	<10		<10	<10	<10	<10		<10	<10	<10						
Nickel	5.7	6.3		6.4	8.6		6.9	8.5	5.7	7		5.7	12	5.6						
Selenium	<2	<2		<2	<2		<2	<2	<2	<2		<2	<2	<2						
Tin	<10	<10		<10	<10		<10	<10	<10	<10		<10	<10	<10						
Zinc	7.5	7.5		9	13		7.6	13	7.3	8.6		6	18	12	19	21		15	14	30
pH																				
pH (unitless)	9.8	9.5		9	8.4		8.9	9.2	9.1	9		9.2	9.3	9.6		9.5	9.5	10		8.8
PAHs																				
Naphthalene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*			*0.05*			
Acenaphthylene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*			*0.05*			
Acenaphthene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*			*0.05*			
Fluorene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*			*0.05*			
Phenanthrene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.11	*0.05*	*0.05*	*0.05*			*0.05*			
Anthracene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*			*0.05*			
Fluoranthrene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.18	*0.05*	*0.05*	*0.05*			*0.05*			
Pyrene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.19	*0.05*	*0.05*	*0.05*			*0.05*			
Benzo(a)anthracene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.12	*0.05*	*0.05*	*0.05*			*0.05*			
Chrysene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.14	*0.05*	*0.05*	*0.05*			*0.05*			
Benzo(b)fluoranthene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.11	*0.05*	*0.05*	*0.05*			*0.05*			
Benzo(k)fluoranthene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*			*0.05*			
Benzo(a)pyrene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.15	*0.05*	*0.05*	*0.05*			*0.05*			
Dibenzo(a,h)anthracene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*			*0.05*			
Benzo(g,h,i)perylene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*			*0.05*			
Indeno(1,2,3-cd)pyrene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*			*0.05*			
Total PAH's	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**1.45**	**0.8**	**0.8**	**0.8**			**0.8**			

All concentrations are mg/kg unless otherwise stated

Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

The samples with the **BUS** prefix were from the investigation Maunsell undertook in 2004.

The samples with the **BH** prefix were from the investigation Rust PPK undertook in 1997.

Maunsell has calculated the Total PAH and not displayed the value as reported the in the PPK report

Maunsell B and PPK Natural Samples

maunsell

Sample Number	BH11	BH15	BH17	STATISTICS					CRITERIA	
Laboratory Number/Depth (m)	0.8-1.0	0.7-0.85	0.8-1.0							
				Count	Max	Mean	Std Dev	95% UCL	NEPM D	NEPM F
Metals										
Antimony										
Arsenic	8.9	*2.5*	11	19	11	4.2	3.8	5.9	400	500
Beryllium									80	100
Cadmium	*0.5*	*0.5*	*0.5*	19	0.6	0.4	0.1	0.4	80	100
Chromium	11	26	13	19	46	18.2	9.8	22.6	400	500
Cobalt				11	7.2	3.2	1.6	4.2	400	500
Copper	5.7	9.9	7.3	19	18	6.4	4.2	8.3	4000	5000
Lead	*2.5*	11	*2.5*	19	13	5.2	3.8	6.9	1200	1500
Mercury	*0.25*	*0.25*	*0.25*	19	0.25	0.1	0.1	0.2	40	50
Molybdenum										
Nickel				11	12	7.1	1.9	8.3	2400	3000
Selenium										
Tin										
Zinc	9.8	14	11	19	30	12.8	6.0	15.5	28000	35000
pH										
pH (unitless)	9.3	9.3	9.8	18	10					
PAHs										
Naphthalene										
Acenaphthylene										
Acenaphthene										
Fluorene										
Phenanthrene				15	0.11	0.05	0.02	0.06		
Anthracene										
Fluoranthrene				15	0.18	0.06	0.03	0.08		
Pyrene				15	0.19	0.06	0.04	0.08		
Benzo(a)anthracene				15	0.12	0.05	0.02	0.06		
Chrysene				15	0.14	0.06	0.02	0.07		
Benzo(b)fluoranthene				15	0.11	0.05	0.02	0.06		
Benzo(k)fluoranthene										
Benzo(a)pyrene				15	0.15	0.1	0.0	0.1	4	5
Dibenzo(a,h)anthracene										
Benzo(g,h,i)perylene										
Indeno(1,2,3-cd)pyrene										
Total PAH's				15	1.45	0.8	0.2	0.9	80	100

All concentrations are mg/kg unless otherwise stated

Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Criteria for Chromium is for Chromium VI

Criteria for Mercury is for Methyl mercury

The samples with the **BUS** prefix were from the investigation Maunsell undertook in 2004.

The samples with the **BH** prefix were from the investigation Rust PPK undertook in 1997.

Maunsell has calculated the Total PAH and not displayed the value as reported the in the PPK report

Data Distribution, 95% UCL values and Compliance Values

maunsell

Maunsell Bus A Samples

Analyte	% Proxy Values / Actual Values	Data Distribution	Recommended Method	95% UCL Value	Criteria	Compliance Value
Benzo (a) pyrene	67%	Non-parametric	99% Chebyshev (Mean, Sd)	6.3509	4	1.59
Total PAH	52%	Non-parametric	99% Chebyshev (Mean, Sd)	60.3167	80	0.75

Maunsell Bus A Samples, outlier removed

Analyte	% Proxy Values / Actual Values	Data Distribution	Recommended Method	95% UCL Value	Criteria	Compliance Value
Benzo (a) pyrene	70%	Non-parametric	95% Chebyshev (Mean, Sd)	0.3600	4	0.09
Total PAH	55%	Non-parametric	95% Chebyshev (Mean, Sd)	4.1825	80	0.05

Maunsell Bus A and PPK Fill Samples combined

Analyte	% Proxy Values / Actual Values	Data Distribution	Recommended Method	95% UCL Value	Criteria	Compliance Value
Benzo (a) pyrene	63%	Non-parametric	99% Chebyshev (Mean, Sd)	4.5595	4	1.14
Total PAH	50%	Non-parametric	99% Chebyshev (Mean, Sd)	43.3106	80	0.54

Maunsell Bus A and PPK Fill Samples combined, outlier removed

Analyte	% Proxy Values / Actual Values	Data Distribution	Recommended Method	95% UCL Value	Criteria	Compliance Value
Benzo (a) pyrene	66%	Non-parametric	99% Chebyshev (Mean, Sd)	0.8462	4	0.21
Total PAH	52%	Non-parametric	95% Chebyshev (Mean, Sd)	4.8990	80	0.06

Outlier refers to Bus16-A
Compliance value is 95% UCL / Criteria - thus values of 1 or less indicate compliance with criteria
Note: Care must be taken when interpreting 95% UCL values. Knowledge of the original data set is essential.
The methods used to calculate UCL's are based upon use of full data sets without censoring.
Typically, where non-detects exist at less than 15% of the data set, it is acceptable to insert these values as half the limit of reporting (proxy values).
At levels above this, the proxy values can skew the data set and subsequently require the use of statistical methods resulting in unrealistically high UCL values in order to achieve the coverage required (ie 95%).
The production of artificially high UCL values can also occur due to the presence of outlying results (eg B(a)P and PAH in Bus16-A) in small data sets (ie <50)
Generally, where 99% Chebyshev (Mean, Sd) 95% UCL has been used, the UCL value obtained may be unreasonably high as a result of data distribution and not necessarily a true reflection of the actual interval in which the mean of the population portion exists.

ProUCL Version 3.0, computer software produced by Lockheed Martin for the US EPA was used to determine data distribution and calculate 95% UCL values.
This program is available on-line and offers technical descriptions of data distributions and the methods used to calculate 95% UCL values.

Balfours and Bus Stations Redevelopment

Additional Investigations

Bus Stations Site

Prepared for

Adelaide City Council

26 September 2005

Consulting Engineers and Scientists

Tierra Environment Pty. Ltd.
ABN: 84 111 615 680

71 Belair Road,
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515
general@tierra.com.au

Balfours/Bus Stations Redevelopment
Additional Investigations
Bus Station Site

Prepared for
Adelaide City Council

26 September 2005

Document Status	Name	Signature	Date
Approved for Issue ☑	Prepared by Daryl Burrows		26 Sept 2005
Revision A	Reviewed by Elmar Schaffeler		26 Sept 2005

1 INTRODUCTION

1.1 Background

Tierra Environment Pty Ltd (Tierra) was engaged by the Adelaide City Council (ACC) to undertake additional investigations at the Bus Station sites. Previously investigations had been completed at the Bus Station sites by Maunsell Australia Pty Ltd (Maunsell) and PPK. The Maunsell report utilised data gathered from their investigations and the PB investigations. Maunsell recommended that the soil beneath buildings be investigated once site structures were removed as these areas were difficult to access and the quality of these materials was unknown.

The Maunsell report was reviewed by Andrew Nunn of Soil and Groundwater Pty Ltd, engaged by ACC as the Environmental Auditor for the project. A series of issues were presented to Maunsell by the Auditor. The issues were addressed in correspondence to the Auditor dated 11 January 2005. As an outcome of these discussions and correspondence, four issues required resolution at the time of site clearance activities.

These issues were as follows:

- Investigation of the potential presence of sub surface fuel tanks
- Investigation of materials beneath building footings
- Targeted soil sampling within car park
- Investigation of perched water in north western corner of site

It was recommended that all of these issues be resolved at the time of commencement of site works and remediation as it would be the most cost efficient method of undertaking these works. Subsequently the Urban Construct/Multiplex/Adelaide City Council team advised of their requirement for more certainty in advance of seeking a cost estimate from a contractor to conduct site works. As a consequence additional investigations were undertaken by Tierra and its subconsultants between March and May 2005.

1.2 Investigation Program

The additional investigation program was discussed with the Auditor, Urban Construct and Multiplex and a scope of work prepared. The scope of work was reviewed by the Auditor and found to be sufficient to satisfy the Auditors requirements for further information on the above four issues.

2 SCOPE OF WORKS

The following scope of work was undertaken:

2.1 Task 1 – Sub-surface Tank Investigation

To investigate the potential for the presence of underground tanks at the site (including beneath building footings), ground penetrating radar investigations of the site were was undertaken by Ecophyte Pty Ltd. The findings of Ecophyte's investigation are the subject of a separate report presented in Appendix H and are summarised in this report.

2.2 Task 2 – Implementation of Soil Sampling Program – Beneath Footings

Maunsell's investigation report identified that areas beneath buildings were not investigated due to access difficulties. To investigate these areas at a density similar to the rest of the site and maintaining the same suite of analytes for consistency, the following was undertaken.

- Location of underground services
- Concrete coring of 19 sampling locations (5 per each main bus building, two per other buildings and one in the small building immediately west of the church)
- Establishment of 19 push tube sampling locations (hand drilled) to nominally 2m (the final depth was dependant on access restrictions caused by internal ceiling heights in the buildings) and recovery of core samples
- Environmental logging of recovered cores
- Field screening for volatile organic hydrocarbons
- Collection of 3 samples per location
- Collection of QA/QC samples (2 inter laboratory duplicates, 2 intra laboratory duplicates, 1 rinsate sample and 1 trip blank)
- Analysis of upper samples, half of the middle, half of the lower sample and QA/QC samples for Vic EPA screen
- Upon receipt of the regular results, 4 selected samples ranging from representative of the mean results to the maximum results were analysed for leachability of PAH and metals. The samples were assessed with Class 1 Leaching fluid (reagent water) as per Australian Standard 4439.3 – 1997, 'Preparation of Leachates – Bottle Leaching Procedure'. Other analytes were not found to be of concern and were not investigated.

Other collected samples were held by the laboratory pending the outcome of the above laboratory investigations. Further testing was not required. The trip blank was not analysed as the rinsate samples were acceptable.

As part of Task 2, a sampling location which could not be established by Maunsell due to the area being secured was established by Tierra. The sampling location (BUS29) was part of the grid based sampling across the site and will be compared with existing grid based data prepared by Maunsell and PPK.

2.3 Task 3 – Soil Sampling Program – Car Park Area, Targeted

Establishment of 6 push tube sampling locations to nominally 2m and recovery of core samples in the vicinity of areas known to contain contaminants

- Establishment of one push tube sampling location in the locked car parking area (this area was not accessible during the Maunsell investigations)
- Environmental logging of recovered cores
- Field screening for volatile organic hydrocarbons
- Collection of 3 samples per location

- Collection of QA/QC samples (1 inter laboratory duplicate, 1 intra laboratory duplicate and 1 rinsate sample)
- Analysis of upper samples, half of the middle, half of the lower sample and QA/QC samples for metals and PAH
- Upon receipt of the regular results, 4 selected samples ranging from representative of the mean results to the maximum results were analysed for leachability of PAH and metals. The samples were assessed with Class 1 Leaching fluid (reagent water) as per Australian Standard 4439.3 – 1997, 'Preparation of Leachates – Bottle Leaching Procedure'.

All other samples were held by the laboratory pending the outcome of the above laboratory investigations. Further testing was not required.

2.4 Task 4 – Investigation of Perched Water

Three soil bores were established in the vicinity of the perched water identified by Maunsell (including one location immediately adjacent to Maunsell's sampling location) and left open over night (approximately 18 hours). There was no seepage in any of the three locations. A groundwater bore was not installed as a result.

2.5 Data Review and Reporting

- Review of data and preparation of a report
- Submission of report to auditor

3 METHODOLOGY

3.1 Site Inspection

An experienced environmental scientist conducted a site inspection in May 2005 to determine accessibility for the drill rig and hand drilling equipment to locations within the site and to undertake location of underground services with a service locator. Upon completion of service location and review of access issues including negotiating with site occupiers, the final sampling locations were set out.

3.2 Soil Investigation

The positions of soil sampling locations were determined considering access restrictions, overhead structures, underground services and the requirements of site occupiers. Fieldwork was carried out by experienced environmental scientists.

3.2.1 Soil Sampling

Soil sampling was undertaken between 9 and 11 of May 2005 and involved the following activities:

- **Selection of Sampling locations.** The sampling locations within the buildings were located over the buildings footprint under consideration of issues discussed in Section3.2. The remaining sampling locations were targeted. The aim of the sampling set out within the buildings was to provide generally representative information on material qualities. The aim of the sampling set out across the rest of the site was to undertake check testing of previously obtained results.
- **Borehole establishment.** 27 boreholes were successfully established for logging and sampling purposes. 2 locations within the abandoned Explorer Building could not be established beyond 400mm due to a double layer of concrete, asphalt and course gravel. Each borehole was allocated a unique number, "BUSX", where X is the sampling location. The boreholes were established using pushtubes, which were forced by a drill rig or hand drilling equipment, with the resultant soil cores extracted into soil core trays. Environmental logs are presented in Appendix B. Photographs were taken of all 27 cores and are presented in Appendix C. Where existing structures did not permit access for a drill rig within buildings, a hand held motorised hammer was used (hand drilling equipment).

  The boreholes extended to a depth of 1.4m to 2.2m below ground surface with the exception of BUS38 and BUS39. These bores were established in the former Explorere Coach building and encountered refusal at 0.4m below ground surface.

  All pushtubes and core trays were cleaned with environmental cleaning equipment prior to use for each borehole. Borehole locations were measured by hand using surrounding landmarks and buildings as reference points.
- **Soil logging.** During soil core extraction, the material was logged. Specific characteristics of the materials, such as moisture content, colour and particle size were observed and noted on the log sheets, in addition to the type of material being extracted. Additional information recorded on the borelogs included sampling intervals, sample and duplicate numbers, field observations, comments relating to the material and approximate location of natural material. The log sheets are presented in Appendix B
- **Sampling preparation**. Sample jars were labeled in the field prior to beginning each borehole. Sample jars were labeled as follows:

  BUSX-#

  - BUSX denotes the sampling location (described above)
  - '#' is the sample designation and is either A, B or C
  - If a duplicate sample was collected the letter 'D' was used in place of A, B or C.

  In general, from each borehole a sample was taken from discrete material layers identified as being fill material (the A sample), and a second sample was taken either from a discrete fill layer or from a natural material layer immediately underlying the fill (the B sample). The choice as to collection of fill

materials or natural materials was dependent upon the total fill thickness. The third sample was taken from natural materials (the C sample). The duplicate sample (the D sample) was a duplicate of the A sample.

- **Sampling.** The sampling interval was determined and the section representing the interval separated from the rest of the core. The section was then homogenised in a tray and sampled. Sample jars were kept in an esky with ice until transportation to the laboratory. Samples were collected by hand. Clean gloves were used for each sample to avoid cross-contamination. In addition, natural materials were handled first to reduce the risk of any cross contamination involving materials from fill sections mixing with samples containing natural material prior to sampling.
- **Quality sampling**. Quality sampling was undertaken at or above the rates indicated in Table 1.

Table 1 – Soil Quality Sampling

Quality Sampling	Rate
Intra Laboratory Duplicate	1 per 20 regular samples
Inter Laboratory Duplicate	1 per 20 regular samples
Rinsate Samples	1 per day
Trip Blank	1 per consignment

The procedure for collecting quality samples was the same as for normal samples, but the mixed material was sequentially added to each jar to ensure the samples were as analogous as possible.

- **On-site screening**. Materials from soil cores were screened generally at half metre intervals for volatile organic carbon using a MiniRae 2000 Photo-Ionisation Detector (PID). Materials were collected separately from any laboratory samples. Material from each interval was placed in a separate sealed plastic bag and screened within approximately 5 minutes of sampling. PID readings were recorded on borelogs, presented in Appendix B.
- **Tracking of samples**. Tracking of samples was undertaken using Chain of Custody (COC) documentation. COCs were sent to the laboratory with the instructions of the analysis required. The laboratory checked the condition and number of samples, and signed and returned by fax a copy of the COC to confirm receipt of samples.

3.2.2 Analytical Testing

The following scope of analytical testing was undertaken:

- Analysis of selected samples for Vic EPA Screen
- Analysis of selected samples for Metals (Sb, As, Be, Cd, Cr, Co, Cu, Pb, Hg, Mo, Ni, Se, Sn, Zn) and PAH
- Holding of selected samples pending the findings of first round of analytical testing
- PID field analysis of material for volatile organic carbon at half metre intervals in every borehole
- Collection and analysis of duplicate and rinsate samples at rates indicated in Table 1, with duplicates being of fill material only to reduce the likelihood of original and duplicate analytes all returning results less than the limits of reporting, thus voiding the usefulness of duplicate analysis.

A more detailed scope of analytical testing is presented in Section 2.

Analyses of soil samples were conducted by MGT Environmental Consulting Pty Ltd. The laboratory holds National Association of Testing Authorities (NATA) registration for the parameters listed in Table 2.

Table 2 – Analytical Methods and Limits of Reporting

Parameter	Analytical Method	Limits of Reporting	Number of Samples Tested
pH (unitless)	US EPA SW846 or APHA Standard Methods 19th Edition 1995	0.1	33 + 4 quality
Metals Screen	US EPA 6010B (ICP), 7470/1 (CVAA)	Various	45 + 6 quality
MAH	US EPA SW846 Methods 8021B, 8260B, 5030 & MGT 350A	0.05	33 + 4 quality
PAH	US EPA SW846 Method 8310(HPLC) & 8270C(GC/MS)	Various (0.1-2)	45 + 6 quality
TRH	MGT Method 100A-GC	Various (20-500)	33 + 4 quality
Phenols & Cresols	HPLC – JRNL. CHROM 464(1989) 405-410	0.1, 0.2 or 0.5	33 + 4 quality
Cyanide	US EPA SW846 Method 9010B	5	33 + 4 quality
Chlorinated Hydrocarbons	US EPA SW846 Method 8021B	0.05, 0.1 or 0.2	33 + 4 quality
Organochlorine Pesticides	US EPA SW846 Method 8081A	0.05, 0.1 or 0.2	33 + 4 quality
Polychlorinated Biphenyls	US EPA SW846 Method 8082	Various (0.1-2)	33 + 4 quality

Note – Units are in mg/kg unless otherwise stated.
Quality in the table refers to intra and inter laboratory duplicates. Inter laboratory duplicates were undertaken by WSL consultants (NATA registered). 2 Vic EPA Screen and one metals and PAH screen was undertaken by WSL for quality purposes.

3.3 Groundwater Investigation

A groundwater well was not established in the area of suspected perched water as the three boreholes established in the vicinity did not reveal any seepage of moisture after being left open over night.

4 QUALITY

4.1 General

Tierra conducts investigations in accordance with the principals of quality assurance and quality control measures (QA/QC). The 'National Environment Protection (Assessment of Site Contamination) Measure, 1999', states that a quality assurance system is 'actions, procedures, checks and decisions to ensure representativeness and integrity of samples and accuracy and reliability of analysis results'. It goes on to say that the system involves 'selection of appropriate sampling and presentation methods, documentation and sample storage, cleaning of tools before sampling and between samples, cleaning of containers, maintenance of sample environment to minimise sample contamination and analyte losses, delivery to the laboratory in good condition and within timeframes required for the particular analytes'.

The Tierra QA/QC principles include:

- Use of established procedures and suitably qualified field personnel for environmental sampling
- Documentation of chain-of-custody and sample handling and storage
- Use of NATA registered laboratories as preselected subconsultants performing interlaboratory quality control checks
- Use of field duplicates samples, rinsate samples and trip blank samples

Quality of project outputs is maintained by ensuring:

- All staff are appropriately trained
- Safety standards are defined and implemented
- Good housekeeping practices are adopted during all phases of the project
- Complete records of fieldwork, samples and data are maintained

Specific quality control procedures conducted for this project include:

- The use of appropriate sample collection and handling procedures
- The use of appropriately skilled and experienced personnel
- The application of decontamination procedures where appropriate to minimise cross contamination
- The extraction and analysis within appropriate handling times
- The use of an independent, NATA accredited laboratory for analysis
- The collection and analysis of blind duplicates, split duplicates, and internal laboratory duplicates and matrix spike/matrix spike duplicates

4.2 Field QA/QC Procedures

The laboratory supplied clean jars for soil samples. The jars were labeled in the field prior to borehole establishment based on the predetermined sampling program. On site the jars were filled with a soil sample and stored in an esky with ice. At the end of each day samples were stored on ice if not sent to the laboratory. During transportation to the laboratory the samples were packed in an esky with ice and packaging to avoid damage.

Blind (intralaboratory) and split (interlaboratory) duplicate samples and rinsate samples and trip blank samples were collected in the field at the rates specified in Table 1.

4.3 Laboratory QA/QC Procedures

During the analysis of samples, the analytical laboratory conducted internal QA/QC procedures including the analysis of laboratory duplicates, laboratory spiked samples and method blank samples. All percentage recoveries for laboratory spiked sample analyses were between the acceptance criteria of 60-140%.

Method blank results are of an acceptable quality. Method blank and spiked sample results are presented on analytical reports provided in Appendix E

4.4 Duplicates

Duplicate samples were collected to provide an indication of the sampling and analysis process. Duplicate soil samples were analysed for the full range of parameters. The duplicate soil sample results are presented on analytical reports in Appendix E and in the quality assessment data provided in Appendix F.

Relative Percentage Differences (RPDs) for intra-laboratory and inter-laboratory duplicate samples were calculated and are presented in Appendix F. It was noted that several elevated RPDs were observed for samples where results were relatively low, close to the limits of laboratory reporting, or where limits of reporting differed between laboratories. Tierra reviews each of these RPDs individually. Generally for heterogeneous soil results well above limits of reporting if the order of magnitude is the same the results are considered acceptable.

Based on a qualitative assessment of the data, it appears that neither laboratory is consistently over or underestimating and that the difference in the reported results is not a reflection of laboratory procedures, but rather the inherent heterogeneity of soil, particularly fill material. It was however noted that the PAH results of BUS30-A and its inter laboratory duplicate BUS30-D were consistently higher from the secondary laboratory. It was not possible to assess if this was a systematic problem between laboratories or due to the nature of heterogeneous soils as only one of the inter laboratory duplicates contained detectable PAH. We note that a similar issue was not identified for other analytes so it is likely to be an artefact of the soil and not the laboratory.

4.5 Rinsates and Trip Blanks

Rinsates were collected to provide an indication of the effectiveness of cleaning and decontamination procedures implimented on equipment. Demineralised water was passed over selected cleaned equipment, and collected in regular sampling vessels and stored with regular samples. Rinsate samples were submitted to the laboratory for analysis of the same parameters as the regular samples. All results were less than the limits of reporting the two rinsate samples. It appears that the cleaning and decontamination procedures implemented for this project were appropriate.

Trip blank samples were prepared to provide an indication of potential cross contamination effects from sample handling and transportation. One sample was prepared and submitted to the laboratory with the regular samples and held by the laboratory pending the outcome of the results of the rinsate samples. As the rinsate samples were all less than the limits of reporting the trip blank was not analysed for the rinsate samples had served the same purpose as the trip blanks.

4.6 QA/QC Discussion

Quality assurance and quality control was conducted in accordance with Tierra's environmental investigation procedures to ensure that data of known quality is reported.

The required scope of samples collected, analytical testing, and quality testing was achieved for soil and groundwater samples.

Specific aspects of the project used to maintain QA/QC were:

- **Field Procedures** – The design of the investigation, including the collection of duplicates, is of a standard that provides confidence in the quality of the samples collected.
- **Analytical Procedures** – The laboratory's internal QA/QC results indicate that analytical information provided by the laboratory is reliable.
- **Inter- and Intra-Laboratory Duplicate Samples** – the results indicate that there was no bias in the analysis as a consequence of the selection of the laboratory.

Based on the QA/QC information available for this project, the results are of an appropriate standard and can be used as part of a basis of interpretation of site conditions.

5 GENERAL RESULTS

5.1 Introduction

The current investigation was designed to address specific issues raised by previous investigations and the Auditor . These issues are detailed as Tasks 1 to 4 in Section 2.

Sections 5 outlines the assessment criteria and general findings non specific to Tasks 1 to 4. The findings in relation to Tasks 1 to 4 are addressed in Sections 6.

The assessment criteria being used in this report are the investigation levels as presented in the National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM).

5.2 Assessment Criteria

5.2.1 Soil

The laboratory analysis results for soil have been assessed against the appropriate NEPM Health Investigation Levels (HILs) as presented in Table 5-A of that document. The proposed use of the site as high-rise residential and commercial/industrial suggest NEPM HILs 'D' and 'F' respectively are the most appropriate guidelines. Initial comparison is made with the more conservative NEPM HIL 'D', based on an exposure setting of residential with minimal opportunities for soil access. Where analytical results conform to NEPM 'D' guidelines, it is therefore inferred that the results also satisfy NEPM 'F' guidelines. The NEPM states "investigation levels provide a trigger to assist in judging whether a detailed investigation of a site is necessary". Consequently, NEPM HIL 'D' is herein referred to as 'Preliminary Acceptance Criteria' as, if not exceeded, Auditor appointed site specific criteria may not be required. However, comparison is also made with interim urban ecological investigation levels (EILs) where data and guidelines exist. Triggered EILs give an indication of the potential for toxicological effects should sensitive receiving environments exist.

The Southern Waste Disposal Criterion for the Classification of Contaminated Waste was implemented to assess the quality of soil in the event that contaminated soil requires excavation. Three classifications of contaminated waste exist within the scheme, all of which are assessed in this investigation. The classifications are Waste Fill (WF), Intermediate Landfill Cover (ILC) and Low Level Contaminated Waste (LLCW).

In addition to the chemical specifications outlined in the Classification of Contaminated Waste, physical characteristics for Waste Fill and Intermediate Landfill Cover are as follows:

"Waste Fill – less than 100mm in diameter, homogenous, consisting of clay, concrete, rock, sand, soil or other inert mineralogical matter and not containing asbestos or bitumen (as specified in Part 4 of the Environmental Protection (Fees and Levy) Regulations 1994. Not containing significant organic material such as timber, vegetable matter or other waste materials."

"Intermediate Landfill Cover – less than 200mm in diameter. Not containing significant organic matter such as timber, vegetable matter or other waste material."

Where analytical results above the limits of reporting were detected disposal criteria were discussed to provide an indication of the materials suitability for disposal. However when it is determined which parcels of material are to be removed from site then the appropriate data will need to be reviewed against the disposal criteria.

5.2.2 Groundwater

Groundwater criteria was not utilised for this project as the suspected perched aquifer in the north west corner of the site was found not to be present.

5.2.3 Statistics

The statistical analysis performed on results are the same for both groundwater and soil investigations.

Statistical calculations such as the mean, standard deviation and 95% upper confidence level of the arithmetic mean (95%UCL) were undertaken for each analyte detected at concentrations above the limit of reporting. The confidence statistic provides a measure of the uncertainty of the estimate of the population proportion, that is there is a 95% confidence that the true unknown mean of the population portion is in the

computed interval. The standard deviation and 95%UCL were only calculated where there were three or more samples in the data set. The 95%UCLs were initially calculated based on the assumption of normal data distribution. If analytes were sufficiently close to NEPM criteria values then reassessment of data distribution and recalculation of 95%UCL values was undertaken using a computer program ProUCL 3.0, developed for the US EPA. The results indicated that the 95% UCLS for the task 3 fill data sets would require recalculations but other data sets appeared appropriate. Recalculated results for Task 3 are presented in Appendix G.

It is acknowledged that some individual samples may exceed guideline levels, however the focus of this report are the 95%UCL values relating to the average quality of material over the entire Bus Station sites and comparison of targeted sampling to previous data (Task 3). For reference, summary results are provided in Appendix D and original laboratory reports are provided Appendix E.

The 95%UCL of sample sets was assessed against the appropriate guidelines described above. For task 3 individual samples and 95%UCL of sample the current sample set were compared with previous 95%UCLs to assess similarity.

For statistical purposes, all values below the laboratories' limits of reporting (LOR) were substituted with a value equal to 50% of the LOR. The italics and blue text indicate these results. As a result the total PAH was re-calculated by Tierra using the sum of 50% of the LORs for individual PAHs, which is different to the methodology used by the laboratory (which was 100% of the LORs for individual PAHs).

In the discussion of the results, the statement "all samples returned results less than the limits of reporting" implies that all samples, A, B and C, are below the specified criteria.

5.3 Field Findings

5.3.1 Soil

The borehole logs for the soil investigations can be found in Appendix B. It is noted that the fill/natural interface often showed signs of a layer of reworked natural material, mixed with above fill materials. This was classified as fill material for the purpose of this investigation.

Table 3 – Log Findings

Sample Location	Total Depth (m)	Fill/Natural Interface Depth (m)	Description of Natural Substrate	Description of Fill
BUS22	2.1	1.05	Silty clay	Surface asphalt, silty gravelly sand, clay
BUS23	2.2	0.75	Clay, silty clay	Surface asphalt, silty gravelly sand, clay
BUS24	2.1	0.9	Clay	Surface asphalt, silty gravelly sand, concrete, gravelly sandy silt
BUS25	2.1	0.6	Silty clay	Surface asphalt, silty gravelly sand, clay
BUS26	2.1	0.75	Silty clay, clay	Surface asphalt, silty gravelly sand, sandy gravelly silt
BUS27	2.1	0.85	Clay, silty sandy clay	Surface asphalt, silty gravelly sand, clay
BUS28	1.8	0.45	Silty clay	Surface asphalt, silty gravelly sand, silty sandy clay
BUS29	2.0	0.6	Silty clay, clay	Surface asphalt, silty sand, silty clay
BUS30	1.4	0.65	Clay, silty clay	Surface concrete, gravelly sand silt
BUS31	2.0	0.35	Silty clay, clay	Surface concrete, gravelly silty sand
BUS32	1.85	0.45	Clay, silty clay, clay	Surface concrete, sand, gravelly sandy clay
BUS33	2.05	0.3	Clay, silty clay, clay	Surface concrete, sand, clay
BUS34	1.7	0.65	Silty clay, clay	Surface concrete, sand, clay
BUS35	2.05	0.8	Clay, silty clay	Surface concrete, sand, gravelly sandy clay
BUS36	2.0	0.5	Clay, silty clay	Surface concrete, sand, gravelly sand, gravelly sandy clay

Sample Location	Total Depth (m)	Fill/Natural Interface Depth (m)	Description of Natural Substrate	Description of Fill
BUS37	2.1	0.8	Clay, silty clay, clay	Surface concrete, sand, gravelly sandy clay, sandy silt
BUS38	0.4 refusal	NA	NA	Surface concrete, gravelly silty sand, asphalt, gravelly silty sand
BUS39	0.4 refusal	NA	NA	Surface concrete, gravelly silty sand, asphalt, gravelly silty sand, concrete
BUS40	2.0	0.6	Clay, sandy silt	Surface concrete, gravelly silty sand, clay
BUS41	2.0	0.75	Sandy silt	Surface concrete, gravelly silty sand, clay
BUS42	2.1	1.25	Silty clay	Surface concrete, gravelly silty sand
BUS43	2.0	0.6	Gravelly silt, clay	Surface concrete, gravelly silty sand, asphalt, gravelly silty sand
BUS44	1.9	1.1	Clay	Surface concrete, sandy gravel, gravelly sandy clay, gravelly sand
BUS45	1.75	0.25	Clay, calcrete, silty clay	Surface concrete, sandy gravel

5.3.2 Groundwater

Three bores were established in the vicinity of the suspected perched water. All three bores were left open over night and no moisture seepage occurred. The soil moisture condition ranged from dry to moist. The moist materials did not appear sufficiently moist to suspect perched water. Wells were not established in the soil bores and no further investigation into the suspected perched water was undertaken.

5.4 Analytical Findings

5.4.1 Monocyclic Aromatic Hydrocarbons

The Preliminary Acceptance Criteria for MAH are, 1mg/kg of Benzene, 130mg/kg of Toluene, 50mg/kg for Ethyl Benzene and 25mg/kg for Xylene. All samples returned results several orders of magnitude less than the criteria and less than the Southern Waste Waste Fill Disposal criteria.

5.4.2 Phenols and Cresols

The Preliminary Acceptance Criteria for phenols is 34000mg/kg. No criteria exist for cresols. All sample returned results less than the limits of reporting.

5.4.3 Chlorinated Hydrocarbons

There are no Preliminary Acceptance Criteria specified for chlorinated hydrocarbons. All samples returned results less than the limits of reporting.

5.4.4 Organochlorine Pesticides

The Preliminary Acceptance Criteria specified for organochlorine pesticides are presented below.

Table 4: Acceptance criteria of organochlorine pesticides in soil

Analyte	NEPM 'D' HIL (mg/kg)
Aldrin + Dieldrin	40
Chlordane	200
DDT + DDD + DDE	800
Heptachlor	40

Most samples returned results less than the limits of reporting with the exception of 12 samples. Of the 12 samples all results were less than the criteria. 3 of the 12 samples (BUS32-A, BUS33-A and BUS37-A) returned results above the Southern Waste Waste Fill Disposal criteria. The Southern Waste Waste Fill Disposal criteria for Aldrin + Dieldrin is 2mg/kg and the highest individual sample result was 3.8mg/kg. The three samples were all surface samples beneath building footings and the material beneath each layer met the criteria. In addition the mean and 95%UCL for Aldrin + Dieldrin for all samples, for all fill samples and for all natural samples met the Southern Waste Waste Fill Disposal criteria.

5.4.5 Polychlorinated Biphenyls

The Preliminary Acceptance Criteria for total PCBs is 40mg/kg. All samples returned results less than the limits of reporting.

5.4.6 Cyanide

The Preliminary Acceptance Criteria specified for free cyanide was 1000mg/kg. All samples returned results less than the limits of reporting.

5.4.7 pH

There was no Preliminary Acceptance Criteria specified for this analyte. The values of pH ranged from 7.7 to 9.5.

5.4.8 Total Recoverable Hydrocarbons

The NSW EPA Guidelines for Assessing Service Station Sites criteria and the Southern Waste Waste Fill criteria for TRH C_6-C_9 is 65mg/kg. All C_6-C_9 results were less than the limits of reporting.

The NSW EPA Guidelines for Assessing Service Station Sites criteria and the Southern Waste Waste Fill criteria for TRH C_{10}-C_{40} is 1000mg/kg. TRH fractions C_{10}-C_{14} were less than the limits of reporting.

TRH fractions C_{15}-C_{28} were all less than the limits of reporting with the exception of BUS41-A (130 mg/kg).

TRH fractions C_{29}-C_{36} were all less than the limits of reporting with the exception of BUS41-A (400 mg/kg).

Overall, the TRH mean and 95%UCL are well with in the guidelines. With the exception of BALF 41-A, TRH was below the limits of reporting.

5.4.9 Metals

The Preliminary Acceptance Criteria and Southern Waste Waste Fill Disposal criteria specified for metals are presented below in table 5.

Table 5: Acceptance criteria for metals in soil

Analyte	Preliminary Acceptance Criteria		Southern Waste Depot July 2003 Waste Soil		
		Interim Urban	WF	ILC	LLCW
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	400	20	20	200	750
Beryllium	80	-	20	40	150
Cadmium	80	3	3	30	60
Chromium (VI)	400	1	1	200	750
Cobalt	400	-	170	170	1000
Copper	4,000	100	60	2000	7500
Lead	1,200	600	300	1200	5000
Manganese	6,000	500	500	6000	10000
Mercury	60	-	1	30	110
Molybdenum	-	-	-	-	-
Nickel	2,400	60	60	600	3000
Selenium	-	-	-	-	-

Analyte	Preliminary Acceptance Criteria		Southern Waste Depot July 2003 Waste Soil		
Tin	-	-	-	-	-
Zinc	28,000	200	200	14000	50000

Overall, the mean and 95% UCLs for all metals returned results well within the Preliminary Acceptance Criteria. However, one individual upper fill samples (BUS40-A) exceeded the criteria for lead and chromium. The exceedence was less than 250% of the criteria and the sample immediately below this sample was within the acceptance criteria. All other individual samples were less than the acceptance criteria.

The 95%UCLs for arsenic and zinc exceed the NEPM EILs but considering there is little to no opportunity for phytotoxic exposure due to the development type and there are unlikely to be any sensitive receiving environments exposed to the materials then the exceedence appear to be low risk.

Some Southern Waste Waste Fill Disposal criteria may be exceeded but would not preclude the material for disposal as either Intermediate Landfill Cover Waste (ILC) or Low Level Contaminated Waste (LLCW). Depending upon the final composition of the materials selected for disposal the statistics may need to be reviewed utilising the appropriate sampling position results.

5.4.10 Polynuclear Aromatic Hydrocarbons

The Preliminary Acceptance Criteria for total PAHs is 80mg/kg. The mean and 95% UCL for total PAHs were within the specified criterion. However, sample BUS22-B returned results which exceed this criteria with 164.5mg/kg of total PAHs. The next highest total PAH was 12.75mg/kg well below the criteria and the one exceeding result.

The Preliminary Acceptance Criteria specified for benzo(a)pyrene is 4mg/kg. The mean and 95% UCL for benzo(a)pyrene is below the specified criterion. Benzo(a)pyrene was detected in 14 of the 45 samples with one sample (BUS22-B) exceeding the HIL D criteria. BUS22-B returned a result of 11mg/kg. The remaining samples returned results less than the limits of reporting.

Some Southern Waste Waste Fill Disposal criteria may be exceeded but would not preclude the material for disposal as either Intermediate Landfill Cover Waste (ILC) or Low Level Contaminated Waste (LLCW). Depending upon the final composition of the materials selected for disposal the statistics may need to be reviewed utilising the appropriate sampling position results.

6 TASK SPECIFIC RESULTS AND CONCLUSIONS

6.1 Sub-Surface Tank Investigation (Task 1)

Investigation of the potential presence of sub-surface tanks was undertaken by Ecophyte. Ecophyte's investigation report is presented in Appendix H. In summary it was found that there were two anomalies which were consistent with a sub-surface tank that may require further investigations.

6.2 Soil Sampling Program – Beneath Footings (Task 2)

Soil bores established to investigate materials beneath building footings were BUS27 and BUS30 to BUS45 inclusive. BUS29 was established to complete the original sampling grid of Maunsell. At the time of undertaking investigations Maunsell could not gain access to the area where BUS 29 was to be established. BUS29 results have been presented with Task 2 results as the list of analytes are the same and the results are consistent with the results beneath the footings. The samples from beneath footings were collected for a similar reason as BUS 29, which is for the assessment of general soil quality.

Results of all samples has been discussed in Section 5. Analytes which were less than the limits of reporting or the criteria or were not considered an issue will not be further discussed. These analytes include the following:

- MAH
- Phenols and cresols
- chlorinated hydrocarbons
- Organochlorine pesticides
- Polychlorinated biphenyls
- Cyanide
- PH.

TRH was identified in 1 of the 35 samples collected and analysed from beneath the footings. This appears to be a localised issue and the area in question may require inspection at the time of demolition of buildings. TRH will need to be considered if material from this area is disposed of off site.

Metals quality is generally acceptable across the site based on a comparison with NEPM D criteria. However if off site disposal is required material parcels will need to be considered against the disposal criteria. The disposal criteria has been utilised for results of all materials and there were some individual result exceedences of waste fill criteria.

PAH and benzo(a)pyrene is generally acceptable across the site based on a comparison with NEPM D criteria. One sample returned unacceptable PAH and benzo(a)pyrene results. This appears to be a localised issue and the area in question may require inspection at the time of demolition of buildings. PAH and benzo(a)pyrene will need to be considered if material from this area is disposed of off site.

The BUS 29 results are consistent with Maunsell's investigation of the Bus Station and the results in the vicinity of this sampling location do not change Maunsell's findings.

Selected samples ranging from representative of the mean results to the maximum results were analysed for leachability of PAH and metals. The samples were assessed with Class 1 Leaching fluid (reagent water) as per Australian Standard 4439.3 – 1997, 'Preparation of Leachates – Bottle Leaching Procedure'. Leachability results for Task 2 samples are presented in Appendix D. All leachability results are of an acceptable quality.

6.3 Soil Sampling Program – Car Park Area, Targeted (Task 3)

Metals and PAH were further investigated within the car parking area to assess the potential affect of the sampling methods used by Maunsell (sampling of wider sampling intervals representative of proposed excavations) and the sampling method used by PB which is appears to be highly selective of potentially contaminated materials. In addition the discrepancy between Maunsell and PB in regard to identification of layers of slag was adressed. PB reported to have identified layers of slag in the fill materials across the

entire site but Maunsell did not identify such materials. To address this Tierra selcted 6 sampling locations previously identified as having high PAH and or metals results. Tierra results were expected to be higher and more similar to PB results than for Maunsell results from across the entire site as the Tierra results expected to be biased.

A slag rich layer was not identified during the establishment of sampling locations and logging of materials. Photographs of cores were presented in Maunsell's November 2004 report and are presented here in Appendix C.

Selected samples ranging from representative of the mean results to the maximum results were analysed for leachability of PAH and metals. The samples were assessed with Class 1 Leaching fluid (reagent water) as per Australian Standard 4439.3 – 1997, 'Preparation of Leachates – Bottle Leaching Procedure'. Leachability results for Task 2 samples are presented in Appendix D. All leachability results are of an acceptable quality. The highest PAH leachability results (while still low) were recorded from the sample (BUS22-B) with the highest dry weight concentration of PAH.

6.3.1 Fill Materials

Metals results (individual, mean and 95% UCL) with the exception of lead and zinc were consistent with the Maunsell results. The lead and zinc results appear to be skewed by one sample (BUS24-B). excluding this result the individual, mean and 95% UCL are generally consistent with Maunsell results.

Individual and mean PAH and benzo(a)pyrene results are generally consistent with Maunsell results. The 95% UCLs of the Tierra data set is higher than Maunsell's but still meets the NEPM D criteria.

6.3.2 Natural Materials

Metals, PAH and benzo(a)pyrene results are generally consistent with Maunsell results.

6.4 Investigation of Perched Water (Task 4)

Three bores were established in the vicinity of the suspected perched water. All three bores were left open over night and no moisture seepage occurred. The soil moisture condition ranged from dry to moist. Soil bore details (MW1-A, MW1-B and MW1-C) are presented in Appendix B. The moist materials did not appear sufficiently moist to suspect perched water. Wells were not established in the soil bores and no further investigation into the suspected perched water was undertaken. It is considered unlikely that there is any perched water in the vicinity of these bores.

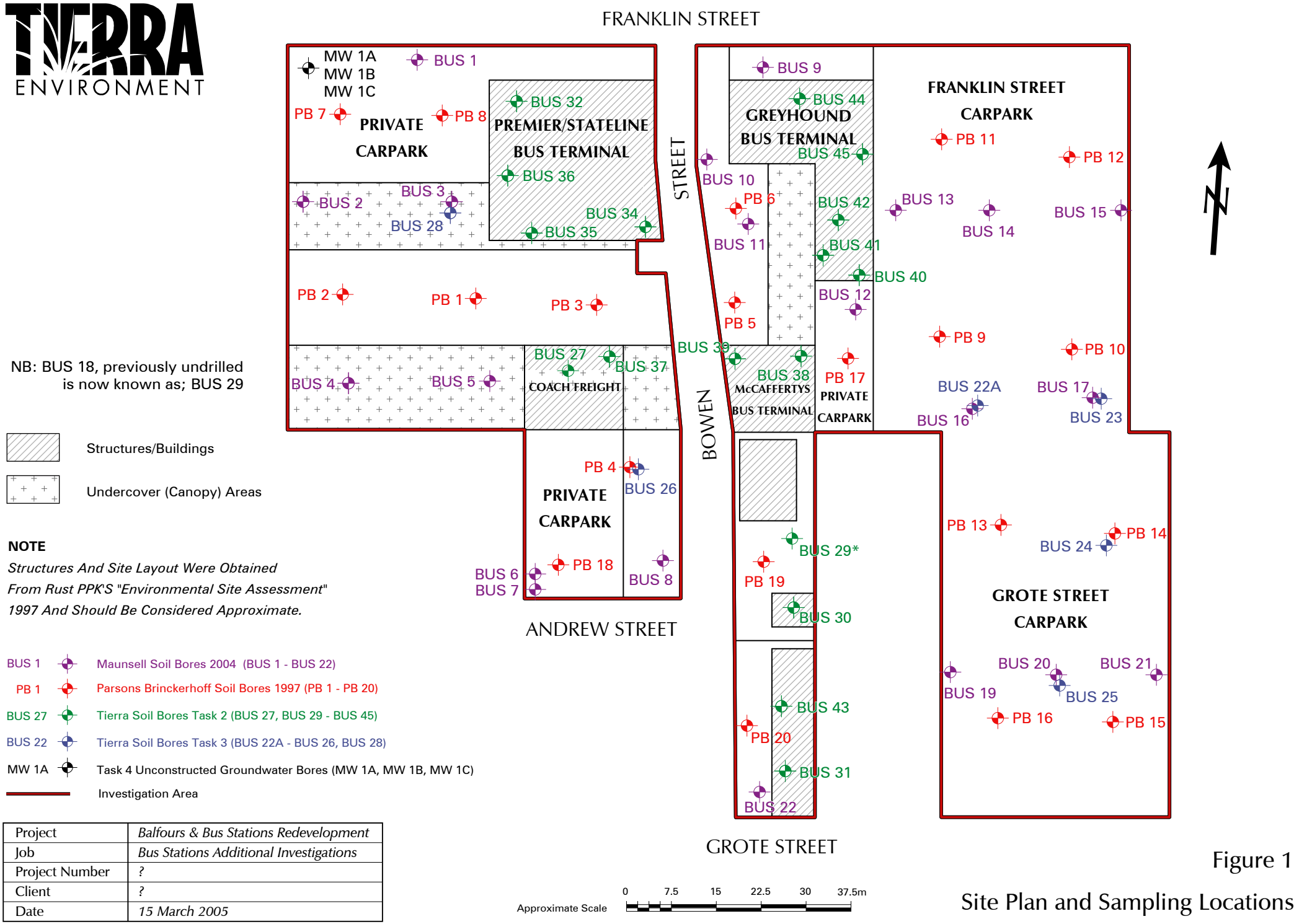
7 LIMITATIONS OF USE

Site contamination is generally a produce of man-made processes and therefore exhibits characteristics and properties that vary from place to place and can change with time. Contamination assessments involve gathering and assimilating limited facts about these characteristics and properties in order to better understand or predict the status of contamination on a particular site under certain conditions.

The facts reported and utilised in this document may have been obtained by inspection, excavation, probing, sampling, testing, other means of investigation or from the client. They are directly relevant only to the ground at the place where and time when the investigation was carried out. Any interpretation or recommendation given in this report is based on judgment and experience and not on greater knowledge of the facts than the sources of information indicate. The interpretations and recommendations are opinions provided for the sole use by the Client identified on the cover sheet and in accordance with a specific brief. Tierra does not represent that the information or interpretation contained in this document addresses completely existing features such as surface and subsurface contamination, groundwater and geotechnical conditions or ground or contamination behavior on the subject site.

The responsibility of Tierra Environment Australia Pty Ltd is solely to its Client. It is not intended that this document be relied upon by any third party, other than an environmental auditor engaged by the client for the purpose of a contaminated land audit. Tierra does not undertake any duty to or accept any responsibility to any other parties who may rely upon this document.

APPENDIX A – FIGURES



NB: BUS 18, previously undrilled is now known as; BUS 29

Structures/Buildings

Undercover (Canopy) Areas

NOTE

Structures And Site Layout Were Obtained From Rust PPK'S "Environmental Site Assessment" 1997 And Should Be Considered Approximate.

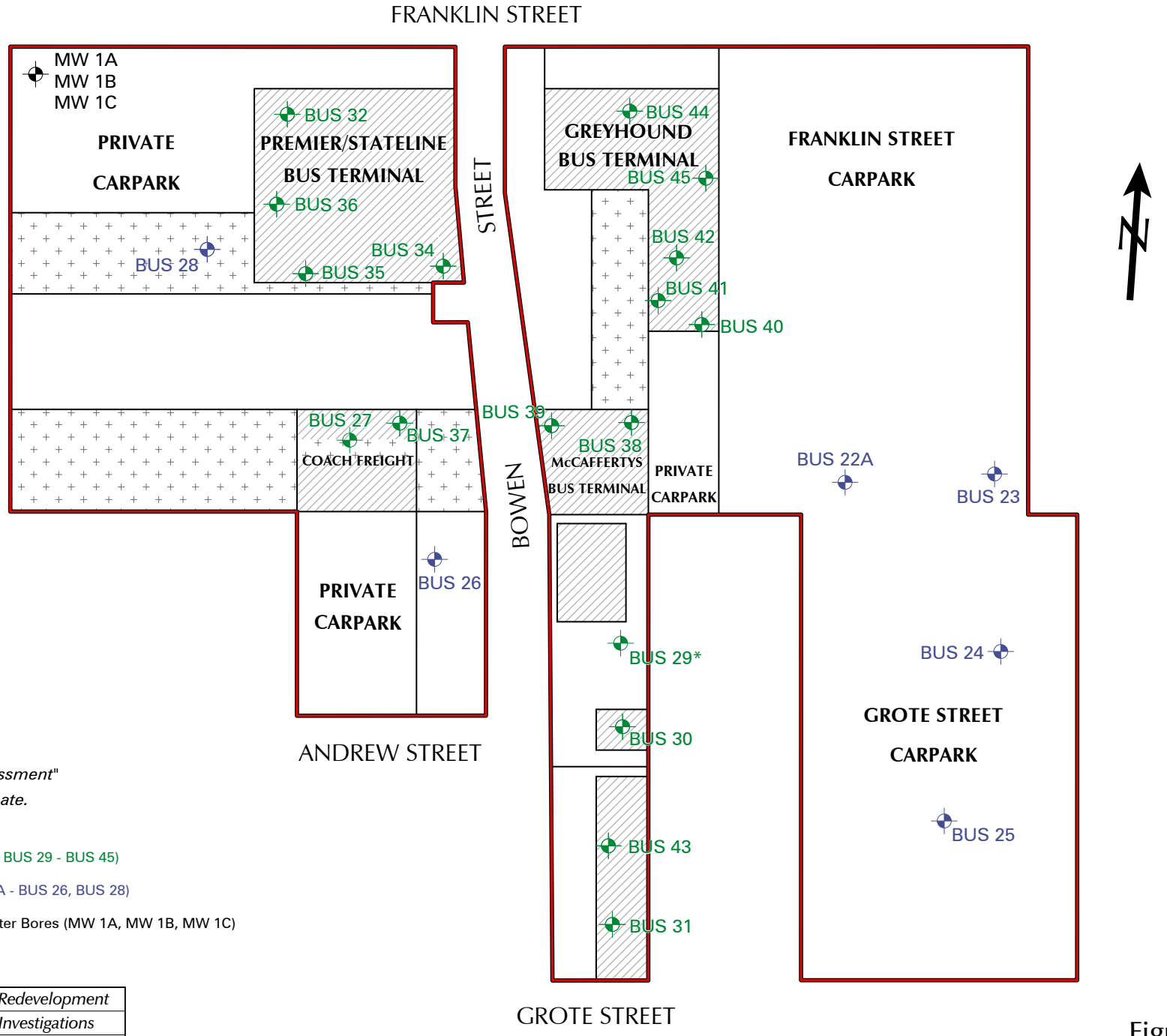
BUS 1	Maunsell Soil Bores 2004 (BUS 1 - BUS 22)
PB 1	Parsons Brinckerhoff Soil Bores 1997 (PB 1 - PB 20)
BUS 27	Tierra Soil Bores Task 2 (BUS 27, BUS 29 - BUS 45)
BUS 22	Tierra Soil Bores Task 3 (BUS 22A - BUS 26, BUS 28)
MW 1A	Task 4 Unconstructed Groundwater Bores (MW 1A, MW 1B, MW 1C)
	Investigation Area

Project	*Balfours & Bus Stations Redevelopment*
Job	*Bus Stations Additional Investigations*
Project Number	*?*
Client	*?*
Date	*15 March 2005*

Figure 1

Site Plan and Sampling Locations

TIERRA ENVIRONMENT



NB: BUS 18, previously undrilled is now known as; BUS 29

Structures/Buildings

Undercover (Canopy) Areas

NOTE

Structures And Site Layout Were Obtained From Rust PPK'S "Environmental Site Assessment" 1997 And Should Be Considered Approximate.

BUS 27 — Tierra Soil Bores Task 2 (BUS 27, BUS 29 - BUS 45)

BUS 22 — Tierra Soil Bores Task 3 (BUS 22A - BUS 26, BUS 28)

MW 1A — Task 4 Unconstructed Groundwater Bores (MW 1A, MW 1B, MW 1C)

Investigation Area

Project	*Balfours & Bus Stations Redevelopment*
Job	*Bus Stations Additional Investigations*
Project Number	*?*
Client	*?*
Date	*15 March 2005*

Approximate Scale 0 7.5 15 22.5 30 37.5m

Figure 2

Site Plan and Sampling Locations

APPENDIX B – ENVIRONMENTAL LOGS

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 22

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: AMR

RL Surface:

Datum:

Excav. Type: Pushtube borehole — **Length:** 2.1 m

Equipment: Toyota Pushtube rig — **Width:** 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:	Remarks:
					ASPHALT	
					Silty Gravelly SAND, tan cream, slighty moist, sand is variable fine to very coarse grained, gravel is sub-angular to 20mm	
	BUS22-A BUS22-D					
		0.1	**0.5**		Colour change to light pink cream	
	BUS22-B	0.1	**1.0**		CLAY, brown with orange patches, slighty moist, firm, minor fine to coarse grained sand and minor subangular gravel to 8mm. Material is reworked and also contains brick fragments and metallic slag	
					Silty CLAY, tan, dry, very minor fine grained sand	Natural
					Silty CLAY, cream, dry, firm	
	BUS22-C	0.2	**1.5**		Colour change to cream	
		0.1	**2.0**			
					END OF HOLE	
			2.5			
			3.0			

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 23

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: DPB

RL Surface:

Datum:

Excav. Type: Pushtube borehole

Equipment: Toyota Pushtube rig

Length: 2.2 m

Width: 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					ASPHALT
					Silty Gravelly SAND, tan cream, slighty moist, sand is variable fine to very coarse grained, gravel is sub-angular to 20mm
	BUS23-A BUS23-D				
					Colour change to light orange tan
		0.1	**0.5**		
					CLAY, red brown, slighty moist, firm. Material is reworked and contains minor brick fragmetns and ash
					Silty CLAY, light orange tan, moist, firm, very minor fine grained sand
		0.1	**1.0**		
	BUS23-B				Colour change to cream and slightly moist
					Silty CLAY, cream, dry, firm
		0.1	**1.5**		
	BUS23-C				
		0.1	**2.0**		
					END OF HOLE
			2.5		
			3.0		

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

No reworking at 0.75m
Natural

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 24

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: AMR

RL Surface:

Datum:

Excav. Type: Pushtube borehole

Equipment: Toyota Pushtube rig

Length: 2.1 m

Width: 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:	Remarks:
					ASPHALT	
					Silty Gravelly SAND, tan cream, dry, sand is variable fine to very coarse grained, gravel is sub-angular to 20mm	
	BUS24-A					
		0.0	0.5		Concrete	
					Gravelly Sandy SILT, brown, slightyly moist, sub-angular gravel up to 10mm. Material contains fragments of glass, brick and ash	
	BUS24-B					
		0.0	1.0		CLAY, light brown red, slightly moist, firm	Natural
					Silty CLAY, cream, dry, firm	
	BUS24-C	0.0	1.5		Colour change to cream	
		0.0	2.0			
					END OF HOLE	
			2.5			
			3.0			

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 25

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: AMR

RL Surface:

Datum:

Excav. Type: Pushtube borehole

Equipment: Toyota Pushtube rig

Length: 2.1 m

Width: 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:	Remarks:
					ASPHALT	
					Silty Gravelly SAND, tan cream, slighty moist, sand is variable fine to very coarse grained, gravel is sub-angular to 20mm	
	BUS25-A					
		0.0	0.5		CLAY, brown with orange patches, slighty moist, firm, minor fine to coarse grained sand and minor subangular gravel to 8mm. Material is reworked and also contains brick fragments and metallic slag	
	BUS25-B					
					Silty CLAY, tan, slightly moist, very minor fine grained sand	Natural
		0.0	1.0			
	BUS25-C				Colour change to cream dry	
					Silty CLAY, cream, dry, firm	
		0.1	1.5			
		0.1	2.0			
					END OF HOLE	
			2.5			
			3.0			

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 26

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: AMR

RL Surface:

Datum:

Excav. Type: Pushtube borehole

Equipment: Toyota Pushtube rig

Length: 2.1 m

Width: 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					ASPHALT
					Silty Gravelly SAND, tan cream, slighty moist, sand is variable fine to very coarse grained, gravel is sub-angular to 20mm
	BUS26-A				
		0.1	0.5		
	BUS26-B				Sandy Gravelly SILT, dark brown, moist, stiff to firm. Material contains brick, ash and glass fragments and metallic slag
		0.1	1.0		Silty CLAY, tan, moist, minor fine sand
					CLAY, cream to green, moist, soft to firm
	BUS26-C				Silty CLAY, cream, dry, firm
		0.1	1.5		
		0.1	2.0		
					END OF HOLE
			2.5		
			3.0		

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Natural

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 27

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: AMR

RL Surface:

Datum:

Excav. Type: Pushtube borehole

Equipment: Toyota Pushtube rig

Length: 2.1 m

Width: 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					ASPHALT
					Silty Gravelly SAND, tan cream, slighty moist, sand is variable fine to very coarse grained, gravel is sub-angular to 20mm
	BUS27-A				
		0.1	0.5		
	BUS27-B				CLAY, brown with orange patches, slighty moist, firm, minor fine to coarse grained sand and minor subangular gravel to 8mm. Material is reworked and also contains brick fragments
		0.2	1.0		CLAY, brown with orange patches, slighty moist, firm, minor fine to coarse grained sand and minor subangular gravel to 8mm. Material is reworked and also contains brick fragments and metallic slag Silty CLAY, tan, dry, very minor fine grained sand
	BUS27-C				Silty CLAY, cream, dry, firm
		0.1	1.5		Silty Sandy CLAY, tan, moist, soft
		0.2	2.0		Colour change to cream with very moist patches
					END OF HOLE
			2.5		
			3.0		

Remarks:

Natural

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 28

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: AMR

RL Surface:

Datum:

Excav. Type: Pushtube borehole

Equipment: Toyota Pushtube rig

Length: 1.3 m

Width: 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					ASPHALT
					Silty Gravelly SAND, tan cream, slighty moist, sand is variable fine to very coarse grained, gravel is sub-angular to 20mm
	BUS28-A				
	BUS28-B				Silty Sandy CLAY, dark brown, slightly moist, minor fine grained material. Contains brick fragments
		0.1	0.5		Silty CLAY, light brown, slightly moist with minor fine sands
	BUS28-C				
		0.1	1.0		
					Silty CLAY, cream, dry, firm
		0.1	1.5		
					END OF HOLE
		0.1	2.0		
			2.5		
			3.0		

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Natural

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 29

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: AMR

RL Surface:

Datum:

Excav. Type: Pushtube borehole

Equipment: Toyota Pushtube rig

Length: 2.1 m

Width: 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					ASPHALT
					Silty SAND, light brown, dry containing brick fragments to 35mm
	BUS29-A				
					Silty CLAY, dark brown, slightly moist. Material is reworked and contains fragments of glass, and also minor sands and gravel
	BUS29-B	0.1	0.5		
					Silty CLAY, brown, slightly moist, firm
		0.1	1.0		Colour change to tan cream
	BUS29-C				Silty CLAY, cream, dry, firm
		0.1	1.5		
					CLAY, cream, moist, firm
		0.1	2.0		
					END OF HOLE
			2.5		
			3.0		

Remarks:

Natural

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 30

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: AMR

RL Surface:

Datum:

Excav. Type: Pushtube borehole

Equipment: Toyota Pushtube rig

Length: 1.4 m

Width: 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					Concrete
	BUS30-A BUS30-D				Gravelly Sandy SILT, dark brown, slightly moist, soft. Material is reworked and contains ash and brick fragments
	BUS30-B	0.1	0.5		
	BUS30-C	0.1	1.0		CLAY, brown, slightly moist
		0.1			Silty CLAY, cream, dry, firm
			1.5		REFUSAL
			2.0		
			2.5		
			3.0		

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Natural

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 31

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: AMR

RL Surface:

Datum:

Excav. Type: Pushtube borehole

Equipment: Toyota Pushtube rig

Length: 2.0 m

Width: 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					Concrete
					Gravelly, Silty SAND, brown, dry with rare brick and ash fragments
	BUS31-A				
					Silty CLAY, brown, slightly moist, stiff
	BUS31-B	0.1	0.5		
					Changes colour to light brown
		0.1	1.0		
					CLAY, cream, slightly moist, soft to firm
	BUS31-C				
					Silty CLAY, cream, dry, firm
		0.1	1.5		
		0.1	2.0		END OF HOLE
			2.5		
			3.0		

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Natural

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 32

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: DPB

RL Surface:

Datum:

Excav. Type: Pushtube borehole

Equipment: Hand Drilling Equip't

Length: 1.85 m

Width: 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					Concrete
					SAND, orange, moist, fine to medium grained
	BUS32-A				Gravelly, Sandy CLAY, grey brown, moist, gravel is masonry and is subangular to 35mm. Sand is variable, fine to very coarse grained
	BUS32-B				
		0.1	0.5		CLAY, brown, slightly moist, firm
	BUS32-C				
					Silty CLAY, light orange tan, slightly moist
		0.1	1.0		Colour change to cream tan, becoming less silty
					Silty CLAY, cream, dry, firm
		0.1	1.5		
					CLAY, tan, slightly moist, firm, with grey pebbles
		0.1			
					END OF HOLE
			2.0		
			2.5		
			3.0		

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Natural

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 33

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: DPB

RL Surface:

Datum:

Excav. Type: Pushtube borehole

Equipment: Toyota Pushtube rig

Length: 2.05 m

Width: 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					Concrete
	BUS33-A				SAND, orange, moist, fine to medium grained
	BUS33-B				CLAY, dark brown, moist, soft, minor masonry and wood
		0.1	0.5		CLAY, brown, slightly moist, firm
					Natural
					Silty CLAY, light orange tan, slightly moist
	BUS33-C	0.1	1.0		Colour change to cream tan
					Silty CLAY, cream, dry, firm
		0.1	1.5		
					CLAY, tan, slightly moist, firm, with grey pebbles
		0.1	2.0		
					END OF HOLE
			2.5		
			3.0		

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 34

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: DPB

RL Surface:

Datum:

Excav. Type: Pushtube borehole **Length:** m

Equipment: Hand Drilling Equip't **Width:** 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					Concrete
	BUS34-A BUS34-D				SAND, cream, slightly moist, fine to medium grained
	BUS34-B				CLAY, dark brown, moist, soft, minor masonry and wood
		0.1	**0.5**		Layer of charcoal and ash
	BUS34-C				Silty CLAY, light orange tan, slightly moist Colour change to cream tan
		0.2	**1.0**		Silty CLAY, cream, dry, firm
		0.2	**1.5**		CLAY, tan, slightly moist, firm, with grey pebbles
					END OF HOLE
			2.0		
			2.5		
			3.0		

Remarks:

Natural

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 35

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: DPB

RL Surface:

Datum:

Excav. Type: Pushtube borehole **Length:** m

Equipment: Hand Drilling Equip't **Width:** 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					Concrete
	BUS35-A				SAND, orange, moist, fine to medium grained
	BUS35-B				Gravelly, Sandy CLAY, grey brown, moist, gravel is masonry and is subangular to 35mm. Sand is variable, fine to very coarse grained
		0.1	0.5		
					CLAY, brown, slightly moist, firm
	BUS35-C	0.1	1.0		
					Silty CLAY, light orange tan, slightly moist
		0.1	1.5		Silty CLAY, cream, dry, firm
					Colour change to cream
		0.1	2.0		
					END OF HOLE
			2.5		
			3.0		

Remarks:

Natural

Key To Graphic Log

INDICATES SILT

INDICATES SAND

INDICATES ASPHALT/CONCRETE

INDICATES ROCK

INDICATES CLAY

INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 36

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: DPB

RL Surface:

Datum:

Excav. Type: Pushtube borehole **Length:** m

Equipment: Hand Drilling Equip't **Width:** 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					Concrete
	BUS36-A				SAND, orange, moist, fine to medium grained
	BUS36-B				Gravelly SAND, slightly moist, sand variable fine to coarse grained Gravel is subangular to 5mm
					Gravelly, Sandy CLAY, grey brown, moist, gravel is masonry and is subangular to 35mm. Sand is variable, fine to very coarse grained
		0.1	0.5		
					CLAY, brown, slightly moist, firm
	BUS36-C				
		0.1	1.0		Silty CLAY, light orange tan, slightly moist
					Silty CLAY, cream, dry, firm
		0.1	1.5		
					Colour change to cream
		0.1	2.0		
					END OF HOLE
			2.5		
			3.0		

Remarks:

Natural

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 37

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: AMR

RL Surface:

Datum:

Excav. Type: Pushtube borehole **Length:** m

Equipment: Hand Drilling Equip't **Width:** 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:	Remarks:
					Concrete	
	BUS37-A				SAND, orange, moist, fine to medium grained	
	BUS37-B				Gravelly, Sandy CLAY, grey brown, moist, gravel is masonry and is subangular to 35mm. Sand is variable, fine to very coarse grained	
		0.1	0.5		Sandy, SILT, red, slightly moist. Material contains brick, ash and glass fragments. Sand grains are fine to medium	
	BUS37-C	0.0	1.0		CLAY, reddish brown, slightly moist, firm	Natural
		0.0	1.5		Silty CLAY, light brown, slightly moist Silty CLAY, cream, dry, firm	
		0.0	2.0		CLAY, cream, moist to wet, soft	
			2.5		END OF HOLE	
			3.0			

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 38

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: AMR

RL Surface:

Datum:

Excav. Type: Pushtube borehole **Length:** m

Equipment: Hand Drilling Equip't **Width:** 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					Concrete
					Gravelly Silty SAND, tan, slightly moist, variable gain size, clasts up to 10mm
					Asphalt
					Gravelly Silty SAND, tan, slightly moist, variable gain size, clasts up to 10mm
			0.5		REFUSAL
			1.0		
					Silty CLAY, cream, dry, firm
			1.5		
			2.0		
			2.5		
			3.0		

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 39

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: AMR

RL Surface:

Datum:

Excav. Type: Pushtube borehole **Length:** m

Equipment: Hand Drilling Equip't **Width:** 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					Concrete
					Gravelly Silty SAND, tan, slightly moist, variable gain size, clasts up to 10mm
					Bitumen
					Gravelly Silty SAND, tan, slightly moist, variable gain size, clasts up to 10mm
					Concrete
					REFUSAL
			0.5		
			1.0		
					Silty CLAY, cream, dry, firm
			1.5		
			2.0		
			2.5		
			3.0		

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 40

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: AMR

RL Surface:

Datum:

Excav. Type: Pushtube borehole **Length:** m

Equipment: Hand Drilling Equip't **Width:** 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:	Remarks:
					Concrete	
	BUS40-A				Gravelly Silty SAND, dark brown, dry. Material contains fragments of slag, ash, leather and brick. Sand is fine grained.	
	BUS40-B					
		0.0	0.5		CLAY, reddish brown, firm, slightly moist reworked material	
					CLAY, reddish brown, firm, slightly moist	Natural
	BUS40-C				Sandy SILT, tan, dry. Sand is fine with rare coarse grains, becomes less sandy	
		0.0	1.0			
					Silty CLAY, cream, dry, firm	
		0.0	1.5		Colour change to cream, and becomes slightly moist	
		0.1	2.0		END OF HOLE	
			2.5			
			3.0			

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 41

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: DPB

RL Surface:

Datum:

Excav. Type: Pushtube borehole **Length:** m

Equipment: Hand Drilling Equip't **Width:** 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:	Remarks:
					Concrete	
	BUS41-A				Gravelly Silty SAND, dark brown, dry. Material contains fragments of slag, ash, leather and brick. Sand is fine grained.	
	BUS41-B					
		0.0	0.5		CLAY, reddish brown, firm, slightly moist reworked material	
					CLAY, reddish brown, firm, slightly moist reworked material Contains masonry fragments	
					Sandy SILT, tan, dry. Sand is fine with rare coarse grains, becomes less sandy	Natural
	BUS41-C	0.0	1.0			
		0.0	1.5		Silty CLAY, cream, dry, firm	
		0.1	2.0			
					END OF HOLE	
			2.5			
			3.0			

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 42

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: AMR

RL Surface:

Datum:

Excav. Type: Pushtube borehole **Length:** m

Equipment: Hand Drilling Equip't **Width:** 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:	Remarks:
					Concrete	
	BUS42-A				Gravelly Silty SAND, light brown, dry. Material contains fragments of brick. Gravel is subangular to 20mm, sand is generally fine grained	
	BUS42-B					
		0.0	0.5			
		0.0	1.0			
					Silty CLAY, cream, dry, firm	Natural
	BUS42-C	0.0	1.5			
		0.1	2.0			
					END OF HOLE	
			2.5			
			3.0			

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 43

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: AMR

RL Surface:

Datum:

Excav. Type: Pushtube borehole **Length:** m

Equipment: Hand Drilling Equip't **Width:** 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					Concrete
	BUS43-A				Gravelly Silty SAND, light brown, dry. Material contains fragments of brick. Gravel is subangular to 20mm, sand is generally fine grained
	BUS43-B				
		0.0	0.5		
					Asphalt
					Gravelly Silty SAND, light brown, dry, contains brick fragments
					Gravelly SILT, brown, slightly moist. Gravel up to 10mm
		0.0	1.0		
					Silty CLAY, cream, dry, firm
		0.0	1.5		CLAY, cream, moist, soft
	BUS43-C				
	BUS43-C				
		0.1	2.0		END OF HOLE
			2.5		
			3.0		

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Natural

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 44

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: DPB

RL Surface:

Datum:

Excav. Type: Pushtube borehole **Length:** m

Equipment: Hand Drilling Equip't **Width:** 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:	Remarks:
					Concrete	
	BUS44-A				Sandy GRAVEL, grey, dry, gravel angular to 10mm, sand variable, fine to very coarse grained	
	BUS44-B				Gravelly Sandy CLAY, grey brown, moist, gravel is masonry and is subangular to 35mm. Sand is variable, fine to very coarse grained	
		0.0	0.5			
		0.0	1.0		Gravelly SAND, cream, dry, sand variable, fine to very course grained, gravel is subangular to 15mm	
					CLAY, grey, dry, stiff	Natural
	BUS44-C				Silty CLAY, cream, dry, firm	
		0.0	1.5		CLAY, brown, slightly moist	
					Colour change to grey green	
		0.1	2.0		END OF HOLE	
			2.5			
			3.0			

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

BUS 45

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: DPB

RL Surface:

Datum:

Excav. Type: Pushtube borehole **Length:** m

Equipment: Hand Drilling Equip't **Width:** 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					Concrete
	BUS45-A				Sandy GRAVEL, grey, dry, gravel angular to 10mm, sand variable, fine to very coarse grained
	BUS45-B				CLAY, brown, dry, soft
		0.0	0.5		
					Calcrete, dark pink cream
					Silty CLAY, tan, dry, minor gravel to 10mm
	BUS45-C	0.0	1.0		Colour change to cream
					Silty CLAY, cream, dry, firm
		0.0	1.5		
					END OF HOLE
		0.1	2.0		
			2.5		
			3.0		

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Natural

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No. **MW1 A**

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: DPB

RL Surface:

Datum:

Excav. Type: Pushtube borehole **Length:** 3.1 m

Equipment: Hand Drilling Equip't **Width:** 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					ASPHALT
					Gravelly Silty SAND, tan cream, dry, sand variable predominantly fine with coarse grains, gravel subangular to 35mm
			0.5		
					Gravelly SILT, dark brown, dry, brick and slag fragments to 10mm
					Reworked CLAY, light brown, moist
					Natural Silty CLAY, creamy moist, soft
			1.0		
			1.5		
			2.0		
					Natural, CLAY, cream, moist, firm
			2.5		
			3.0		

END OF HOLE

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Natural

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

MW1 B

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: DPB

RL Surface:

Datum:

Excav. Type: Pushtube borehole

Equipment: Hand Drilling Equip't

Length: 3.1 m

Width: 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:	Remarks:
					ASPHALT	
			0.5		Gravelly Silty SAND, tan cream, dry, sand variable predominantly fine with coarse grains, gravel subangular to 35mm	
					Reworked CLAY, light brown, moist	
			1.0		Natural Silty CLAY, creamy moist, soft	Natural
			1.5		Sandy Clayey SILT, cream, moist, soft to medium firm	
			2.0			
			2.5		CLAY, cream, moist to wet in patches, soft to firm	
			3.0			

END OF HOLE

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

ENVIRONMENTAL LOG

Tierra Environment Pty Ltd
71 Belair Road
Kingswood SA
5000

Client: Adelaide City Council

Project: Balfours / Bus Station Redevelopment

Location: Bus Station

Bore No.

MW1 C

TIERRA ENVIRONMENT

Job no: AAA 05 002 00

Date: 10/05/2005

Logged: DPB

RL Surface:

Datum:

Excav. Type: Pushtube borehole

Equipment: Hand Drilling Equip't

Length: 3.1 m

Width: 50 mm

Water	Samples/ Tests	PID Tests (ppm)	Depth (m)	Graphic Log	Material Description:
					ASPHALT
			0.5		Gravelly Silty SAND, tan cream, dry, sand variable predominantly fine with coarse grains, gravel subangular to 35mm
					Reworked CLAY, light brown, moist
			1.0		Natural Silty CLAY, creamy moist, soft
			1.5		Sandy Clayey SILT, cream, moist, soft to medium firm
			2.0		
			2.5		CLAY, cream, moist to wet in patches, soft to firm
			3.0		

END OF HOLE

Remarks:

Key To Graphic Log

- INDICATES SILT
- INDICATES SAND
- INDICATES ASPHALT/CONCRETE
- INDICATES ROCK
- INDICATES CLAY
- INDICATES GRAVEL

Natural

APPENDIX C – PHOTOGRAPHS

BUS 22 and 23

BUS 24 and 25

BUS 26

BUS 27

BUS 28

BUS 29

BUS 31

BUS 32 and 33

BUS 34

BUS 35 and 36

BUS 37

BUS 40 and 41

BUS 42

BUS 43

BUS 44 and 45

MW 1A and 1B

APPENDIX D – SUMMARY RESULTS

Sample Number	BUS 27-A	BUS 27-B	BUS 27-C	BUS 29-A	BUS 29-B	BUS 30-A	BUS 30-B	BUS 30-C	BUS 31-A	BUS 32-A	BUS 32-B	BUS 32-C	BUS 33-A	BUS 34-A	BUS 34-B	BUS 34-C	BUS 35-A	BUS 35-B	BUS 35-C
Fill/Natural	Fill	Fill	Natural	Fill	Fill	Fill	Fill	Natural	Fill	Fill	Fill	Natural	Fill	Fill	Fill	Natural	Fill	Fill	Natural
Laboratory Number	05-MY01722	05-MY01723	05-MY01724	05-MY01727	05-MY01728	05-MY01729	05-MY01730	05-MY01731	05-MY01732	05-MY01733	05-MY01734	05-MY01735	05-MY01736	05-MY01737	05-MY01738	05-MY01739	05-MY01741	05-MY01742	05-MY01743
CHLORINATED HYDROCARBONS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
HEAVY METALS																			
Antimony	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*
Arsenic	*1*	6.9	*1*	15	4.8	3.4	7.3	6.3	93	6.7	*1*	7	3.9	6.1	*1*	*1*	13	3.8	*1*
Beryllium	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Cadmium	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	0.9	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*
Chromium	*2.5*	17	26	9.4	22	14	19	37	11	10	14	34	10	11	17	12	13	13	47
Cobalt	*2.5*	*2.5*	*2.5*	5.4	6.2	11	*2.5*	8.2	8.4	*2.5*	*2.5*	6.3	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	6.4
Copper	*2.5*	46	15	20	13	17	65	18	27	9.4	10	14	14	7.4	8.6	8.4	*2.5*	26	27
Lead	*2.5*	320	7.8	67	54	52	350	17	150	58	110	13	180	30	160	*2.5*	*2.5*	130	35
Mercury	*0.05*	2	*0.05*	0.2	*0.05*	0.1	1.4	*0.05*	0.1	*0.05*	0.1	*0.05*	0.1	*0.05*	0.1	*0.05*	*0.05*	0.7	0.1
Molybdenum	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	*2.5*	6.4	13	16	9.5	7	7.4	17	5.5	*2.5*	5.7	14	*2.5*	*2.5*	6.4	6.9	*2.5*	5.5	21
Selenium	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Tin	*5*	100	*5*	*5*	*5*	12	67	*5*	17	*5*	*5*	*5*	52	*5*	11	*5*	*5*	32	10
Zinc	*2.5*	470	20	53	17	120	750	30	940	89	110	25	56	56	18	8.9	6	470	59
MISCELLANEOUS ANALYSES																			
pH (units) (1:5 aqueous extract)	8.9	8.8	8.6	8.2	9.1	8.2	8.9	8.9	8.6	8.6	8.8	8	8.7	8.8	8.7	8.7	8.7	8.6	7.9
CYANIDE																			
Cyanide (total)	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
MAH's AROMATIC VOLATILE ORGANICS																			
Benzene	*0.025*	*0.025*	*0.025*	*0.025*	0.06	0.05	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
Ethylbenzene	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	0.05	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
Toluene	*0.025*	*0.025*	*0.025*	*0.025*	0.09	0.12	*0.025*	*0.05*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
Xylenes(ortho.meta and para)	*0.025*	*0.025*	*0.025*	*0.025*	0.1	0.12	*0.025*	*0.05*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
ORGANOCHLORINE PESTICIDES	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
Aldrin	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	2.2	*0.025*	*0.025*	2.1	0.11	*0.025*	*0.025*	0.05	*0.025*	*0.025*
Dieldrin	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	0.17	*0.025*	*0.025*	1.7	0.48	*0.025*	*0.025*	0.07	*0.025*	*0.025*
4 4'-DDD	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	< 0.05	*0.025*	*0.025*	< 0.05	< 0.05	*0.025*	*0.025*	< 0.05	*0.025*	*0.025*
4 4'-DDE	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	0.05	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
4 4'-DDT	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	0.07	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
b-BHC	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
Endrin ketone	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
POLYNUCLEAR AROMATIC HYDROCARBONS																			
Acenaphthene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Acenaphthylene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.2	*0.05*	0.2	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Anthracene	*0.05*	0.2	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.1	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Benz(a)anthracene	*0.05*	1	*0.05*	*0.05*	*0.05*	0.3	0.9	*0.05*	1	*0.05*	*0.05*	*0.05*	0.1	*0.05*	*0.05*	*0.05*	*0.05*	0.5	*0.05*
Benzo(a)pyrene	*0.05*	0.7	*0.05*	*0.05*	*0.05*	0.1	1.5	*0.05*	1.3	0.1	*0.05*	*0.05*	0.2	*0.05*	*0.05*	*0.05*	*0.05*	0.2	*0.05*
Benzo(b)fluoranthene	*0.05*	0.8	*0.05*	*0.05*	*0.05*	0.3	1.1	*0.05*	1.2	*0.05*	*0.05*	*0.05*	0.2	*0.05*	*0.05*	*0.05*	*0.05*	0.4	*0.05*
Benzo(g.h.i)perylene	*0.05*	0.8	*0.05*	*0.05*	*0.05*	0.4	1.3	*0.05*	1.3	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.3	*0.05*
Benzo(k)fluoranthene	*0.05*	0.9	*0.05*	*0.05*	*0.05*	0.6	1.1	*0.05*	1.3	*0.05*	*0.05*	*0.05*	0.2	*0.05*	*0.05*	*0.05*	*0.05*	0.4	*0.05*
Chrysene	*0.05*	1.3	*0.05*	*0.05*	*0.05*	0.4	0.9	*0.05*	1	0.1	*0.05*	*0.05*	0.1	*0.05*	*0.05*	*0.05*	*0.05*	0.4	*0.05*
Dibenz(a.h)anthracene	*0.05*	0.2	*0.05*	*0.05*	*0.05*	*0.05*	0.2	*0.05*	0.3	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Fluoranthene	*0.05*	2.1	*0.05*	*0.05*	*0.05*	0.6	1.7	*0.05*	1.8	0.2	*0.05*	*0.05*	0.2	*0.05*	*0.05*	*0.05*	*0.05*	0.7	*0.05*
Fluorene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Indeno(1.2.3-cd)pyrene	*0.05*	0.6	*0.05*	*0.05*	*0.05*	0.2	0.6	*0.05*	0.9	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.2	*0.05*
Naphthalene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Phenanthrene	*0.05*	1.3	*0.05*	*0.05*	*0.05*	0.1	0.5	*0.05*	0.5	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.2	*0.05*
Pyrene	*0.05*	1.8	*0.05*	*0.05*	*0.05*	0.8	1.5	*0.05*	1.7	0.2	*0.05*	*0.05*	0.3	*0.05*	*0.05*	*0.05*	*0.05*	0.7	*0.05*
Total PAH	0.8	11.9	0.8	0.8	0.8	4.1	11.7	0.8	12.75	1.2	0.8	0.8	1.75	0.8	0.8	0.8	0.8	4.3	0.8
POLYCHLORINATED BIPHENYLS (PCB's)	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
PHENOLS & CRESOLS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
TOTAL RECOVERABLE HYDROCARBONS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
T.R.H. C15-C28 Fraction by GC	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*
T.R.H. C29-C36 Fraction by GC	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*
Total T.R.H	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*

All concentrations are mg/L unless otherwise stated

* Guidelines for Assessing Service Station Sites - NSW EPA

<LOR indicates all analytes in the category were below the limit of detection, and so not shown

<LOR indicates some analytes in the category were below the limit of detection, and so not shown

Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Sample Number	BUS 36-A	BUS 37-A	BUS 40-A	BUS 40-B	BUS 40-C	BUS 41-A	BUS 42-A	BUS 43-A	BUS 43-B	BUS 43-C	BUS 44-A	BUS 44-B	BUS 44-C	BUS 45-A
Fill/Natural	Fill	Fill	Fill	Fill	Natural	Fill	Fill	Fill	Fill	Natural	Fill	Fill	Natural	Fill
Laboratory Number	05-MY01744	05-MY01745	05-MY01746	05-MY01747	05-MY01748	05-MY01749	05-MY01750	05-MY01751	05-MY01752	05-MY01753	05-MY01754	05-MY01755	05-MY01756	05-MY01757
CHLORINATED HYDROCARBONS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
HEAVY METALS														
Antimony	*5*	*5*	190	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*
Arsenic	14	57	15	7.9	*1*	10	7.8	130	99	*1*	5.9	17	11	7.6
Beryllium	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Cadmium	*0.25*	*0.25*	2.1	*0.25*	*0.25*	0.8	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	1.1	*0.25*	*0.25*
Chromium	7.1	16	430	22	10	13	7.7	33	16	13	10	18	33	8.7
Cobalt	*2.5*	*2.5*	*2.5*	5.1	*2.5*	*2.5*	*2.5*	7	*2.5*	*2.5*	*2.5*	*2.5*	5.8	*2.5*
Copper	*2.5*	12	450	51	7.5	160	60	17	9.8	6.3	18	120	14	15
Lead	*2.5*	46	1700	89	*2.5*	480	54	16	15	5	79	800	800	83
Mercury	*0.05*	*0.05*	0.5	0.3	*0.05*	3	*0.05*	*0.05*	*0.05*	*0.05*	0.1	2	*0.05*	*0.05*
Molybdenum	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	*2.5*	7.2	15	10	6.1	8.4	5.1	14	7.4	7.2	5.1	10	9.6	5
Selenium	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Tin	*5*	*5*	1500	66	*5*	100	10	*5*	*5*	*5*	20	120	500	22
Zinc	7.9	55	1400	140	9.9	160	72	42	27	11	78	730	24	88
MISCELLANEOUS ANALYSES														
pH (units) (1:5 aqueous extract)	8.4	9.3	8.3	8.3	7.9	8.4	7.7	8.4	8.7	9.5	8.8	8.7	9	8.7
CYANIDE														
Cyanide (total)	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
MAH's AROMATIC VOLATILE ORGANICS														
Benzene	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.05*	*0.025*
Ethylbenzene	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.05*	*0.025*
Toluene	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
Xylenes(ortho.meta and para)	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
ORGANOCHLORINE PESTICIDES	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
Aldrin	0.19	1.2	0.44	*0.025*	*0.025*	*0.025*	0.520	*0.025*	*0.025*	*0.025*	0.23	*0.025*	*0.025*	0.39
Dieldrin	*0.025*	1.6	0.7	*0.025*	*0.025*	0.24	0.85	*0.025*	*0.025*	*0.025*	0.95	*0.025*	*0.025*	0.84
4 4'-DDD	*0.025*	<0.05	< 0.05	*0.025*	*0.025*	< 0.05	< 0.05	*0.025*	*0.025*	*0.025*	< 0.05	*0.025*	*0.025*	<0.05
4 4'-DDE	*0.025*	*0.025*	0.15	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
4 4'-DDT	*0.025*	*0.025*	0.11	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	0.53	*0.025*	0.46
b-BHC	*0.025*	*0.025*	1.1	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
Endrin ketone	*0.025*	0.05	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
POLYNUCLEAR AROMATIC HYDROCARBONS														
Acenaphthene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Acenaphthylene	*0.05*	*0.05*	0.2	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.1
Anthracene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.3
Benz(a)anthracene	*0.05*	*0.05*	1.2	*0.05*	*0.05*	0.3	0.2	*0.05*	*0.05*	*0.05*	*0.05*	0.5	*0.05*	0.6
Benzo(a)pyrene	*0.05*	*0.05*	1.4	*0.05*	*0.05*	0.4	0.2	*0.05*	*0.05*	*0.05*	*0.05*	0.5	*0.05*	0.5
Benzo(b)fluoranthene	*0.05*	*0.05*	1.2	*0.05*	*0.05*	0.3	0.2	*0.05*	*0.05*	*0.05*	*0.05*	0.4	*0.05*	0.4
Benzo(g.h.i)perylene	*0.05*	*0.05*	1	*0.05*	*0.05*	0.3	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.4	*0.05*	0.4
Benzo(k)fluoranthene	*0.05*	*0.05*	1.2	*0.05*	*0.05*	0.3	0.1	*0.05*	*0.05*	*0.05*	*0.05*	0.4	*0.05*	0.4
Chrysene	*0.05*	*0.05*	1	*0.05*	*0.05*	0.3	0.2	*0.05*	*0.05*	*0.05*	*0.05*	0.4	*0.05*	0.5
Dibenz(a.h)anthracene	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Fluoranthene	*0.05*	0.2	1.7	*0.05*	*0.05*	0.4	0.2	*0.05*	*0.05*	*0.05*	*0.05*	0.7	*0.05*	1.1
Fluorene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Indeno(1.2.3-cd)pyrene	*0.05*	*0.05*	0.8	*0.05*	*0.05*	0.2	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.3	*0.05*	0.4
Naphthalene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.1
Phenanthrene	*0.05*	*0.05*	0.6	*0.05*	*0.05*	0.1	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.3	*0.05*	1.1
Pyrene	*0.05*	0.2	1.7	*0.05*	*0.05*	0.4	0.3	*0.05*	*0.05*	*0.05*	*0.05*	0.8	*0.05*	1
Total PAH	0.8	1.1	12.3	0.8	0.8	3.3	1.85	0.8	0.8	0.8	0.8	5	0.8	7.05
POLYCHLORINATED BIPHENYLS (PCB's)	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
PHENOLS & CRESOLS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
TOTAL RECOVERABLE HYDROCARBONS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
T.R.H. C15-C28 Fraction by GC	*50*	*50*	*50*	*50*	*50*	130	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*
T.R.H. C29-C36 Fraction by GC	*50*	*50*	*50*	*50*	*50*	400	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*
Total T.R.H	*85*	*85*	*85*	*85*	*85*	565	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*
All concentrations are mg/L unless otherwise state														
* Guidelines for Assessing Service Station Sites - I														
<LOR indicates all analytes in the category were b														
<LOR indicates some analytes in the category wer														
Numbers in italics represent values which were les														

Sample Number / Fill/Natural / Laboratory Number	STATISTICS					CRITERIA			
						PAC	Southern Waste Depot		
							WF	ILC	LLCW
	Count	Max	Mean	Std Dev	95% UCL				
CHLORINATED HYDROCARBONS									
HEAVY METALS									
Antimony	33	190	10.6	32.2	21.6				
Arsenic	33	130	17.2	31.0	27.8	400	20	200	750
Beryllium						80	20	40	150
Cadmium	33	2.1	0.4	0.4	0.5	80	3	30	60
Chromium	33	430	29.6	72.6	54.3	400	400	12%	30%
Cobalt	33	11	3.9	2.3	4.6	400	170	170	1000
Copper	33	450	39.2	81.0	66.8	4000	60	2000	7500
Lead	33	1700	179.2	340.9	295.5	1200	300	1200	5000
Mercury	33	3	0.4	0.7	0.6	60	1	30	110
Molybdenum									
Nickel	33	21	8.1	4.7	9.7	2400	60	600	3000
Selenium	33	1	1.0	0.0	#NUM!				
Tin	33	1500	82.5	269.5	174.5				
Zinc	33	1400	186.2	323.9	296.7	28000	200	14000	50000
MISCELLANEOUS ANALYSES									
pH (units) (1:5 aqueous extract)	33	9.5							
CYANIDE									
Cyanide (total)						1000	500	1000	3500
MAH's AROMATIC VOLATILE ORGANICS									
Benzene	33	0.06	0.0	0.0	0.0	1*	1	5	15
Ethylbenzene	33	0.05	0.0	0.0	0.0	50*	3.1	100	1000
Toluene	33	0.12	0.0	0.0	0.0	130*	1.4	50	500
Xylenes(ortho.meta and para)	33	0.12	0.0	0.0	0.0	25*	14	180	1800
ORGANOCHLORINE PESTICIDES									
Aldrin	33	2.2	0.2	0.5	0.4	40	2	2	50
Dieldrin	33	1.7	0.2	0.5	0.4				
4 4'-DDD	23	0.025	0.0	0.0	0.0	800			
4 4'-DDE	33	0.15	0.0	0.0	0.0				
4 4'-DDT	33	0.53	0.1	0.1	0.1		2	2	50
b-BHC	33	1.1	0.1	0.2	0.1				
Endrin ketone	33	0.05	0.0	0.0	0.0				
POLYNUCLEAR AROMATIC HYDROCARBONS									
Acenaphthene	33	0.05	0.1	0.0	0.1				
Acenaphthylene	33	0.2	0.1	0.0	0.1				
Anthracene	33	0.3	0.1	0.1	0.1				
Benz(a)anthracene	33	1.2	0.2	0.3	0.3				
Benzo(a)pyrene	33	1.5	0.2	0.4	0.4	4	1	2	5
Benzo(b)fluoranthene	33	1.2	0.2	0.3	0.3				
Benzo(g.h.i)perylene	33	1.3	0.2	0.4	0.3				
Benzo(k)fluoranthene	33	1.3	0.2	0.4	0.4				
Chrysene	33	1.3	0.2	0.3	0.3				
Dibenz(a.h)anthracene	33	0.3	0.1	0.1	0.1				
Fluoranthene	33	2.1	0.4	0.6	0.6				
Fluorene	33	0.05	0.1	0.0	0.1				
Indeno(1.2.3-cd)pyrene	33	0.9	0.2	0.2	0.2				
Naphthalene	33	0.1	0.1	0.0	0.1				
Phenanthrene	33	1.3	0.2	0.3	0.3				
Pyrene	33	1.8	0.4	0.6	0.6				
Total PAH	33	12.75	2.9	3.8	4.2	80	5	40	200
POLYCHLORINATED BIPHENYLS (PCB's)									
PHENOLS & CRESOLS									
TOTAL RECOVERABLE HYDROCARBONS									
T.R.H. C15-C28 Fraction by GC	33	130	52.4	13.9	57.2				
T.R.H. C29-C36 Fraction by GC	33	400	60.6	60.9	81.4				
Total T.R.H	33	565	99.5	83.6	128.1	1000*			
All concentrations are mg/L unless otherwise state									
* Guidelines for Assessing Service Station Sites - I									
<LOR indicates all analytes in the category were b									
<LOR indicates some analytes in the category wer									
Numbers in italics represent values which were les									

Sample Number	BUS 27-A	BUS 27-B	BUS 29-A	BUS 29-B	BUS 30-A	BUS 30-B	BUS 31-A	BUS 32-A	BUS 32-B	BUS 33-A	BUS 34-A	BUS 34-B	BUS 35-A	BUS 35-B	BUS 36-A	BUS 37-A	BUS 40-A	BUS 40-B	BUS 41-A
Fill/Natural	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill
Laboratory Number	05-MY01722	05-MY01723	05-MY01727	05-MY01728	05-MY01729	05-MY01730	05-MY01732	05-MY01733	05-MY01734	05-MY01736	05-MY01737	05-MY01738	05-MY01741	05-MY01742	05-MY01744	05-MY01745	05-MY01746	05-MY01747	05-MY01749
CHLORINATED HYDROCARBONS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
HEAVY METALS																			
Antimony	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	190	*5*	*5*
Arsenic	*1*	6.9	15	4.8	3.4	7.3	93	6.7	*1*	3.9	6.1	*1*	13	3.8	14	57	15	7.9	10
Beryllium	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Cadmium	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	0.9	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	2.1	*0.25*	0.8
Chromium	*2.5*	17	9.4	22	14	19	11	10	14	10	11	17	13	13	7.1	16	430	22	13
Cobalt	*2.5*	*2.5*	5.4	6.2	11	*2.5*	8.4	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	5.1	*2.5*
Copper	*2.5*	46	20	13	17	65	27	9.4	10	14	7.4	8.6	*2.5*	26	*2.5*	12	450	51	160
Lead	*2.5*	320	67	54	52	350	150	58	110	180	30	160	*2.5*	130	*2.5*	46	1700	89	480
Mercury	*0.05*	2	0.2	*0.05*	0.1	1.4	0.1	*0.05*	0.1	0.1	*0.05*	0.1	*0.05*	0.7	*0.05*	*0.05*	0.5	0.3	3
Molybdenum	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	*2.5*	6.4	16	9.5	7	7.4	5.5	*2.5*	5.7	*2.5*	*2.5*	6.4	*2.5*	5.5	*2.5*	7.2	15	10	8.4
Selenium	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Tin	*5*	100	*5*	*5*	12	67	17	*5*	*5*	52	*5*	11	*5*	32	*5*	*5*	1500	66	100
Zinc	*2.5*	470	53	17	120	750	940	89	110	56	56	18	6	470	7.9	55	1400	140	160
MISCELLANEOUS ANALYSES																			
pH (units) (1:5 aqueous extract)	8.9	8.8	8.2	9.1	8.2	8.9	8.6	8.6	8.8	8.7	8.8	8.7	8.7	8.6	8.4	9.3	8.3	8.3	8.4
CYANIDE																			
Cyanide (total)	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
MAH's AROMATIC VOLATILE ORGANICS																			
Benzene	*0.025*	*0.025*	*0.025*	0.06	0.05	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
Ethylbenzene	*0.025*	*0.025*	*0.025*	*0.025*	0.05	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
Toluene	*0.025*	*0.025*	*0.025*	0.09	0.12	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
Xylenes(ortho.meta and para)	*0.025*	*0.025*	*0.025*	0.1	0.12	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
ORGANOCHLORINE PESTICIDES	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
Aldrin	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	2.2	*0.025*	2.1	0.11	*0.025*	0.05	*0.025*	0.19	1.2	0.44	*0.025*	*0.025*
Dieldrin	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	0.17	*0.025*	1.7	0.48	*0.025*	0.07	*0.025*	*0.025*	1.6	0.7	*0.025*	0.24
4 4'-DDD	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	< 0.05	*0.025*	< 0.05	< 0.05	*0.025*	< 0.05	*0.025*	*0.025*	<0.05	< 0.05	*0.025*	< 0.05
4 4'-DDE	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	0.05	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	0.15	*0.025*	*0.025*
4 4'-DDT	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	0.07	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	0.11	*0.025*	*0.025*
b-BHC	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	1.1	*0.025*	*0.025*
Endrin ketone	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	0.05	*0.025*	*0.025*	*0.025*
POLYNUCLEAR AROMATIC HYDROCARBONS																			
Acenaphthene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Acenaphthylene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.2	0.2	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.2	*0.05*	*0.05*
Anthracene	*0.05*	0.2	*0.05*	*0.05*	*0.05*	*0.05*	0.1	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Benz(a)anthracene	*0.05*	1	*0.05*	*0.05*	0.3	0.9	1	*0.05*	*0.05*	0.1	*0.05*	*0.05*	*0.05*	0.5	*0.05*	*0.05*	1.2	*0.05*	0.3
Benzo(a)pyrene	*0.05*	0.7	*0.05*	*0.05*	0.1	1.5	1.3	0.1	*0.05*	0.2	*0.05*	*0.05*	*0.05*	0.2	*0.05*	*0.05*	1.4	*0.05*	0.4
Benzo(b)fluoranthene	*0.05*	0.8	*0.05*	*0.05*	0.3	1.1	1.2	*0.05*	*0.05*	0.2	*0.05*	*0.05*	*0.05*	0.4	*0.05*	*0.05*	1.2	*0.05*	0.3
Benzo(g.h.i)perylene	*0.05*	0.8	*0.05*	*0.05*	0.4	1.3	1.3	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.3	*0.05*	*0.05*	1	*0.05*	0.3
Benzo(k)fluoranthene	*0.05*	0.9	*0.05*	*0.05*	0.6	1.1	1.3	*0.05*	*0.05*	0.2	*0.05*	*0.05*	*0.05*	0.4	*0.05*	*0.05*	1.2	*0.05*	0.3
Chrysene	*0.05*	1.3	*0.05*	*0.05*	0.4	0.9	1	0.1	*0.05*	0.1	*0.05*	*0.05*	*0.05*	0.4	*0.05*	*0.05*	1	*0.05*	0.3
Dibenz(a.h)anthracene	*0.05*	0.2	*0.05*	*0.05*	*0.05*	0.2	0.3	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.1*	*0.05*	*0.05*
Fluoranthene	*0.05*	2.1	*0.05*	*0.05*	0.6	1.7	1.8	0.2	*0.05*	0.2	*0.05*	*0.05*	*0.05*	0.7	*0.05*	0.2	1.7	*0.05*	0.4
Fluorene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Indeno(1.2.3-cd)pyrene	*0.05*	0.6	*0.05*	*0.05*	0.2	0.6	0.9	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.2	*0.05*	*0.05*	0.8	*0.05*	0.2
Naphthalene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Phenanthrene	*0.05*	1.3	*0.05*	*0.05*	0.1	0.5	0.5	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.2	*0.05*	*0.05*	0.6	*0.05*	0.1
Pyrene	*0.05*	1.8	*0.05*	*0.05*	0.8	1.5	1.7	0.2	*0.05*	0.3	*0.05*	*0.05*	*0.05*	0.7	*0.05*	0.2	1.7	*0.05*	0.4
Total PAH	0.8	11.9	0.8	0.8	4.1	11.7	12.75	1.2	0.8	1.75	0.8	0.8	0.8	4.3	0.8	1.1	12.3	0.8	3.3
POLYCHLORINATED BIPHENYLS (PCB's)	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
PHENOLS & CRESOLS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
TOTAL RECOVERABLE HYDROCARBONS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
T.R.H. C15-C28 Fraction by GC	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	130
T.R.H. C29-C36 Fraction by GC	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*	400
Total T.R.H	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*	565

All concentrations are mg/L unless otherwise stated

* Guidelines for Assessing Service Station Sites - NSW EPA

<LOR indicates all analytes in the category were below the limit of detection, and so not shown

<LOR indicates some analytes in the category were below the limit of detection, and so not shown

Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Sample Number	BUS 42-A	BUS 43-A	BUS 43-B	BUS 44-A	BUS 44-B	BUS 44-C	BUS 45-A
Fill/Natural	Fill	Fill	Fill	Fill	Fill	Natural	Fill
Laboratory Number	05-MY01750	05-MY01751	05-MY01752	05-MY01754	05-MY01755	05-MY01756	05-MY01757
CHLORINATED HYDROCARBONS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
HEAVY METALS							
Antimony	*5*	*5*	*5*	*5*	*5*	*5*	*5*
Arsenic	7.8	130	99	5.9	17	11	7.6
Beryllium	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Cadmium	*0.25*	*0.25*	*0.25*	*0.25*	1.1	*0.25*	*0.25*
Chromium	7.7	33	16	10	18	33	8.7
Cobalt	*2.5*	7	*2.5*	*2.5*	*2.5*	5.8	*2.5*
Copper	60	17	9.8	18	120	14	15
Lead	54	16	15	79	800	800	83
Mercury	*0.05*	*0.05*	*0.05*	0.1	2	*0.05*	*0.05*
Molybdenum	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	5.1	14	7.4	5.1	10	9.6	5
Selenium	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Tin	10	*5*	*5*	20	120	500	22
Zinc	72	42	27	78	730	24	88
MISCELLANEOUS ANALYSES							
pH (units) (1:5 aqueous extract)	7.7	8.4	8.7	8.8	8.7	9	8.7
CYANIDE							
Cyanide (total)	< 5	< 5	< 5	< 5	< 5	< 5	< 5
MAH's AROMATIC VOLATILE ORGANICS							
Benzene	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.05*	*0.025*
Ethylbenzene	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.05*	*0.025*
Toluene	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
Xylenes(ortho.meta and para)	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
ORGANOCHLORINE PESTICIDES	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
Aldrin	0.520	*0.025*	*0.025*	0.23	*0.025*	*0.025*	0.39
Dieldrin	0.85	*0.025*	*0.025*	0.95	*0.025*	*0.025*	0.84
4 4'-DDD	< 0.05	*0.025*	*0.025*	< 0.05	*0.025*	*0.025*	<0.05
4 4'-DDE	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
4 4'-DDT	*0.025*	*0.025*	*0.025*	*0.025*	0.53	*0.025*	0.46
b-BHC	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
Endrin ketone	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
POLYNUCLEAR AROMATIC HYDROCARBONS							
Acenaphthene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Acenaphthylene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.1
Anthracene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.3
Benz(a)anthracene	0.2	*0.05*	*0.05*	*0.05*	0.5	*0.05*	0.6
Benzo(a)pyrene	0.2	*0.05*	*0.05*	*0.05*	0.5	*0.05*	0.5
Benzo(b)fluoranthene	0.2	*0.05*	*0.05*	*0.05*	0.4	*0.05*	0.4
Benzo(g.h.i)perylene	*0.05*	*0.05*	*0.05*	*0.05*	0.4	*0.05*	0.4
Benzo(k)fluoranthene	0.1	*0.05*	*0.05*	*0.05*	0.4	*0.05*	0.4
Chrysene	0.2	*0.05*	*0.05*	*0.05*	0.4	*0.05*	0.5
Dibenz(a.h)anthracene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Fluoranthene	0.2	*0.05*	*0.05*	*0.05*	0.7	*0.05*	1.1
Fluorene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Indeno(1.2.3-cd)pyrene	*0.05*	*0.05*	*0.05*	*0.05*	0.3	*0.05*	0.4
Naphthalene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	0.1
Phenanthrene	*0.05*	*0.05*	*0.05*	*0.05*	0.3	*0.05*	1.1
Pyrene	0.3	*0.05*	*0.05*	*0.05*	0.8	*0.05*	1
Total PAH	1.85	0.8	0.8	0.8	5	0.8	7.05
POLYCHLORINATED BIPHENYLS (PCB's)	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
PHENOLS & CRESOLS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
TOTAL RECOVERABLE HYDROCARBONS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
T.R.H. C15-C28 Fraction by GC	*50*	*50*	*50*	*50*	*50*	*50*	*50*
T.R.H. C29-C36 Fraction by GC	*50*	*50*	*50*	*50*	*50*	*50*	*50*
Total T.R.H	*85*	*85*	*85*	*85*	*85*	*85*	*85*
All concentrations are mg/L unless otherwise state							
* Guidelines for Assessing Service Station Sites - I							
<LOR indicates all analytes in the category were b							
<LOR indicates some analytes in the category wer							
Numbers in italics represent values which were les							

Sample Number / Fill/Natural / Laboratory Number	STATISTICS					CRITERIA			
						PAC	Southern Waste Depot		
							WF	ILC	LLCW
	Count	Max	Mean	Std Dev	95% UCL				
CHLORINATED HYDROCARBONS									
HEAVY METALS									
Antimony	26	190	12.1	36.3	26.1				
Arsenic	26	130	21.1	33.9	34.2	400	20	200	750
Beryllium						80	20	40	150
Cadmium	26	2.1	0.4	0.4	0.6	80	3	30	60
Chromium	26	430	30.7	81.8	62.1	400	400	12%	30%
Cobalt	26	11	3.7	2.3	4.6	400	170	170	1000
Copper	26	450	46.1	90.3	80.8	4000	60	2000	7500
Lead	26	1700	224.3	372.5	367.4	1200	300	1200	5000
Mercury	26	3	0.4	0.8	0.7	60	1	30	110
Molybdenum									
Nickel	26	16	7.0	3.8	8.4	2400	60	600	3000
Selenium	26	1	1.0	0.0					
Tin	26	1500	103.2	301.4	219.1				
Zinc	26	1400	230.1	353.2	365.8	28000	200	14000	50000
MISCELLANEOUS ANALYSES									
pH (units) (1:5 aqueous extract)	26	9.3							
CYANIDE									
Cyanide (total)						1000	500	1000	3500
MAH's AROMATIC VOLATILE ORGANICS									
Benzene	26	0.06	0.0	0.0	0.0	1*	1	5	15
Ethylbenzene	26	0.05	0.0	0.0	0.0	50*	3.1	100	1000
Toluene	26	0.12	0.0	0.0	0.0	130*	1.4	50	500
Xylenes(ortho.meta and para)	26	0.12	0.0	0.0	0.0	25*	14	180	1800
ORGANOCHLORINE PESTICIDES									
Aldrin	26	2.2	0.3	0.6	0.5	40	2	2	50
Dieldrin	26	1.7	0.3	0.5	0.5				
4 4'-DDD	16	0.025	0.0	0.0	0.0	800			
4 4'-DDE	26	0.15	0.0	0.0	0.0				
4 4'-DDT	26	0.53	0.1	0.1	0.1		2	2	50
b-BHC	26	1.1	0.1	0.2	0.1				
Endrin ketone	26	0.05	0.0	0.0	0.0				
POLYNUCLEAR AROMATIC HYDROCARBONS									
Acenaphthene	26	0.05	0.1	0.0	0.1				
Acenaphthylene	26	0.2	0.1	0.0	0.1				
Anthracene	26	0.3	0.1	0.1	0.1				
Benz(a)anthracene	26	1.2	0.3	0.4	0.4				
Benzo(a)pyrene	26	1.5	0.3	0.4	0.5	4	1	2	5
Benzo(b)fluoranthene	26	1.2	0.3	0.4	0.4				
Benzo(g.h.i)perylene	26	1.3	0.3	0.4	0.4				
Benzo(k)fluoranthene	26	1.3	0.3	0.4	0.4				
Chrysene	26	1.3	0.3	0.4	0.4				
Dibenz(a.h)anthracene	26	0.3	0.1	0.1	0.1				
Fluoranthene	26	2.1	0.5	0.6	0.7				
Fluorene	26	0.05	0.1	0.0	0.1				
Indeno(1.2.3-cd)pyrene	26	0.9	0.2	0.3	0.3				
Naphthalene	26	0.1	0.1	0.0	0.1				
Phenanthrene	26	1.3	0.2	0.3	0.3				
Pyrene	26	1.8	0.5	0.6	0.7				
Total PAH	26	12.75	3.4	4.1	5.0	80	5	40	200
POLYCHLORINATED BIPHENYLS (PCB's)									
PHENOLS & CRESOLS									
TOTAL RECOVERABLE HYDROCARBONS									
T.R.H. C15-C28 Fraction by GC	26	130	53.1	15.7	59.1				
T.R.H. C29-C36 Fraction by GC	26	400	63.5	68.6	89.8				
Total T.R.H	26	565	103.5	94.1	139.6	1000*			
All concentrations are mg/L unless otherwise state									
* Guidelines for Assessing Service Station Sites - I									
<LOR indicates all analytes in the category were b									
<LOR indicates some analytes in the category wer									
Numbers in italics represent values which were les									

Sample Number	BUS 27-C	BUS 30-C	BUS 32-C	BUS 34-C	BUS 35-C	BUS 40-C	BUS 43-C	BUS 44-C
Fill/Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural
Laboratory Number	05-MY01724	05-MY01731	05-MY01735	05-MY01739	05-MY01743	05-MY01748	05-MY01753	05-MY01756
CHLORINATED HYDROCARBONS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
HEAVY METALS								
Antimony	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*
Arsenic	*1*	6.3	7	*1*	*1*	*1*	*1*	11
Beryllium	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Cadmium	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*
Chromium	26	37	34	12	47	10	13	33
Cobalt	*2.5*	8.2	6.3	*2.5*	6.4	*2.5*	*2.5*	5.8
Copper	15	18	14	8.4	27	7.5	6.3	14
Lead	7.8	17	13	*2.5*	35	*2.5*	5	800
Mercury	*0.05*	*0.05*	*0.05*	*0.05*	0.1	*0.05*	*0.05*	*0.05*
Molybdenum	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	13	17	14	6.9	21	6.1	7.2	9.6
Selenium	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*
Tin	*5*	*5*	*5*	*5*	10	*5*	*5*	500
Zinc	20	30	25	8.9	59	9.9	11	24
MISCELLANEOUS ANALYSES								
pH (units) (1:5 aqueous extract)	8.6	8.9	8	8.7	7.9	7.9	9.5	9
CYANIDE								
Cyanide (total)	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
MAH's AROMATIC VOLATILE ORGANICS								
Benzene	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.05*
Ethylbenzene	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.05*
Toluene	*0.025*	*0.05*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
Xylenes(ortho.meta and para)	*0.025*	*0.05*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
ORGANOCHLORINE PESTICIDES	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
Aldrin	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
Dieldrin	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
4 4'-DDD	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
4 4'-DDE	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
4 4'-DDT	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
b-BHC	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
Endrin ketone	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*	*0.025*
POLYNUCLEAR AROMATIC HYDROCARBONS								
Acenaphthene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Acenaphthylene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Anthracene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Benz(a)anthracene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Benzo(a)pyrene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Benzo(b)fluoranthene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Benzo(g.h.i)perylene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Benzo(k)fluoranthene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Chrysene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Dibenz(a.h)anthracene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Fluoranthene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Fluorene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Indeno(1.2.3-cd)pyrene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Naphthalene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Phenanthrene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Pyrene	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Total PAH	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
POLYCHLORINATED BIPHENYLS (PCB's)	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
PHENOLS & CRESOLS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
TOTAL RECOVERABLE HYDROCARBONS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR
T.R.H. C15-C28 Fraction by GC	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*
T.R.H. C29-C36 Fraction by GC	*50*	*50*	*50*	*50*	*50*	*50*	*50*	*50*
Total T.R.H	*85*	*85*	*85*	*85*	*85*	*85*	*85*	*85*
All concentrations are mg/L unless otherwise stated								
* Guidelines for Assessing Service Station Sites - NSW EPA								
<LOR indicates all analytes in the category were below the limit of detection, and so not shown								
<LOR indicates some analytes in the category were below the limit of detection, and so not shown								
Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics								

Sample Number	STATISTICS					CRITERIA			
Fill/Natural						PAC	Southern Waste Depot		
Laboratory Number							WF	ILC	LLCW
	Count	Max	Mean	Std Dev	95% UCL				
CHLORINATED HYDROCARBONS									
HEAVY METALS									
Antimony	8								
Arsenic	8	11	3.7	3.9	6.4	400	20	200	750
Beryllium						80	20	40	150
Cadmium	8					80	3	30	60
Chromium	8	47	26.5	13.6	35.9	400	400	12%	30%
Cobalt	8	8.2	4.6	2.3	6.2	400	170	170	1000
Copper	8	27	13.8	6.7	18.4	4000	60	2000	7500
Lead	8	800	110.4	278.9	303.6	1200	300	1200	5000
Mercury	8	0.1	0.1	0.0	0.1	60	1	30	110
Molybdenum									
Nickel	8	21	11.9	5.4	15.6	2400	60	600	3000
Selenium	8								
Tin	8	500	67.5	174.8	188.6				
Zinc	8	59	23.5	16.4	34.8	28000	200	14000	50000
MISCELLANEOUS ANALYSES									
pH (units) (1:5 aqueous extract)	8	9.5							
CYANIDE									
Cyanide (total)						1000	500	1000	3500
MAH's AROMATIC VOLATILE ORGANICS									
Benzene	8					1*	1	5	15
Ethylbenzene	8					50*	3.1	100	1000
Toluene	8					130*	1.4	50	500
Xylenes(ortho.meta and para)	8					25*	14	180	1800
ORGANOCHLORINE PESTICIDES									
Aldrin	8					40	2	2	50
Dieldrin	8								
4 4'-DDD	8					800			
4 4'-DDE	8								
4 4'-DDT	8						2	2	50
b-BHC	8								
Endrin ketone	8								
POLYNUCLEAR AROMATIC HYDROCARBONS									
Acenaphthene	8								
Acenaphthylene	8								
Anthracene	8								
Benz(a)anthracene	8								
Benzo(a)pyrene	8					4	1	2	5
Benzo(b)fluoranthene	8								
Benzo(g.h.i)perylene	8								
Benzo(k)fluoranthene	8								
Chrysene	8								
Dibenz(a.h)anthracene	8								
Fluoranthene	8								
Fluorene	8								
Indeno(1.2.3-cd)pyrene	8								
Naphthalene	8								
Phenanthrene	8								
Pyrene	8								
Total PAH	8					80	5	40	200
POLYCHLORINATED BIPHENYLS (PCB's)									
PHENOLS & CRESOLS									
TOTAL RECOVERABLE HYDROCARBONS									
T.R.H. C15-C28 Fraction by GC	8								
T.R.H. C29-C36 Fraction by GC	8								
Total T.R.H	8					1000*			
All concentrations are mg/L unless otherwise state									
* Guidelines for Assessing Service Station Sites - I									
<LOR indicates all analytes in the category were b									
<LOR indicates some analytes in the category wer									
Numbers in italics represent values which were les									

Sample Number	BUS 22-A	BUS 22-B	BUS 22-C	BUS 23-A	BUS 24-A	BUS 24-B	BUS 24-C	BUS 25-A	BUS 26-A	BUS 26-B	BUS 26-C	BUS 28-A	**STATISTICS**					**CRITERIA**			
Fill/Natural	Fill	Fill	Natural	Fill	Fill	Fill	Natural	Fill	Fill	Fill	Natural	Fill						**PAC**	**Southern Waste Depot**		
Laboratory Number	05-MY01710	05-MY01711	05-MY01712	05-MY01714	05-MY01715	05-MY01716	05-MY01717	05-MY01718	05-MY01719	05-MY01720	05-MY01721	05-MY01726							WF	ILC	LLCW
HEAVY METALS																					
Antimony	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	12	5	5.0	0.0					
Arsenic	*1*	3.3	*1*	*1*	*1*	5.4	*1*	*1.5*	*1*	8.7	*1*	*1*	12	8.7	2.2	2.4	3.6	400	20	200	750
Beryllium	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2						80	20	40	150
Cadmium	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	12	0.25	0.3	0.0		80	3	30	60
Chromium	*2.5*	14	10	*2.5*	*2.5*	19	15	*2.5*	*2.5*	24	14	*2.5*	12	24	9.3	7.8	13.6	400	400	12%	30%
Cobalt	*2.5*	*2.5*	*2.5*	*2.5*	*2.5*	8.9	*2.5*	*2.5*	*2.5*	5.5	*2.5*	*2.5*	12	8.9	3.3	2.0	4.4	400	170	170	1000
Copper	*2.5*	30	7	*2.5*	6.2	400	8.6	*2.5*	*2.5*	38	8.6	*2.5*	12	400	42.6	113.2	106.6	4000	60	2000	7500
Lead	5.1	56	*2.5*	*2.5*	13	550	5.7	*2.5*	*2.5*	180	6.4	*2.5*	12	550	69.1	159.9	159.5	1200	300	1200	5000
Mercury	*0.05*	0.2	*0.05*	*0.05*	*0.05*	0.3	*0.05*	*0.05*	*0.05*	0.3	*0.05*	*0.05*	12	0.3	0.1	0.1	0.2	60	1	30	110
Molybdenum	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10									
Nickel	*2.5*	8.5	6.4	*2.5*	*2.5*	8	8.3	*2.5*	*2.5*	11	8.3	*2.5*	12	11	5.5	3.2	7.3	2400	60	600	3000
Selenium	*1*	2.2	*1*	*1*	*1*	3.7	2.8	*1*	*1*	*1*	*1*	*1*	12	3.7	1.5	0.9	2.0				
Tin	*5*	10	*5*	*5*	*5*	10	*5*	*5*	*5*	23	*5*	*5*	12	23	7.3	5.3	10.3				
Zinc	10	210	7.7	9.2	22	940	15	5.4	7.3	170	15	7.6	12	940	118.3	268.0	269.9	28000	200	14000	50000
POLYNUCLEAR AROMATIC HYDROCARBONS																					
Acenaphthene	*0.05*	3.2	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	12	3.2	0.3	0.9	0.8				
Acenaphthylene	*0.05*	*0.25*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	12	0.25	0.1	0.1	0.1				
Anthracene	*0.05*	6.8	*0.05*	*0.05*	*0.05*	0.1	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	12	6.8	0.6	1.9	1.7				
Benz(a)anthracene	*0.05*	13	*0.05*	*0.05*	*0.05*	0.9	*0.05*	*0.05*	*0.05*	0.1	*0.05*	*0.05*	12	13	1.2	3.7	3.3				
Benzo(a)pyrene	*0.05*	11	*0.05*	*0.05*	*0.05*	1.2	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	12	11	1.1	3.1	2.8	4	1	2	5
Benzo(b)fluoranthene	*0.05*	9.3	*0.05*	*0.05*	*0.05*	1.2	*0.05*	*0.05*	*0.05*	0.1	*0.05*	*0.05*	12	9.3	0.9	2.7	2.4				
Benzo(g.h.i)perylene	*0.05*	6.8	*0.05*	*0.05*	*0.05*	0.6	*0.05*	*0.05*	*0.05*	0.2	*0.05*	*0.05*	12	6.8	0.7	1.9	1.8				
Benzo(k)fluoranthene	*0.05*	13	*0.05*	*0.05*	*0.05*	0.9	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	12	13	1.2	3.7	3.3				
Chrysene	*0.05*	10	*0.05*	*0.05*	*0.05*	0.9	*0.05*	*0.05*	*0.05*	0.2	*0.05*	*0.05*	12	10	1.0	2.9	2.6				
Dibenz(a.h)anthracene	*0.05*	*0.25*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	12	0.25	0.1	0.1	0.1				
Fluoranthene	*0.05*	29	*0.05*	*0.05*	*0.05*	1.6	*0.05*	*0.05*	*0.05*	0.2	*0.05*	*0.05*	12	29	2.6	8.3	7.3				
Fluorene	*0.05*	2.8	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	12	2.8	0.3	0.8	0.7				
Indeno(1.2.3-cd)pyrene	*0.05*	5.5	*0.05*	*0.05*	*0.05*	0.6	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	12	5.5	0.6	1.6	1.4				
Naphthalene	*0.05*	0.6	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	12	0.6	0.1	0.2	0.2				
Phenanthrene	*0.05*	28	*0.05*	*0.05*	*0.05*	0.6	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	12	28	2.4	8.1	7.0				
Pyrene	*0.05*	25	*0.05*	*0.05*	*0.05*	1.6	*0.05*	*0.05*	*0.05*	0.3	*0.05*	*0.05*	12	25	2.3	7.2	6.3				
Total PAH	0.8	164.5	0.8	0.8	0.8	10.45	0.8	0.8	0.8	1.6	0.8	0.8	12	164.5	15.3	47.1	41.9	80	5	40	200
All concentrations are mg/L unless otherwise stated																					
<LOR indicates all analytes in the category were below the limit of detection, and so not shown																					
<LOR indicates some analytes in the category were below the limit of detection, and so not shown																					
Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics																					

Sample Number	BUS 22-A	BUS 22-B	BUS 23-A	BUS 24-A	BUS 24-B	BUS 25-A	BUS 26-A	BUS 26-B	BUS 28-A	STATISTICS					CRITERIA			
Fill/Natural	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill						PAC	Southern Waste Depot		
Laboratory Number	05-MY01710	05-MY01711	05-MY01714	05-MY01715	05-MY01716	05-MY01718	05-MY01719	05-MY01720	05-MY01726							WF	ILC	LLCW
HEAVY METALS																		
Antimony	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	9	5	5.0	0.0					
Arsenic	*1*	3.3	*1*	*1*	5.4	*1.5*	*1*	8.7	*1*	9	8.7	2.7	2.7	4.4	400	20	200	750
Beryllium	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2						80	20	40	150
Cadmium	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	9	0.25	0.3	0.0		80	3	30	60
Chromium	*2.5*	14	*2.5*	*2.5*	19	*2.5*	*2.5*	24	*2.5*	9	24	8.0	8.6	13.6	400	400	12%	30%
Cobalt	*2.5*	*2.5*	*2.5*	*2.5*	8.9	*2.5*	*2.5*	5.5	*2.5*	9	8.9	3.5	2.2	5.0	400	170	170	1000
Copper	*2.5*	30	*2.5*	6.2	400	*2.5*	*2.5*	38	*2.5*	9	400	54.1	130.4	139.3	4000	60	2000	7500
Lead	5.1	56	*2.5*	13	550	*2.5*	*2.5*	180	*2.5*	9	550	90.5	181.9	209.3	1200	300	1200	5000
Mercury	*0.05*	0.2	*0.05*	*0.05*	0.3	*0.05*	*0.05*	0.3	*0.05*	9	0.3	0.1	0.1	0.2	60	1	30	110
Molybdenum	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10									
Nickel	*2.5*	8.5	*2.5*	*2.5*	8	*2.5*	*2.5*	11	*2.5*	9	11	4.7	3.4	7.0	2400	60	600	3000
Selenium	*1*	2.2	*1*	*1*	3.7	*1*	*1*	*1*	*1*	9	3.7	1.4	0.9	2.0				
Tin	*5*	10	*5*	*5*	10	*5*	*5*	23	*5*	9	23	8.1	6.0	12.0				
Zinc	10	210	9.2	22	940	5.4	7.3	170	7.6	9	940	153.5	305.2	352.9	28000	200	14000	50000
POLYNUCLEAR AROMATIC HYDROCARBONS																		
Acenaphthene	*0.05*	3.2	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	9	3.2	0.4	1.1	1.1				
Acenaphthylene	*0.05*	*0.25*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	9	0.25	0.1	0.1	0.1				
Anthracene	*0.05*	6.8	*0.05*	*0.05*	0.1	*0.05*	*0.05*	*0.05*	*0.05*	9	6.8	0.8	2.2	2.3				
Benz(a)anthracene	*0.05*	13	*0.05*	*0.05*	0.9	*0.05*	*0.05*	0.1	*0.05*	9	13	1.6	4.3	4.4				
Benzo(a)pyrene	*0.05*	11	*0.05*	*0.05*	1.2	*0.05*	*0.05*	*0.05*	*0.05*	9	11	1.4	3.6	3.8	4	1	2	5
Benzo(b)fluoranthene	*0.05*	9.3	*0.05*	*0.05*	1.2	*0.05*	*0.05*	0.1	*0.05*	9	9.3	1.2	3.1	3.2				
Benzo(g.h.i)perylene	*0.05*	6.8	*0.05*	*0.05*	0.6	*0.05*	*0.05*	0.2	*0.05*	9	6.8	0.9	2.2	2.3				
Benzo(k)fluoranthene	*0.05*	13	*0.05*	*0.05*	0.9	*0.05*	*0.05*	*0.05*	*0.05*	9	13	1.6	4.3	4.4				
Chrysene	*0.05*	10	*0.05*	*0.05*	0.9	*0.05*	*0.05*	0.2	*0.05*	9	10	1.3	3.3	3.4				
Dibenz(a.h)anthracene	*0.05*	*0.25*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	9	0.25	0.1	0.1	0.1				
Fluoranthene	*0.05*	29	*0.05*	*0.05*	1.6	*0.05*	*0.05*	0.2	*0.05*	9	29	3.5	9.6	9.7				
Fluorene	*0.05*	2.8	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	9	2.8	0.4	0.9	1.0				
Indeno(1.2.3-cd)pyrene	*0.05*	5.5	*0.05*	*0.05*	0.6	*0.05*	*0.05*	*0.05*	*0.05*	9	5.5	0.7	1.8	1.9				
Naphthalene	*0.05*	0.6	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	9	0.6	0.1	0.2	0.2				
Phenanthrene	*0.05*	28	*0.05*	*0.05*	0.6	*0.05*	*0.05*	*0.05*	*0.05*	9	28	3.2	9.3	9.3				
Pyrene	*0.05*	25	*0.05*	*0.05*	1.6	*0.05*	*0.05*	0.3	*0.05*	9	25	3.0	8.3	8.4				
Total PAH	0.8	164.5	0.8	0.8	10.45	0.8	0.8	1.6	0.8	9	164.5	20.2	54.2	55.6	80	5	40	200

All concentrations are mg/L unless otherwise stated

<LOR indicates all analytes in the category were below the limit of detection, and so not shown

<LOR indicates some analytes in the category were below the limit of detection, and so not shown

Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Sample Number	BUS 22-C	BUS 24-C	BUS 26-C	**STATISTICS**					**CRITERIA**			
Fill/Natural	Natural	Natural	Natural						**PAC**	**Southern Waste Depot**		
Laboratory Number	05-MY01712	05-MY01717	05-MY01721							WF	ILC	LLCW
HEAVY METALS												
Antimony	*5*	*5*	*5*	3								
Arsenic	*1*	*1*	*1*	3					400	20	200	750
Beryllium	< 2	< 2	< 2						80	20	40	150
Cadmium	*0.25*	*0.25*	*0.25*	3					80	3	30	60
Chromium	10	15	14	3	15	13.0	2.6	16.0	400	400	12%	30%
Cobalt	*2.5*	*2.5*	*2.5*	3					400	170	170	1000
Copper	7	8.6	8.6	3	8.6	8.1	0.9	9.1	4000	60	2000	7500
Lead	*2.5*	5.7	6.4	3	6.4	4.9	2.1	7.2	1200	300	1200	5000
Mercury	*0.05*	*0.05*	*0.05*	3					60	1	30	110
Molybdenum	< 10	< 10	< 10									
Nickel	6.4	8.3	8.3	3	8.3	7.7	1.1	8.9	2400	60	600	3000
Selenium	*1*	2.8	*1*	3	2.8	1.6	1.0	2.8				
Tin	*5*	*5*	*5*	3								
Zinc	7.7	15	15	3	15	12.6	4.2	17.3	28000	200	14000	50000
POLYNUCLEAR AROMATIC HYDROCARBONS												
Acenaphthene	*0.05*	*0.05*	*0.05*	3								
Acenaphthylene	*0.05*	*0.05*	*0.05*	3								
Anthracene	*0.05*	*0.05*	*0.05*	3								
Benz(a)anthracene	*0.05*	*0.05*	*0.05*	3								
Benzo(a)pyrene	*0.05*	*0.05*	*0.05*	3					4	1	2	5
Benzo(b)fluoranthene	*0.05*	*0.05*	*0.05*	3								
Benzo(g.h.i)perylene	*0.05*	*0.05*	*0.05*	3								
Benzo(k)fluoranthene	*0.05*	*0.05*	*0.05*	3								
Chrysene	*0.05*	*0.05*	*0.05*	3								
Dibenz(a.h)anthracene	*0.05*	*0.05*	*0.05*	3								
Fluoranthene	*0.05*	*0.05*	*0.05*	3								
Fluorene	*0.05*	*0.05*	*0.05*	3								
Indeno(1.2.3-cd)pyrene	*0.05*	*0.05*	*0.05*	3								
Naphthalene	*0.05*	*0.05*	*0.05*	3								
Phenanthrene	*0.05*	*0.05*	*0.05*	3								
Pyrene	*0.05*	*0.05*	*0.05*	3								
Total PAH	0.8	0.8	0.8	3					80	5	40	200
All concentrations are mg/L unless otherwise stated												
<LOR indicates all analytes in the category were below the limit of detection, and so not shown												
<LOR indicates some analytes in the category were below the limit of detection, and so not shown												
Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics												

Sample Number	BUS 22-B	BUS 24-A	BUS 24-B	BUS 24-C	BUS 26-B	BUS 30-A	BUS 40-A	BUS 44-B	**STATISTICS**					**Criteria**
Fill/Natural	Fill	Fill	Fill	Natural	Fill	Fill	Fill	Fill						**Typical Landfill**
Laboratory Number	05-MY01711	05-MY01715	05-MY01716	05-MY01717	05-MY01720	05-MY01729	05-MY01746	05-MY01755						ILC
									Count	Max	Mean	Std Dev	95% UCL	max leach mg/l
HEAVY METALS														
Antimony	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	8	0.005	0.01	0.00		
Arsenic	*0.005*	*0.005*	*0.005*	*0.005*	0.02	*0.005*	*0.005*	0.02	8	0.02	0.01	0.01	0.01	5
Beryllium	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	8	0.005	0.01	0.00		1
Cadmium	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	8	0.005	0.01	0.00		0.5
Chromium	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	0.02	*0.005*	8	0.02	0.01	0.01	0.01	
Cobalt	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	0.02	*0.005*	*0.005*	8	0.02	0.01	0.01	0.01	10
Copper	*0.005*	*0.005*	0.01	*0.005*	0.01	0.01	0.03	0.01	8	0.03	0.01	0.01	0.02	10
Lead	*0.005*	0.01	*0.005*	*0.005*	0.02	0.03	0.22	*0.005*	8	0.22	0.04	0.07	0.09	5
Molybdenum	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	8	0.005	0.01	0.00		
Nickel	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	8	0.005	0.01	0.00		2
Selenium	<0.02	*0.005*	*0.005*	<0.02	*0.005*	*0.005*	*0.005*	*0.005*	6	0.005	0.01	0.00		
Tin	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	*0.25*	8	0.25	0.25	0.00		
Zinc	0.08	0.01	0.07	0.1	0.91	0.48	0.21	0.05	8	0.91	0.24	0.31	0.45	250
POLYNUCLEAR AROMATIC HYDROCARBONS														
Acenaphthene	0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Acenaphthylene	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Anthracene	< 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Benz(a)anthracene	< 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Benzo(a)pyrene	< 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Benzo(b)fluoranthene	< 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Benzo(g.h.i)perylene	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Benzo(k)fluoranthene	< 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Chrysene	< 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Dibenz(a.h)anthracene	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Fluoranthene	0.002	<0.0002	< 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Fluorene	< 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Indeno(1.2.3-cd)pyrene	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Naphthalene	< 0.001	<0.0002	< 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Phenanthrene	0.003	<0.0002	< 0.001	<0.0002	<0.0002	< 0.001	<0.0002	<0.0002						
Pyrene	0.001	<0.0002	< 0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002						
Total PAH	< 0.02	< 0.0032	< 0.0064	< 0.0032	< 0.0032	< 0.004	< 0.0032	< 0.0032						

APPENDIX E – ANALYTICAL REPORTS

Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION AAA 05 002 01

Order Number:
Date Received: May 13, 2005
Date Sampled: May 13, 2005
Date Reported: May 26, 2005
Contact: Daryl Burrows

Methods

- USEPA 6010B Heavy Metals
- USEPA 6020 Heavy Metals
- USEPA 8270C Phenols
- USEPA 8082 Polychlorinated Biphenyls
- USEPA 8121 Chlorinated Hydrocarbons
- USEPA 8081A Organochlorine Pesticides
- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- USEPA 8260B, MGT 350A Monocyclic Aromatic Hydrocarbons
- MGT100A-GC Total Recoverable Hydrocarbons
- USEPA 9010B Cyanide
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All soil results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 22-A	BUS 22-B	BUS 22-C	BUS 22-D
71 Belair Rd	Lab Number		05-MY01710	05-MY01711	05-MY01712	05-MY01713
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	3.2	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	<0.5	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	6.8	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	13	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	11	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	9.3	< 0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	6.8	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	13	< 0.1	< 0.1
Chrysene	0.1	mg/kg	< 0.1	10	< 0.1	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	<0.5	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	29	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	2.8	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	5.5	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	0.6	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	28	< 0.1	< 0.1
Pyrene	0.1	mg/kg	< 0.1	25	< 0.1	< 0.1
Total PAH	1.6	mg/kg	< 1.6	170	< 1.6	< 1.6
Chrysene-d12 (surr.)	1	%	91	84	93	89
2-Fluorobiphenyl (surr.)	1	%	87	70	78	98
% Moisture	0.1	%	3.3	13	13	3.6
Heavy Metals (7)						
Mercury	0.1	mg/kg	< 0.1	0.2	< 0.1	< 0.1
Heavy Metals (13)						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	< 2	3.3	<2	<2
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	< 5	14	10	< 5
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**BUS 22-A**	**BUS 22-B**	**BUS 22-C**	**BUS 22-D**
71 Belair Rd	**Lab Number**		**05-MY01710**	**05-MY01711**	**05-MY01712**	**05-MY01713**
Kingswood	**Matrix**		**Soil**	**Soil**	**Soil**	**Soil**
South Australia 5062	**Sample Date**		**May 13, 2005**	**May 13, 2005**	**May 13, 2005**	**May 13, 2005**
Analysis Type	**LOR**	**Units**				
Copper	5	mg/kg	< 5	30	7.0	< 5
Lead	5	mg/kg	5.1	56	< 5	< 5
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	< 5	8.5	6.4	< 5
Selenium	2	mg/kg	< 2	2.2	< 2	< 2
Tin	10	mg/kg	< 10	10	< 10	< 10
Zinc	5	mg/kg	10	210	7.7	10

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 23-A	BUS 24-A	BUS 24-B	BUS 24-C
71 Belair Rd	Lab Number		05-MY01714	05-MY01715	05-MY01716	05-MY01717
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	0.9	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	1.2	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	1.2	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	0.6	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	0.9	< 0.1
Chrysene	0.1	mg/kg	< 0.1	< 0.1	0.9	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	<0.2	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	1.6	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	0.6	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	0.6	< 0.1
Pyrene	0.1	mg/kg	< 0.1	< 0.1	1.6	< 0.1
Total PAH	1.6	mg/kg	< 1.6	< 1.6	11	< 1.6
Chrysene-d12 (surr.)	1	%	86	97	100	99
2-Fluorobiphenyl (surr.)	1	%	100	98	97	84
% Moisture	0.1	%	3.4	2.5	11	14
Heavy Metals (7)						
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.3	< 0.1
Heavy Metals (13)						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	<2	<2	5.4	<2
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	< 5	< 5	19	15
Cobalt	5	mg/kg	< 5	< 5	8.9	< 5

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**BUS 23-A**	**BUS 24-A**	**BUS 24-B**	**BUS 24-C**
71 Belair Rd	**Lab Number**		**05-MY01714**	**05-MY01715**	**05-MY01716**	**05-MY01717**
Kingswood	**Matrix**		**Soil**	**Soil**	**Soil**	**Soil**
South Australia 5062	**Sample Date**		**May 13, 2005**	**May 13, 2005**	**May 13, 2005**	**May 13, 2005**
Analysis Type	**LOR**	**Units**				
Copper	5	mg/kg	< 5	6.2	400	8.6
Lead	5	mg/kg	< 5	13	550	5.7
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	< 5	< 5	8.0	8.3
Selenium	2	mg/kg	< 2	< 2	3.7	2.8
Tin	10	mg/kg	< 10	< 10	10	< 10
Zinc	5	mg/kg	9.2	22	940	15

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 25-A	BUS 26-A	BUS 26-B	BUS 26-C
71 Belair Rd	Lab Number		05-MY01718	05-MY01719	05-MY01720	05-MY01721
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	0.1	mg/kg	< 0.1	< 0.1	0.3	< 0.1
Total PAH	1.6	mg/kg	< 1.6	< 1.6	2.1	< 1.6
Chrysene-d12 (surr.)	1	%	96	82	89	82
2-Fluorobiphenyl (surr.)	1	%	96	88	80	77
% Moisture	0.1	%	2.5	5.2	16	20
Heavy Metals (7)						
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.3	< 0.1
Heavy Metals (13)						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	<3	<2	8.7	<2
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	< 5	< 5	24	14
Cobalt	5	mg/kg	< 5	< 5	5.5	< 5

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**BUS 25-A**	**BUS 26-A**	**BUS 26-B**	**BUS 26-C**
71 Belair Rd	**Lab Number**		**05-MY01718**	**05-MY01719**	**05-MY01720**	**05-MY01721**
Kingswood	**Matrix**		**Soil**	**Soil**	**Soil**	**Soil**
South Australia 5062	**Sample Date**		**May 13, 2005**	**May 13, 2005**	**May 13, 2005**	**May 13, 2005**
Analysis Type	**LOR**	**Units**				
Copper	5	mg/kg	< 5	< 5	38	8.6
Lead	5	mg/kg	< 5	< 5	180	6.4
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	< 5	< 5	11	8.3
Selenium	2	mg/kg	< 2	< 2	<2	<2
Tin	10	mg/kg	< 10	< 10	23	< 10
Zinc	5	mg/kg	5.4	7.3	170	15

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 27-A	BUS 27-B	BUS 27-C	BUS 27-D
71 Belair Rd	Lab Number		05-MY01722	05-MY01723	05-MY01724	05-MY01725
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 100
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Fluorobenzene (surr.)	1	%	88	94	91	85
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	0.2	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	1.0	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	0.7	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	0.8	< 0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	0.8	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	0.9	< 0.1	< 0.1
Chrysene	0.1	mg/kg	< 0.1	1.3	< 0.1	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	0.2	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	2.1	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	0.6	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	1.3	< 0.1	< 0.1
Pyrene	0.1	mg/kg	< 0.1	1.8	< 0.1	< 0.1
Total PAH	1.6	mg/kg	< 1.6	12	< 1.6	< 1.6
Chrysene-d12 (surr.)	1	%	82	100	86	89
2-Fluorobiphenyl (surr.)	1	%	84	76	87	84

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 27-A	BUS 27-B	BUS 27-C	BUS 27-D
71 Belair Rd	Lab Number		05-MY01722	05-MY01723	05-MY01724	05-MY01725
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlordane	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxophene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	120	120	130	120
Tetrachloro-m-xylene (surr.)	1	%	120	120	130	130
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 27-A	BUS 27-B	BUS 27-C	BUS 27-D
71 Belair Rd	Lab Number		05-MY01722	05-MY01723	05-MY01724	05-MY01725
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3.5-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzal chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzotrichloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzyl chloride	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Pentachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibutylchlorendate (surr.)	1	%	120	120	130	120
Tetrachloro-m-xylene (surr.)	1	%	120	120	130	130
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB	1	mg/kg	< 1	< 1	< 1	< 1
Dibutylchlorendate (surr.)	1	%	120	120	130	120
Tetrachloro-m-xylene (surr.)	1	%	120	120	130	130
Phenols						
2-Chlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 27-A	BUS 27-B	BUS 27-C	BUS 27-D
71 Belair Rd	Lab Number		05-MY01722	05-MY01723	05-MY01724	05-MY01725
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dimethylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4.6-Trichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.6-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
3&4-Methylphenol (m&p-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Phenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dibromophenol (surr.)	1	%	89	96	97	94
% Moisture	0.1	%	3.5	13	26	4.2
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
pH (1:5 aqueous extract)	0.1	units	8.9	8.8	8.6	8.7
Heavy Metals (7)						
Mercury	0.1	mg/kg	< 0.1	2.0	< 0.1	< 0.1
Heavy Metals (13)						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	< 2	6.9	<2	< 2
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	< 5	17	26	< 5
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	< 5	46	15	< 5
Lead	5	mg/kg	< 5	320	7.8	< 5
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	< 5	6.4	13	< 5
Selenium	2	mg/kg	<2	<2	<2	<2
Tin	10	mg/kg	< 10	100	< 10	< 10

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 27-A	BUS 27-B	BUS 27-C	BUS 27-D
71 Belair Rd	Lab Number		05-MY01722	05-MY01723	05-MY01724	05-MY01725
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Zinc	5	mg/kg	< 5	470	20	< 5

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 28-A	BUS 29-A	BUS 29-B	BUS 30-A
71 Belair Rd	Lab Number		05-MY01726	05-MY01727	05-MY01728	05-MY01729
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	-	< 50	< 50	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	-	< 100	< 100	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	-	< 100	< 100	< 100
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	-	< 0.05	0.06	0.05
Toluene	0.05	mg/kg	-	< 0.05	0.09	0.12
Ethylbenzene	0.05	mg/kg	-	< 0.05	< 0.05	0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	-	< 0.05	0.10	0.12
Fluorobenzene (surr.)	1	%	-	92	93	100
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.3
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.3
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.4
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.6
Chrysene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.4
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.6
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.2
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.8
Total PAH	1.6	mg/kg	< 1.6	< 1.6	< 1.6	4.4
Chrysene-d12 (surr.)	1	%	110	120	87	82
2-Fluorobiphenyl (surr.)	1	%	90	92	76	75

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 28-A	BUS 29-A	BUS 29-B	BUS 30-A
71 Belair Rd	Lab Number		05-MY01726	05-MY01727	05-MY01728	05-MY01729
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	-	<0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Chlordane	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Toxophene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	100	120	120
Tetrachloro-m-xylene (surr.)	1	%	-	130	130	110
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
1.2.3-Trichlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 28-A	BUS 29-A	BUS 29-B	BUS 30-A
71 Belair Rd	Lab Number		05-MY01726	05-MY01727	05-MY01728	05-MY01729
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
1.3-Dichlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
1.3.5-Trichlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Benzal chloride	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Benzotrichloride	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Benzyl chloride	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Hexachloroethane	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Pentachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Dibutylchlorendate (surr.)	1	%	-	100	120	120
Tetrachloro-m-xylene (surr.)	1	%	-	130	130	110
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Total PCB	1	mg/kg	-	< 1	< 1	< 1
Dibutylchlorendate (surr.)	1	%	-	100	120	120
Tetrachloro-m-xylene (surr.)	1	%	-	130	130	110
Phenols						
2-Chlorophenol	0.1	mg/kg	-	<0.1	<0.1	<0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	-	<0.1	<0.1	<0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 28-A	BUS 29-A	BUS 29-B	BUS 30-A
71 Belair Rd	Lab Number		05-MY01726	05-MY01727	05-MY01728	05-MY01729
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	-	<0.5	<0.5	<0.5
2.4-Dichlorophenol	0.1	mg/kg	-	<0.1	<0.1	<0.1
2.4-Dimethylphenol	0.1	mg/kg	-	<0.1	<0.1	<0.1
2.4.6-Trichlorophenol	0.1	mg/kg	-	<0.1	<0.1	<0.1
2.6-Dichlorophenol	0.1	mg/kg	-	<0.1	<0.1	<0.1
3&4-Methylphenol (m&p-Cresol)	0.1	mg/kg	-	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	0.1	mg/kg	-	<0.1	<0.1	<0.1
Pentachlorophenol	0.5	mg/kg	-	<0.5	<0.5	<0.5
Phenol	0.1	mg/kg	-	<0.1	<0.1	<0.1
2.4-Dibromophenol (surr.)	1	%	-	99	100	99
% Moisture	0.1	%	3.4	11	13	17
Cyanide (total)	5	mg/kg	-	< 5	< 5	< 5
pH (1:5 aqueous extract)	0.1	units	-	8.2	9.1	8.2
Heavy Metals (7)						
Mercury	0.1	mg/kg	< 0.1	0.2	< 0.1	0.1
Heavy Metals (13)						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	< 2	15	4.8	3.4
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	< 5	9.4	22	14
Cobalt	5	mg/kg	< 5	5.4	6.2	11
Copper	5	mg/kg	< 5	20	13	17
Lead	5	mg/kg	< 5	67	54	52
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	< 5	16	9.5	7.0
Selenium	2	mg/kg	<2	<2	<2	<2
Tin	10	mg/kg	< 10	< 10	< 10	12

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 28-A	BUS 29-A	BUS 29-B	BUS 30-A
71 Belair Rd	Lab Number		05-MY01726	05-MY01727	05-MY01728	05-MY01729
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Zinc	5	mg/kg	7.6	53	17	120

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 30-B	BUS 30-C	BUS 31-A	BUS 32-A
71 Belair Rd	Lab Number		05-MY01730	05-MY01731	05-MY01732	05-MY01733
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 100
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	0.05	mg/kg	< 0.05	<0.1	< 0.05	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	< 0.05	<0.1	< 0.05	< 0.05
Fluorobenzene (surr.)	1	%	91	110	70	75
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	0.2	< 0.1	0.2	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.9	< 0.1	1.0	< 0.1
Benzo(a)pyrene	0.1	mg/kg	1.5	< 0.1	1.3	0.1
Benzo(b)fluoranthene	0.1	mg/kg	1.1	< 0.1	1.2	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	1.3	< 0.1	1.3	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	1.1	< 0.1	1.3	< 0.1
Chrysene	0.1	mg/kg	0.9	< 0.1	1.0	0.1
Dibenz(a.h)anthracene	0.1	mg/kg	0.2	< 0.1	0.3	< 0.1
Fluoranthene	0.1	mg/kg	1.7	< 0.1	1.8	0.2
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	0.6	< 0.1	0.9	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	0.5	< 0.1	0.5	< 0.1
Pyrene	0.1	mg/kg	1.5	< 0.1	1.7	0.2
Total PAH	1.6	mg/kg	12	< 1.6	13	1.8
Chrysene-d12 (surr.)	1	%	85	98	84	95
2-Fluorobiphenyl (surr.)	1	%	90	78	85	99

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 30-B	BUS 30-C	BUS 31-A	BUS 32-A
71 Belair Rd	Lab Number		05-MY01730	05-MY01731	05-MY01732	05-MY01733
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	<0.05	< 0.05	< 0.05	0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.07
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	2.2
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlordane	0.1	mg/kg	< 0.1	< 0.1	< 0.1	<0.1
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	<0.05	< 0.05	< 0.05	0.17
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxophene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	130	110	82	93
Tetrachloro-m-xylene (surr.)	1	%	120	110	120	110
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 30-B	BUS 30-C	BUS 31-A	BUS 32-A
71 Belair Rd	Lab Number		05-MY01730	05-MY01731	05-MY01732	05-MY01733
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3.5-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzal chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzotrichloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzyl chloride	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Pentachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibutylchlorendate (surr.)	1	%	130	110	82	93
Tetrachloro-m-xylene (surr.)	1	%	120	110	120	110
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB	1	mg/kg	< 1	< 1	< 1	< 1
Dibutylchlorendate (surr.)	1	%	130	110	82	93
Tetrachloro-m-xylene (surr.)	1	%	120	110	120	110
Phenols						
2-Chlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 30-B	BUS 30-C	BUS 31-A	BUS 32-A
71 Belair Rd	Lab Number		05-MY01730	05-MY01731	05-MY01732	05-MY01733
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dimethylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4.6-Trichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.6-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
3&4-Methylphenol (m&p-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Phenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dibromophenol (surr.)	1	%	110	100	100	97
% Moisture	0.1	%	16	17	9.6	10
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
pH (1:5 aqueous extract)	0.1	units	8.9	8.9	8.6	8.6
Heavy Metals (7)						
Mercury	0.1	mg/kg	1.4	< 0.1	0.1	< 0.1
Heavy Metals (13)						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	7.3	6.3	93	6.7
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	0.9	< 0.5
Chromium	5	mg/kg	19	37	11	10
Cobalt	5	mg/kg	< 5	8.2	8.4	< 5
Copper	5	mg/kg	65	18	27	9.4
Lead	5	mg/kg	350	17	150	58
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	7.4	17	5.5	< 5
Selenium	2	mg/kg	<2	<2	< 2	< 2
Tin	10	mg/kg	67	< 10	17	< 10

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 30-B	BUS 30-C	BUS 31-A	BUS 32-A
71 Belair Rd	Lab Number		05-MY01730	05-MY01731	05-MY01732	05-MY01733
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Zinc	5	mg/kg	750	30	940	89

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 32-B	BUS 32-C	BUS 33-A	BUS 34-A
71 Belair Rd	Lab Number		05-MY01734	05-MY01735	05-MY01736	05-MY01737
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 100
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Fluorobenzene (surr.)	1	%	78	94	87	86
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1
Chrysene	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	0.1	mg/kg	< 0.1	< 0.1	0.3	< 0.1
Total PAH	1.6	mg/kg	< 1.6	< 1.6	2.2	< 1.6
Chrysene-d12 (surr.)	1	%	90	110	95	110
2-Fluorobiphenyl (surr.)	1	%	85	100	83	85

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 32-B	BUS 32-C	BUS 33-A	BUS 34-A
71 Belair Rd	Lab Number		05-MY01734	05-MY01735	05-MY01736	05-MY01737
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	<0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	<0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	<0.05	< 0.05	2.1	0.11
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlordane	0.1	mg/kg	<0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	1.7	0.48
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	<0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	<0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxophene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	110	120	92	120
Tetrachloro-m-xylene (surr.)	1	%	120	110	110	130
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 32-B	BUS 32-C	BUS 33-A	BUS 34-A
71 Belair Rd	Lab Number		05-MY01734	05-MY01735	05-MY01736	05-MY01737
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3.5-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzal chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzotrichloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzyl chloride	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Pentachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibutylchlorendate (surr.)	1	%	110	120	92	120
Tetrachloro-m-xylene (surr.)	1	%	120	110	110	130
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB	1	mg/kg	< 1	< 1	< 1	< 1
Dibutylchlorendate (surr.)	1	%	110	120	92	120
Tetrachloro-m-xylene (surr.)	1	%	120	110	110	130
Phenols						
2-Chlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 32-B	BUS 32-C	BUS 33-A	BUS 34-A
71 Belair Rd	Lab Number		05-MY01734	05-MY01735	05-MY01736	05-MY01737
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dimethylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4.6-Trichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.6-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
3&4-Methylphenol (m&p-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Phenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dibromophenol (surr.)	1	%	87	98	100	94
% Moisture	0.1	%	13	24	13	13
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
pH (1:5 aqueous extract)	0.1	units	8.8	8.0	8.7	8.8
Heavy Metals (7)						
Mercury	0.1	mg/kg	0.1	< 0.1	0.1	< 0.1
Heavy Metals (13)						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	<2	7.0	3.9	6.1
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	14	34	10	11
Cobalt	5	mg/kg	< 5	6.3	< 5	< 5
Copper	5	mg/kg	10	14	14	7.4
Lead	5	mg/kg	110	13	180	30
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	5.7	14	< 5	< 5
Selenium	2	mg/kg	<2	<2	<2	<2
Tin	10	mg/kg	< 10	< 10	52	< 10

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 32-B	BUS 32-C	BUS 33-A	BUS 34-A
71 Belair Rd	Lab Number		05-MY01734	05-MY01735	05-MY01736	05-MY01737
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Zinc	5	mg/kg	110	25	56	56

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 34-B	BUS 34-C	BUS 34-D	BUS 35-A
71 Belair Rd	Lab Number		05-MY01738	05-MY01739	05-MY01740	05-MY01741
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 100
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Fluorobenzene (surr.)	1	%	86	93	83	89
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PAH	1.6	mg/kg	< 1.6	< 1.6	< 1.6	< 1.6
Chrysene-d12 (surr.)	1	%	100	92	97	87
2-Fluorobiphenyl (surr.)	1	%	110	88	84	87

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 34-B	BUS 34-C	BUS 34-D	BUS 35-A
71 Belair Rd	Lab Number		05-MY01738	05-MY01739	05-MY01740	05-MY01741
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	0.10	0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlordane	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	0.08	0.07
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	<0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxophene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	110	130	95	130
Tetrachloro-m-xylene (surr.)	1	%	110	110	87	99
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 34-B	BUS 34-C	BUS 34-D	BUS 35-A
71 Belair Rd	Lab Number		05-MY01738	05-MY01739	05-MY01740	05-MY01741
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3.5-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzal chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzotrichloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzyl chloride	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Pentachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibutylchlorendate (surr.)	1	%	110	130	95	130
Tetrachloro-m-xylene (surr.)	1	%	110	110	87	99
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB	1	mg/kg	< 1	< 1	< 1	< 1
Dibutylchlorendate (surr.)	1	%	110	130	95	130
Tetrachloro-m-xylene (surr.)	1	%	110	110	87	99
Phenols						
2-Chlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 34-B	BUS 34-C	BUS 34-D	BUS 35-A
71 Belair Rd	Lab Number		05-MY01738	05-MY01739	05-MY01740	05-MY01741
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dimethylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4.6-Trichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.6-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
3&4-Methylphenol (m&p-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Phenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dibromophenol (surr.)	1	%	97	100	97	93
% Moisture	0.1	%	12	17	6.3	8.2
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
pH (1:5 aqueous extract)	0.1	units	8.7	8.7	7.6	8.7
Heavy Metals (7)						
Mercury	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Heavy Metals (13)						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	<2	<2	8.8	13
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	17	12	6.9	13
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	8.6	8.4	< 5	< 5
Lead	5	mg/kg	160	< 5	5.5	< 5
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	6.4	6.9	< 5	< 5
Selenium	2	mg/kg	<2	<2	<2	<2
Tin	10	mg/kg	11	< 10	< 10	< 10

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 34-B	BUS 34-C	BUS 34-D	BUS 35-A
71 Belair Rd	Lab Number		05-MY01738	05-MY01739	05-MY01740	05-MY01741
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Zinc	5	mg/kg	18	8.9	15	6.0

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 35-B	BUS 35-C	BUS 36-A	BUS 37-A
71 Belair Rd	Lab Number		05-MY01742	05-MY01743	05-MY01744	05-MY01745
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 100
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Fluorobenzene (surr.)	1	%	79	76	85	83
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.5	< 0.1	< 0.1	<0.1
Benzo(a)pyrene	0.1	mg/kg	0.5	< 0.1	< 0.1	<0.1
Benzo(b)fluoranthene	0.1	mg/kg	0.4	< 0.1	< 0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	0.3	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	0.4	< 0.1	< 0.1	< 0.1
Chrysene	0.1	mg/kg	0.4	< 0.1	< 0.1	<0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.7	< 0.1	< 0.1	0.2
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Pyrene	0.1	mg/kg	0.7	< 0.1	< 0.1	0.2
Total PAH	1.6	mg/kg	4.9	< 1.6	< 1.6	1.8
Chrysene-d12 (surr.)	1	%	100	88	96	91
2-Fluorobiphenyl (surr.)	1	%	100	90	76	77

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 35-B	BUS 35-C	BUS 36-A	BUS 37-A
71 Belair Rd	Lab Number		05-MY01742	05-MY01743	05-MY01744	05-MY01745
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	<0.05
4,4'-DDE	0.05	mg/kg	<0.05	< 0.05	< 0.05	<0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	<0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	<0.05	< 0.05	0.19	1.2
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlordane	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	<0.05	< 0.05	< 0.05	1.6
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	<0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxophene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	110	130	72	120
Tetrachloro-m-xylene (surr.)	1	%	82	110	79	110
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 35-B	BUS 35-C	BUS 36-A	BUS 37-A
71 Belair Rd	Lab Number		05-MY01742	05-MY01743	05-MY01744	05-MY01745
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3.5-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzal chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzotrichloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzyl chloride	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Pentachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibutylchlorendate (surr.)	1	%	110	130	72	120
Tetrachloro-m-xylene (surr.)	1	%	82	110	79	110
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB	1	mg/kg	< 1	< 1	< 1	< 1
Dibutylchlorendate (surr.)	1	%	110	130	72	120
Tetrachloro-m-xylene (surr.)	1	%	82	110	79	110
Phenols						
2-Chlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 35-B	BUS 35-C	BUS 36-A	BUS 37-A
71 Belair Rd	Lab Number		05-MY01742	05-MY01743	05-MY01744	05-MY01745
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dimethylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4.6-Trichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.6-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
3&4-Methylphenol (m&p-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Phenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dibromophenol (surr.)	1	%	92	100	92	93
% Moisture	0.1	%	12	25	10	18
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
pH (1:5 aqueous extract)	0.1	units	8.6	7.9	8.4	9.3
Heavy Metals (7)						
Mercury	0.1	mg/kg	0.7	0.1	< 0.1	< 0.1
Heavy Metals (13)						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	3.8	<2	14	57
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	13	47	7.1	16
Cobalt	5	mg/kg	< 5	6.4	< 5	< 5
Copper	5	mg/kg	26	27	< 5	12
Lead	5	mg/kg	130	35	< 5	46
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	5.5	21	< 5	7.2
Selenium	2	mg/kg	<2	<2	<2	<2
Tin	10	mg/kg	32	10	< 10	< 10

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 35-B	BUS 35-C	BUS 36-A	BUS 37-A
71 Belair Rd	Lab Number		05-MY01742	05-MY01743	05-MY01744	05-MY01745
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Zinc	5	mg/kg	470	59	7.9	55

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 40-A	BUS 40-B	BUS 40-C	BUS 41-A
71 Belair Rd	Lab Number		05-MY01746	05-MY01747	05-MY01748	05-MY01749
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	< 100	< 100	< 100	130
TRH C29-C36 Fraction by GC	100	mg/kg	< 100	< 100	< 100	400
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Fluorobenzene (surr.)	1	%	76	95	90	92
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	1.2	< 0.1	< 0.1	0.3
Benzo(a)pyrene	0.1	mg/kg	1.4	< 0.1	< 0.1	0.4
Benzo(b)fluoranthene	0.1	mg/kg	1.2	< 0.1	< 0.1	0.3
Benzo(g.h.i)perylene	0.1	mg/kg	1.0	< 0.1	< 0.1	0.3
Benzo(k)fluoranthene	0.1	mg/kg	1.2	< 0.1	< 0.1	0.3
Chrysene	0.1	mg/kg	1.0	< 0.1	< 0.1	0.3
Dibenz(a.h)anthracene	0.1	mg/kg	<0.2	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	1.7	< 0.1	< 0.1	0.4
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	0.8	< 0.1	< 0.1	0.2
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	0.6	< 0.1	< 0.1	0.1
Pyrene	0.1	mg/kg	1.7	< 0.1	< 0.1	0.4
Total PAH	1.6	mg/kg	13	< 1.6	< 1.6	3.6
Chrysene-d12 (surr.)	1	%	91	91	99	100
2-Fluorobiphenyl (surr.)	1	%	89	93	82	100

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 40-A	BUS 40-B	BUS 40-C	BUS 41-A
71 Belair Rd	Lab Number		05-MY01746	05-MY01747	05-MY01748	05-MY01749
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	< 0.05	<0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	0.15	<0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	0.11	<0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.44	< 0.05	<0.05	< 0.05
b-BHC	0.05	mg/kg	1.1	< 0.05	< 0.05	< 0.05
Chlordane	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.70	< 0.05	<0.05	0.24
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	<0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	<0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxophene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	76	120	100	120
Tetrachloro-m-xylene (surr.)	1	%	100	90	78	110
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 40-A	BUS 40-B	BUS 40-C	BUS 41-A
71 Belair Rd	Lab Number		05-MY01746	05-MY01747	05-MY01748	05-MY01749
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3.5-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzal chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzotrichloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzyl chloride	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Pentachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibutylchlorendate (surr.)	1	%	76	120	100	120
Tetrachloro-m-xylene (surr.)	1	%	100	90	78	110
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB	1	mg/kg	< 1	< 1	< 1	< 1
Dibutylchlorendate (surr.)	1	%	76	120	100	120
Tetrachloro-m-xylene (surr.)	1	%	100	90	78	110
Phenols						
2-Chlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 40-A	BUS 40-B	BUS 40-C	BUS 41-A
71 Belair Rd	Lab Number		05-MY01746	05-MY01747	05-MY01748	05-MY01749
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dimethylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4.6-Trichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.6-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
3&4-Methylphenol (m&p-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Phenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dibromophenol (surr.)	1	%	96	88	99	98
% Moisture	0.1	%	8.5	13	13	7.0
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
pH (1:5 aqueous extract)	0.1	units	8.3	8.3	7.9	8.4
Heavy Metals (7)						
Mercury	0.1	mg/kg	0.5	0.3	< 0.1	3.0
Heavy Metals (13)						
Antimony	10	mg/kg	190	< 10	< 10	< 10
Arsenic	2	mg/kg	15	7.9	<2	10
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	2.1	< 0.5	< 0.5	0.8
Chromium	5	mg/kg	430	22	10	13
Cobalt	5	mg/kg	< 5	5.1	< 5	< 5
Copper	5	mg/kg	450	51	7.5	160
Lead	5	mg/kg	1700	89	< 5	480
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	15	10	6.1	8.4
Selenium	2	mg/kg	<2	<2	<2	<2
Tin	10	mg/kg	1500	66	< 10	100

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 40-A	BUS 40-B	BUS 40-C	BUS 41-A
71 Belair Rd	Lab Number		05-MY01746	05-MY01747	05-MY01748	05-MY01749
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Zinc	5	mg/kg	1400	140	9.9	160

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 42-A	BUS 43-A	BUS 43-B	BUS 43-C
71 Belair Rd	Lab Number		05-MY01750	05-MY01751	05-MY01752	05-MY01753
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 100
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Fluorobenzene (surr.)	1	%	86	71	78	95
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Chrysene	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	0.1	mg/kg	0.3	< 0.1	< 0.1	< 0.1
Total PAH	1.6	mg/kg	2.3	< 1.6	< 1.6	< 1.6
Chrysene-d12 (surr.)	1	%	110	94	100	95
2-Fluorobiphenyl (surr.)	1	%	93	88	110	89

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 42-A	BUS 43-A	BUS 43-B	BUS 43-C
71 Belair Rd	Lab Number		05-MY01750	05-MY01751	05-MY01752	05-MY01753
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.52	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlordane	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.85	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	<0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	<0.05	<0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxophene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	73	110	90	120
Tetrachloro-m-xylene (surr.)	1	%	81	91	93	110
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 42-A	BUS 43-A	BUS 43-B	BUS 43-C
71 Belair Rd	Lab Number		05-MY01750	05-MY01751	05-MY01752	05-MY01753
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3.5-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzal chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzotrichloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzyl chloride	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Pentachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibutylchlorendate (surr.)	1	%	73	110	90	120
Tetrachloro-m-xylene (surr.)	1	%	81	91	93	110
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB	1	mg/kg	< 1	< 1	< 1	< 1
Dibutylchlorendate (surr.)	1	%	73	110	90	120
Tetrachloro-m-xylene (surr.)	1	%	81	91	93	110
Phenols						
2-Chlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 42-A	BUS 43-A	BUS 43-B	BUS 43-C
71 Belair Rd	Lab Number		05-MY01750	05-MY01751	05-MY01752	05-MY01753
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dimethylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4.6-Trichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.6-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
3&4-Methylphenol (m&p-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Phenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dibromophenol (surr.)	1	%	100	110	100	100
% Moisture	0.1	%	4.2	17	14	18
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
pH (1:5 aqueous extract)	0.1	units	7.7	8.4	8.7	9.5
Heavy Metals (7)						
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Heavy Metals (13)						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	7.8	130	99	<2
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	7.7	33	16	13
Cobalt	5	mg/kg	< 5	7.0	< 5	< 5
Copper	5	mg/kg	60	17	9.8	6.3
Lead	5	mg/kg	54	16	15	5.0
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	5.1	14	7.4	7.2
Selenium	2	mg/kg	<2	<2	<2	<2
Tin	10	mg/kg	10	< 10	< 10	< 10

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 42-A	BUS 43-A	BUS 43-B	BUS 43-C
71 Belair Rd	Lab Number		05-MY01750	05-MY01751	05-MY01752	05-MY01753
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Zinc	5	mg/kg	72	42	27	11

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 44-A	BUS 44-B	BUS 44-C	BUS 45-A
71 Belair Rd	Lab Number		05-MY01754	05-MY01755	05-MY01756	05-MY01757
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 100
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	< 0.05	< 0.05	<0.1	< 0.05
Toluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05	<0.1	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Fluorobenzene (surr.)	1	%	89	86	100	120
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.3
Benz(a)anthracene	0.1	mg/kg	< 0.1	0.5	< 0.1	0.6
Benzo(a)pyrene	0.1	mg/kg	< 0.1	0.5	< 0.1	0.5
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	0.4	< 0.1	0.4
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	0.4	< 0.1	0.4
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	0.4	< 0.1	0.4
Chrysene	0.1	mg/kg	< 0.1	0.4	< 0.1	0.5
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	0.7	< 0.1	1.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	0.3	< 0.1	0.4
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Phenanthrene	0.1	mg/kg	< 0.1	0.3	< 0.1	1.1
Pyrene	0.1	mg/kg	< 0.1	0.8	< 0.1	1.0
Total PAH	1.6	mg/kg	< 1.6	5.3	< 1.6	7.2
Chrysene-d12 (surr.)	1	%	85	86	85	94
2-Fluorobiphenyl (surr.)	1	%	88	100	92	100

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 44-A	BUS 44-B	BUS 44-C	BUS 45-A
71 Belair Rd	Lab Number		05-MY01754	05-MY01755	05-MY01756	05-MY01757
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	<0.05
4,4'-DDE	0.05	mg/kg	<0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	<0.05	0.53	< 0.05	0.46
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.23	< 0.05	< 0.05	0.39
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Chlordane	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.95	< 0.05	< 0.05	0.84
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	<0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	<0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	<0.05	< 0.05	< 0.05	<0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxophene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	93	120	76	100
Tetrachloro-m-xylene (surr.)	1	%	88	120	95	100
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 44-A	BUS 44-B	BUS 44-C	BUS 45-A
71 Belair Rd	Lab Number		05-MY01754	05-MY01755	05-MY01756	05-MY01757
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.3.5-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
1.4-Dichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzal chloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzotrichloride	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Benzyl chloride	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Pentachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dibutylchlorendate (surr.)	1	%	93	120	76	100
Tetrachloro-m-xylene (surr.)	1	%	88	120	95	100
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB	1	mg/kg	< 1	< 1	< 1	< 1
Dibutylchlorendate (surr.)	1	%	93	120	76	100
Tetrachloro-m-xylene (surr.)	1	%	88	120	95	100
Phenols						
2-Chlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 44-A	BUS 44-B	BUS 44-C	BUS 45-A
71 Belair Rd	Lab Number		05-MY01754	05-MY01755	05-MY01756	05-MY01757
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dimethylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4.6-Trichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.6-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
3&4-Methylphenol (m&p-Cresol)	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Phenol	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
2.4-Dibromophenol (surr.)	1	%	98	97	110	94
% Moisture	0.1	%	7.3	9.3	20	4.1
Cyanide (total)	5	mg/kg	< 5	< 5	< 5	< 5
pH (1:5 aqueous extract)	0.1	units	8.8	8.7	9.0	8.7
Heavy Metals (7)						
Mercury	0.1	mg/kg	0.1	2.0	< 0.1	< 0.1
Heavy Metals (13)						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	5.9	17	11	7.6
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	1.1	< 0.5	< 0.5
Chromium	5	mg/kg	10	18	33	8.7
Cobalt	5	mg/kg	< 5	< 5	5.8	< 5
Copper	5	mg/kg	18	120	14	15
Lead	5	mg/kg	79	800	800	83
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	5.1	10	9.6	5.0
Selenium	2	mg/kg	<2	<2	<2	<2
Tin	10	mg/kg	20	120	500	22

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 44-A	BUS 44-B	BUS 44-C	BUS 45-A
71 Belair Rd	Lab Number		05-MY01754	05-MY01755	05-MY01756	05-MY01757
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**				
Zinc	5	mg/kg	78	730	24	88

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS R1	BUS R2
71 Belair Rd	Lab Number		05-MY01758	05-MY01759
Kingswood	Matrix		Water	Water
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**		
Total Recoverable Hydrocarbons				
TRH C6-C9 Fraction by GC	0.02	mg/L	< 0.02	-
TRH C10-C14 Fraction by GC	0.05	mg/L	< 0.05	-
TRH C15-C28 Fraction by GC	0.1	mg/L	< 0.1	-
TRH C29-C36 Fraction by GC	0.1	mg/L	< 0.1	-
Monocyclic Aromatic Hydrocarbons				
Benzene	0.001	mg/L	< 0.001	-
Toluene	0.001	mg/L	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	-
Xylenes(ortho.meta and para)	0.001	mg/L	< 0.001	-
Fluorobenzene (surr.)	1	%	90	-
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	0.0001	mg/L	< 0.0001	< 0.0001
Acenaphthylene	0.0001	mg/L	< 0.0001	< 0.0001
Anthracene	0.0001	mg/L	< 0.0001	< 0.0001
Benz(a)anthracene	0.0001	mg/L	< 0.0001	< 0.0001
Benzo(a)pyrene	0.0001	mg/L	< 0.0001	< 0.0001
Benzo(b)fluoranthene	0.0001	mg/L	< 0.0001	< 0.0001
Benzo(g.h.i)perylene	0.0001	mg/L	< 0.0001	< 0.0001
Benzo(k)fluoranthene	0.0001	mg/L	< 0.0001	< 0.0001
Chrysene	0.0001	mg/L	< 0.0001	< 0.0001
Dibenz(a.h)anthracene	0.0001	mg/L	< 0.0001	< 0.0001
Fluoranthene	0.0001	mg/L	< 0.0001	< 0.0001
Fluorene	0.0001	mg/L	< 0.0001	< 0.0001
Indeno(1.2.3-cd)pyrene	0.0001	mg/L	< 0.0001	< 0.0001
Naphthalene	0.0001	mg/L	< 0.0001	< 0.0001
Phenanthrene	0.0001	mg/L	< 0.0001	< 0.0001
Pyrene	0.0001	mg/L	< 0.0001	< 0.0001
Total PAH	0.0016	mg/L	< 0.0016	< 0.0016
Chrysene-d12 (surr.)	1	%	130	130
2-Fluorobiphenyl (surr.)	1	%	78	78

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS R1	BUS R2
71 Belair Rd	Lab Number		05-MY01758	05-MY01759
Kingswood	Matrix		Water	Water
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**		
Organochlorine Pesticides				
4,4'-DDD	0.0001	mg/L	<0.0001	-
4,4'-DDE	0.0001	mg/L	<0.0001	-
4,4'-DDT	0.0001	mg/L	<0.0001	-
a-BHC	0.0001	mg/L	< 0.0002	-
Aldrin	0.0001	mg/L	<0.0001	-
b-BHC	0.0001	mg/L	< 0.0002	-
Chlordane	0.0005	mg/L	<0.001	-
d-BHC	0.0001	mg/L	< 0.0002	-
Dieldrin	0.0001	mg/L	<0.0001	-
Endosulfan I	0.0001	mg/L	<0.0001	-
Endosulfan II	0.0001	mg/L	<0.0001	-
Endosulfan sulphate	0.0001	mg/L	<0.0001	-
Endrin	0.0001	mg/L	<0.0001	-
Endrin aldehyde	0.0001	mg/L	<0.0001	-
Endrin ketone	0.0001	mg/L	<0.001	-
g-BHC (Lindane)	0.0001	mg/L	< 0.0002	-
Heptachlor	0.0001	mg/L	<0.0001	-
Heptachlor epoxide	0.0001	mg/L	<0.0001	-
Hexachlorobenzene	0.0002	mg/L	< 0.001	-
Methoxychlor	0.0001	mg/L	<0.001	-
Toxophene	0.0005	mg/L	<0.001	-
Dibutylchlorendate (surr.)	1	%	110	-
Tetrachloro-m-xylene (surr.)	1	%	120	-
Chlorinated Hydrocarbons				
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	-
1.2.3-Trichlorobenzene	0.001	mg/L	< 0.001	-
1.2.3.4-Tetrachlorobenzene	0.001	mg/L	< 0.001	-
1.2.3.5-Tetrachlorobenzene	0.001	mg/L	< 0.001	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS R1	BUS R2
71 Belair Rd	Lab Number		05-MY01758	05-MY01759
Kingswood	Matrix		Water	Water
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**		
1.2.4-Trichlorobenzene	0.001	mg/L	< 0.001	-
1.2.4.5-Tetrachlorobenzene	0.001	mg/L	< 0.001	-
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	-
1.3.5-Trichlorobenzene	0.001	mg/L	< 0.001	-
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	-
Benzal chloride	0.001	mg/L	< 0.001	-
Benzotrichloride	0.001	mg/L	< 0.001	-
Benzyl chloride	0.001	mg/L	< 0.001	-
Hexachlorobenzene	0.0002	mg/L	< 0.001	-
Hexachlorobutadiene	0.001	mg/L	< 0.001	-
Hexachlorocyclopentadiene	0.001	mg/L	< 0.001	-
Hexachloroethane	0.001	mg/L	< 0.001	-
Pentachlorobenzene	0.001	mg/L	< 0.001	-
Dibutylchlorendate (surr.)	1	%	110	-
Tetrachloro-m-xylene (surr.)	1	%	120	-
Polychlorinated Biphenyls				
Aroclor-1016	0.001	mg/L	< 0.001	-
Aroclor-1221	0.001	mg/L	< 0.001	-
Aroclor-1232	0.001	mg/L	< 0.001	-
Aroclor-1242	0.001	mg/L	< 0.001	-
Aroclor-1248	0.001	mg/L	< 0.001	-
Aroclor-1254	0.001	mg/L	< 0.001	-
Aroclor-1260	0.001	mg/L	< 0.001	-
Total PCB	0.01	mg/L	<0.001	-
Dibutylchlorendate (surr.)	1	%	110	-
Tetrachloro-m-xylene (surr.)	1	%	120	-
Phenols				
2-Chlorophenol	0.0001	mg/L	< 0.0001	-
2-Methylphenol (o-Cresol)	0.0001	mg/L	< 0.0001	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS R1	BUS R2
71 Belair Rd	Lab Number		05-MY01758	05-MY01759
Kingswood	Matrix		Water	Water
South Australia 5062	Sample Date		May 13, 2005	May 13, 2005
Analysis Type	**LOR**	**Units**		
2-Nitrophenol	0.0002	mg/L	<0.001	-
2.4-Dichlorophenol	0.0001	mg/L	< 0.0001	-
2.4-Dimethylphenol	0.0001	mg/L	< 0.0001	-
2.4.6-Trichlorophenol	0.0001	mg/L	< 0.0001	-
2.6-Dichlorophenol	0.0001	mg/L	< 0.0001	-
3&4-Methylphenol (m&p-Cresol)	0.0001	mg/L	< 0.0001	-
4-Chloro-3-methylphenol	0.0001	mg/L	< 0.0001	-
Pentachlorophenol	0.0002	mg/L	<0.002	-
Phenol	0.0001	mg/L	< 0.0001	-
2.4-Dibromophenol (surr.)	1	%	89	-
Cyanide (total)	0.005	mg/L	< 0.005	-
pH (1:5 aqueous extract)	0.1	units	8.6	
Heavy Metals (7)				
Mercury	0.0001	mg/L	< 0.0001	< 0.0001
Heavy Metals (13)				
Antimony	0.05	mg/L	< 0.05	< 0.05
Arsenic	0.001	mg/L	< 0.001	< 0.001
Beryllium	0.001	mg/L	< 0.001	< 0.001
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002
Chromium	0.001	mg/L	< 0.001	< 0.001
Cobalt	0.001	mg/L	< 0.001	< 0.001
Copper	0.001	mg/L	< 0.001	< 0.001
Lead	0.001	mg/L	< 0.001	< 0.001
Molybdenum	0.005	mg/L	< 0.005	< 0.005
Nickel	0.001	mg/L	< 0.001	< 0.001
Selenium	0.001	mg/L	< 0.001	< 0.001
Tin	0.005	mg/L	< 0.005	< 0.005
Zinc	0.001	mg/L	< 0.001	< 0.001

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID	BUS 22-A	BUS 22-A	BUS 22-A	BUS 22-A	Method blank
71 Belair Rd	Lab Number	05-MY01710	05-MY01710	05-MY01710	05-MY01710	Batch
Kingswood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
South Australia 5062	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery	mg/L
Heavy Metals (7)						
Mercury		< 0.1	< 0.1	<1	107	< 0.001
Heavy Metals (13)						
Antimony		< 10	< 10	-	86	< 0.5
Arsenic		< 2	< 2	-	97	< 0.02
Beryllium		< 2	< 2	-	98	< 0.02
Cadmium		< 0.5	< 0.5	-	102	< 0.02
Chromium		< 5	< 5	-	96	< 0.05
Cobalt		< 5	< 5	-	92	< 0.05
Copper		< 5	< 5	-	96	< 0.05
Lead		5.1	< 5	-	85	< 0.05
Molybdenum		< 10	< 10	-	98	< 0.5
Nickel		< 5	< 5	-	96	< 0.05
Selenium		< 2	< 2	-	95	< 0.02
Tin		< 10	< 10	-	84	< 0.5
Zinc		10	10	-	93	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	BUS 26-B	BUS 26-B	BUS 26-B	BUS 26-B
	Lab Number	05-MY01720	05-MY01720	05-MY01720	05-MY01720
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery
Heavy Metals (7)					
Mercury		0.3	0.4	16	81
Heavy Metals (13)					
Antimony		< 10	< 10	-	96
Arsenic		8.7	7.6	-	93
Beryllium		< 2	< 2	-	85
Cadmium		< 0.5	< 0.5	-	96
Chromium		24	24	-	86
Cobalt		5.5	5.4	-	88
Copper		38	37	-	98
Lead		180	180	-	116
Molybdenum		< 10	< 10	-	84
Nickel		11	10	-	81
Selenium		<2	<2	-	93
Tin		23	24	-	105
Zinc		170	190	-	108

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID	BUS 27-A	BUS 27-A	BUS 27-A	BUS 27-A	Method blank
71 Belair Rd	Lab Number	05-MY01722	05-MY01722	05-MY01722	05-MY01722	Batch
Kingswood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
South Australia 5062	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery	mg/L
Polycyclic Aromatic Hydrocarbons						
Acenaphthene		< 0.1	< 0.1	<1	92	< 0.001
Acenaphthylene		< 0.1	< 0.1	<1	85	< 0.001
Anthracene		< 0.1	< 0.1	<1	91	< 0.001
Benz(a)anthracene		< 0.1	< 0.1	<1	79	< 0.001
Benzo(a)pyrene		< 0.1	< 0.1	<1	85	< 0.001
Benzo(b)fluoranthene		< 0.1	< 0.1	<1	130	< 0.001
Benzo(g.h.i)perylene		< 0.1	< 0.1	<1	100	< 0.001
Benzo(k)fluoranthene		< 0.1	< 0.1	<1	134	< 0.001
Chrysene		< 0.1	< 0.1	<1	100	< 0.001
Dibenz(a.h)anthracene		< 0.1	< 0.1	<1	87	< 0.001
Fluoranthene		< 0.1	< 0.1	<1	117	< 0.001
Fluorene		< 0.1	< 0.1	<1	104	< 0.001
Indeno(1.2.3-cd)pyrene		< 0.1	< 0.1	<1	102	< 0.001
Naphthalene		< 0.1	< 0.1	<1	100	< 0.001
Phenanthrene		< 0.1	< 0.1	<1	84	< 0.001
Pyrene		< 0.1	< 0.1	<1	105	< 0.001
Total PAH		< 1.6	< 1.6	-	-	< 0.02
Chrysene-d12 (surr.)		82	99	-	89	120
2-Fluorobiphenyl (surr.)		84	100	-	75	98
Organochlorine Pesticides						
Chlordane		-	-	-	-	< 0.01
Endrin ketone		-	-	-	-	< 0.005
Hexachlorobenzene		-	-	-	-	< 0.005
Methoxychlor		< 0.05	-	-	79	< 0.005
Toxophene		-	-	-	-	< 0.01
Chlorinated Hydrocarbons						
1.4-Dichlorobenzene		< 0.05	-	-	96	< 0.005

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID	BUS 27-C	BUS 27-C	BUS 27-C	BUS 27-C	Method blank
71 Belair Rd	Lab Number	05-MY01724	05-MY01724	05-MY01724	05-MY01724	Batch
Kingswood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
South Australia 5062	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery	mg/L
Organochlorine Pesticides						
4,4'-DDD		< 0.05	< 0.05	<1	87	< 0.005
4,4'-DDE		< 0.05	< 0.05	<1	95	< 0.005
4,4'-DDT		< 0.05	< 0.05	<1	122	< 0.005
a-BHC		< 0.05	< 0.05	<1	86	< 0.005
Aldrin		< 0.05	< 0.05	<1	104	< 0.005
b-BHC		< 0.05	< 0.05	<1	77	< 0.005
Chlordane		< 0.1	< 0.1	<1	-	< 0.01
d-BHC		< 0.05	< 0.05	<1	89	< 0.005
Dieldrin		< 0.05	< 0.05	<1	97	< 0.005
Endosulfan I		< 0.05	< 0.05	<1	96	< 0.005
Endosulfan II		< 0.05	< 0.05	<1	93	< 0.005
Endosulfan sulphate		< 0.05	< 0.05	<1	84	< 0.005
Endrin		< 0.05	< 0.05	<1	83	< 0.005
Endrin aldehyde		< 0.05	< 0.05	<1	97	< 0.005
Endrin ketone		< 0.05	< 0.05	<1	-	< 0.005
g-BHC (Lindane)		< 0.05	< 0.05	<1	102	< 0.005
Heptachlor		< 0.05	< 0.05	<1	108	< 0.005
Heptachlor epoxide		< 0.05	< 0.05	<1	99	< 0.005
Hexachlorobenzene		< 0.05	< 0.05	<1	-	< 0.005
Methoxychlor		< 0.05	< 0.05	<1	-	< 0.005
Toxophene		< 0.1	< 0.1	<1	-	< 0.01
Dibutylchlorendate (surr.)		130	120	-	109	73
Tetrachloro-m-xylene (surr.)		130	99	-	109	91
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene		< 0.05	< 0.05	<1	-	< 0.005
1.2.3-Trichlorobenzene		< 0.05	< 0.05	<1	-	< 0.005
1.2.3.4-Tetrachlorobenzene		< 0.05	< 0.05	<1	-	< 0.005
1.2.3.5-Tetrachlorobenzene		< 0.05	< 0.05	<1	-	< 0.005

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample	BUS 27-C	BUS 27-C	BUS 27-C	BUS 27-C	Method blank
	Lab Number	05-MY01724	05-MY01724	05-MY01724	05-MY01724	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery	mg/L
Chlorinated Hydrocarbons						
1.2.4-Trichlorobenzene		< 0.05	< 0.05	<1	-	< 0.005
1.2.4.5-Tetrachlorobenzene		< 0.05	< 0.05	<1	-	< 0.005
1.3-Dichlorobenzene		< 0.05	< 0.05	<1	-	< 0.005
1.3.5-Trichlorobenzene		< 0.05	< 0.05	<1	-	< 0.005
1.4-Dichlorobenzene		< 0.05	< 0.05	<1	-	< 0.005
Benzal chloride		< 0.05	< 0.05	<1	-	< 0.005
Benzotrichloride		< 0.05	< 0.05	<1	84	< 0.005
Benzyl chloride		< 0.2	< 0.2	<1	-	< 0.02
Hexachlorobutadiene		< 0.05	< 0.05	<1	110	< 0.005
Hexachlorocyclopentadiene		< 0.05	< 0.05	<1	-	< 0.005
Hexachloroethane		< 0.05	< 0.05	<1	90	< 0.005
Pentachlorobenzene		< 0.05	< 0.05	<1	-	< 0.005
Polychlorinated Biphenyls						
Aroclor-1016		< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1221		< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1232		< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1242		< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1248		< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1254		< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1260		< 0.1	< 0.1	<1	-	< 0.01
Total PCB		< 1	< 1	<1	-	< 0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID	BUS 30-B	BUS 30-B	BUS 30-B	BUS 30-B	Method blank
71 Belair Rd	Lab Number	05-MY01730	05-MY01730	05-MY01730	05-MY01730	Batch
Kingswood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
South Australia 5062	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery	mg/L
Total Recoverable Hydrocarbons						
TRH C10-C14 Fraction by GC		< 50	< 50	<1	77	< 0.05
TRH C15-C28 Fraction by GC		< 100	< 100	<1	92	< 0.1
TRH C29-C36 Fraction by GC		< 100	< 100	<1	-	< 0.1
Heavy Metals (13)						
Antimony		< 10	< 10	<1	-	-
Arsenic		7.3	7.6	4.9	-	-
Beryllium		< 2	< 2	8.3	-	-
Cadmium		< 0.5	< 0.5	3.5	-	-
Chromium		19	18	4.6	-	-
Cobalt		< 5	< 5	2.1	-	-
Copper		65	110	50	-	-
Molybdenum		< 10	< 10	4.5	-	-
Nickel		7.4	7.0	4.2	-	-
Selenium		<2	<2	<1	-	-
Tin		67	70	5.7	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID	BUS 30-C	BUS 30-C	BUS 30-C	BUS 30-C	Method blank
71 Belair Rd	Lab Number	05-MY01731	05-MY01731	05-MY01731	05-MY01731	Batch
Kingswood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
South Australia 5062	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery	mg/L
Monocyclic Aromatic Hydrocarbons						
Benzene		< 0.05	< 0.05	<1	108	< 0.005
Toluene		<0.1	<0.1	<1	109	< 0.005
Ethylbenzene		< 0.05	< 0.05	<1	106	< 0.005
Xylenes(ortho.meta and para)		<0.1	<0.1	<1	112	< 0.005
Fluorobenzene (surr.)		110	95	-	94	88

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID	BUS 31-A	BUS 31-A	BUS 31-A	BUS 31-A	Method blank
71 Belair Rd	Lab Number	05-MY01732	05-MY01732	05-MY01732	05-MY01732	Batch
Kingswood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
South Australia 5062	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery	mg/L
Cyanide (total)		< 5	< 5	16	88	< 0.5
pH (1:5 aqueous extract)		8.6	8.6	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene		< 0.1	< 0.1	<1	-	-
Acenaphthylene		0.2	0.2	8.0	-	-
Anthracene		0.1	0.1	<1	-	-
Benz(a)anthracene		1.0	0.9	6.3	-	-
Benzo(a)pyrene		1.3	1.4	12	-	-
Benzo(b)fluoranthene		1.2	1.2	4.0	-	-
Benzo(g.h.i)perylene		1.3	1.4	3.6	-	-
Benzo(k)fluoranthene		1.3	1.2	7.6	-	-
Chrysene		1.0	1.0	7.7	-	-
Dibenz(a.h)anthracene		0.3	0.4	19	-	-
Fluoranthene		1.8	1.5	17	-	-
Fluorene		< 0.1	< 0.1	<1	-	-
Indeno(1.2.3-cd)pyrene		0.9	1.1	21	-	-
Naphthalene		< 0.1	< 0.1	<1	-	-
Phenanthrene		0.5	0.5	6.1	-	-
Pyrene		1.7	1.8	3.6	-	-
Total PAH		13	13	-	-	-
Chrysene-d12 (surr.)		84	100	-	-	-
2-Fluorobiphenyl (surr.)		85	100	-	-	-
Phenols						
2-Chlorophenol		<0.1	<0.1	<1	119	< 0.01
2-Methylphenol (o-Cresol)		<0.1	<0.1	<1	107	< 0.01
2-Nitrophenol		<0.5	<0.5	<1	-	< 0.05
2.4-Dichlorophenol		<0.1	<0.1	<1	110	< 0.01
2.4-Dimethylphenol		<0.1	<0.1	<1	114	< 0.01
2.4.6-Trichlorophenol		<0.1	<0.1	<1	-	< 0.01

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample	BUS 31-A	BUS 31-A	BUS 31-A	BUS 31-A	Method blank
71 Belair Rd	Lab Number	05-MY01732	05-MY01732	05-MY01732	05-MY01732	Batch
Kingswood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
South Australia 5062	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery	mg/L
Phenols						
2.6-Dichlorophenol		<0.1	<0.1	<1	-	< 0.01
3&4-Methylphenol (m&p-Cresol)		<0.1	<0.1	<1	102	< 0.01
4-Chloro-3-methylphenol		<0.1	<0.1	<1	96	< 0.01
Pentachlorophenol		<0.5	<0.5	<1	93	< 0.05
Phenol		<0.1	<0.1	<1	92	< 0.01
2.4-Dibromophenol (surr.)		100	110	-	104	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID	BUS 32-B	BUS 32-B	BUS 32-B	BUS 32-B
71 Belair Rd	Lab Number	05-MY01734	05-MY01734	05-MY01734	05-MY01734
Kingswood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
South Australia 5062	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery
Organochlorine Pesticides					
4,4'-DDD		<0.05	<0.05	<1	119
4,4'-DDE		< 0.05	< 0.05	16	95
4,4'-DDT		< 0.05	< 0.05	1.8	125
a-BHC		< 0.05	< 0.05	<1	86
Aldrin		<0.05	<0.05	<1	130
b-BHC		< 0.05	< 0.05	<1	77
Chlordane		<0.1	<0.1	<1	-
d-BHC		< 0.05	< 0.05	<1	105
Dieldrin		< 0.05	< 0.05	11	108
Endosulfan I		< 0.05	< 0.05	<1	110
Endosulfan II		< 0.05	< 0.05	<1	107
Endosulfan sulphate		< 0.05	< 0.05	<1	102
Endrin		< 0.05	< 0.05	<1	110
Endrin aldehyde		< 0.05	< 0.05	<1	105
Endrin ketone		< 0.05	< 0.05	<1	-
g-BHC (Lindane)		< 0.05	< 0.05	<1	102
Heptachlor		< 0.05	< 0.05	<1	108
Heptachlor epoxide		< 0.05	< 0.05	<1	116
Hexachlorobenzene		< 0.05	< 0.05	<1	-
Methoxychlor		< 0.05	< 0.05	<1	-
Toxophene		< 0.1	< 0.1	<1	-
Dibutylchlorendate (surr.)		110	95	-	112
Tetrachloro-m-xylene (surr.)		120	110	-	125
Chlorinated Hydrocarbons					
1.2-Dichlorobenzene		< 0.05	< 0.05	<1	-
1.2.3-Trichlorobenzene		< 0.05	< 0.05	<1	-
1.2.3.4-Tetrachlorobenzene		< 0.05	< 0.05	<1	-
1.2.3.5-Tetrachlorobenzene		< 0.05	< 0.05	<1	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample	BUS 32-B	BUS 32-B	BUS 32-B	BUS 32-B
	Lab Number	05-MY01734	05-MY01734	05-MY01734	05-MY01734
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery
Chlorinated Hydrocarbons					
1.2.4-Trichlorobenzene		< 0.05	< 0.05	<1	-
1.2.4.5-Tetrachlorobenzene		< 0.05	< 0.05	<1	-
1.3-Dichlorobenzene		< 0.05	< 0.05	<1	-
1.3.5-Trichlorobenzene		< 0.05	< 0.05	<1	-
1.4-Dichlorobenzene		< 0.05	< 0.05	<1	-
Benzal chloride		< 0.05	< 0.05	<1	-
Benzotrichloride		< 0.05	< 0.05	<1	-
Benzyl chloride		< 0.2	< 0.2	<1	-
Hexachlorobutadiene		< 0.05	< 0.05	<1	-
Hexachlorocyclopentadiene		< 0.05	< 0.05	<1	-
Hexachloroethane		< 0.05	< 0.05	<1	-
Pentachlorobenzene		< 0.05	< 0.05	<1	-
Polychlorinated Biphenyls					
Aroclor-1016		< 0.1	< 0.1	<1	-
Aroclor-1221		< 0.1	< 0.1	<1	-
Aroclor-1232		< 0.1	< 0.1	<1	-
Aroclor-1242		< 0.1	< 0.1	<1	-
Aroclor-1248		< 0.1	< 0.1	<1	-
Aroclor-1254		< 0.1	< 0.1	<1	-
Aroclor-1260		< 0.1	< 0.1	<1	-
Total PCB		< 1	< 1	<1	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID	BUS 34-B	BUS 34-B	BUS 34-B	BUS 34-B
71 Belair Rd	Lab Number	05-MY01738	05-MY01738	05-MY01738	05-MY01738
Kingswood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
South Australia 5062	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery
Heavy Metals (7)					
Mercury		0.1	0.1	15	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID	BUS 34-D	BUS 34-D	BUS 34-D	BUS 34-D	Method blank
71 Belair Rd	Lab Number	05-MY01740	05-MY01740	05-MY01740	05-MY01740	Batch
Kingswood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
South Australia 5062	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery	mg/L
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC		-	-	3.1	101	< 0.02
TRH C10-C14 Fraction by GC		< 50	-	-	80	-
Heavy Metals (13)						
Antimony		< 10	< 10	<1	82	-
Arsenic		8.8	7.4	18	85	-
Beryllium		< 2	< 2	0.30	98	-
Cadmium		< 0.5	< 0.5	<1	93	-
Chromium		6.9	6.2	11	91	-
Cobalt		< 5	< 5	<1	90	-
Copper		< 5	< 5	<1	94	-
Lead		5.5	< 5	17	87	-
Molybdenum		< 10	< 10	<1	92	-
Nickel		< 5	< 5	18	88	-
Selenium		<2	<2	<1	-	-
Tin		< 10	< 10	9.8	82	-
Zinc		15	13	18	97	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	BUS 35-A	BUS 35-A	BUS 35-A	BUS 35-A
	Lab Number	05-MY01741	05-MY01741	05-MY01741	05-MY01741
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery
Monocyclic Aromatic Hydrocarbons					
Benzene		< 0.05	< 0.05	<1	106
Toluene		< 0.05	< 0.05	<1	98
Ethylbenzene		< 0.05	< 0.05	<1	101
Xylenes(ortho.meta and para)		< 0.05	< 0.05	<1	104
Fluorobenzene (surr.)		89	83	-	90

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID	BUS 35-B	BUS 35-B	BUS 35-B	BUS 35-B
71 Belair Rd	Lab Number	05-MY01742	05-MY01742	05-MY01742	05-MY01742
Kingswood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
South Australia 5062	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery
Cyanide (total)		< 5	< 5	<1	90
pH (1:5 aqueous extract)		8.6	8.7	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID	BUS 35-C	BUS 35-C	BUS 35-C	BUS 35-C
71 Belair Rd	Lab Number	05-MY01743	05-MY01743	05-MY01743	05-MY01743
Kingswood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
South Australia 5062	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery
Polycyclic Aromatic Hydrocarbons					
Acenaphthene		< 0.1	< 0.1	<1	97
Acenaphthylene		< 0.1	< 0.1	<1	85
Anthracene		< 0.1	< 0.1	<1	77
Benz(a)anthracene		< 0.1	< 0.1	<1	93
Benzo(a)pyrene		< 0.1	< 0.1	<1	94
Benzo(b)fluoranthene		< 0.1	< 0.1	<1	120
Benzo(g.h.i)perylene		< 0.1	< 0.1	<1	110
Benzo(k)fluoranthene		< 0.1	< 0.1	<1	95
Chrysene		< 0.1	< 0.1	<1	115
Dibenz(a.h)anthracene		< 0.1	< 0.1	<1	111
Fluoranthene		< 0.1	< 0.1	<1	98
Fluorene		< 0.1	< 0.1	<1	98
Indeno(1.2.3-cd)pyrene		< 0.1	< 0.1	<1	84
Naphthalene		< 0.1	< 0.1	<1	78
Phenanthrene		< 0.1	< 0.1	<1	131
Pyrene		< 0.1	< 0.1	<1	102
Total PAH		< 1.6	< 1.6	-	-
Chrysene-d12 (surr.)		88	130	-	94
2-Fluorobiphenyl (surr.)		90	98	-	79
Organochlorine Pesticides					
4,4'-DDD		< 0.05	-	-	102
4,4'-DDE		< 0.05	-	-	105
4,4'-DDT		< 0.05	-	-	113
a-BHC		< 0.05	-	-	86
b-BHC		< 0.05	-	-	77
d-BHC		< 0.05	-	-	96
Endosulfan I		< 0.05	-	-	111
Endosulfan II		< 0.05	-	-	109

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample	RPD	BUS 35-C
71 Belair Rd	Lab Number	BATCH	05-MY01743
Kingswood	QA Description		Spike % Recovery
South Australia 5062	Matrix	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005
Analysis Type	**Units**		% Recovery
Organochlorine Pesticides			
Endosulfan sulphate		-	97
Endrin		-	111
Endrin aldehyde		-	102
g-BHC (Lindane)		-	102
Heptachlor		-	108
Heptachlor epoxide		-	104
Dibutylchlorendate (surr.)		-	114
Tetrachloro-m-xylene (surr.)		-	95

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID	BUS 36-A	BUS 36-A	BUS 36-A	BUS 36-A
71 Belair Rd	Lab Number	05-MY01744	05-MY01744	05-MY01744	05-MY01744
Kingswood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
South Australia 5062	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery
Organochlorine Pesticides					
4,4'-DDD		< 0.05	< 0.05	<1	-
4,4'-DDE		< 0.05	< 0.05	<1	-
4,4'-DDT		< 0.05	< 0.05	<1	-
a-BHC		< 0.05	< 0.05	<1	-
Aldrin		0.19	0.16	19	-
b-BHC		< 0.05	< 0.05	<1	-
Chlordane		< 0.1	< 0.1	<1	-
d-BHC		< 0.05	< 0.05	<1	-
Dieldrin		< 0.05	0.06	25	-
Endosulfan I		< 0.05	< 0.05	<1	-
Endosulfan II		< 0.05	< 0.05	<1	-
Endosulfan sulphate		< 0.05	< 0.05	<1	-
Endrin		< 0.05	< 0.05	<1	-
Endrin aldehyde		< 0.05	< 0.05	<1	-
Endrin ketone		< 0.05	< 0.05	<1	-
g-BHC (Lindane)		< 0.05	< 0.05	<1	-
Heptachlor		< 0.05	< 0.05	<1	-
Heptachlor epoxide		< 0.05	< 0.05	<1	-
Hexachlorobenzene		< 0.05	< 0.05	<1	-
Methoxychlor		< 0.05	< 0.05	<1	-
Toxophene		< 0.1	< 0.1	<1	-
Dibutylchlorendate (surr.)		72	72	-	-
Tetrachloro-m-xylene (surr.)		79	87	-	-
Chlorinated Hydrocarbons					
1.2-Dichlorobenzene		< 0.05	< 0.05	<1	-
1.2.3-Trichlorobenzene		< 0.05	< 0.05	<1	-
1.2.3.4-Tetrachlorobenzene		< 0.05	< 0.05	<1	-
1.2.3.5-Tetrachlorobenzene		< 0.05	< 0.05	<1	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample	BUS 36-A	BUS 36-A	BUS 36-A	BUS 36-A
	Lab Number	05-MY01744	05-MY01744	05-MY01744	05-MY01744
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery
Chlorinated Hydrocarbons					
1.2.4-Trichlorobenzene		< 0.05	< 0.05	<1	-
1.2.4.5-Tetrachlorobenzene		< 0.05	< 0.05	<1	-
1.3-Dichlorobenzene		< 0.05	< 0.05	<1	-
1.3.5-Trichlorobenzene		< 0.05	< 0.05	<1	-
1.4-Dichlorobenzene		< 0.05	< 0.05	<1	-
Benzal chloride		< 0.05	< 0.05	<1	-
Benzotrichloride		< 0.05	< 0.05	<1	-
Benzyl chloride		< 0.2	< 0.2	<1	-
Hexachlorobutadiene		< 0.05	< 0.05	<1	-
Hexachlorocyclopentadiene		< 0.05	< 0.05	<1	-
Hexachloroethane		< 0.05	< 0.05	<1	-
Pentachlorobenzene		< 0.05	< 0.05	<1	-
Polychlorinated Biphenyls					
Aroclor-1016		< 0.1	< 0.1	<1	-
Aroclor-1221		< 0.1	< 0.1	<1	-
Aroclor-1232		< 0.1	< 0.1	<1	-
Aroclor-1242		< 0.1	< 0.1	<1	-
Aroclor-1248		< 0.1	< 0.1	<1	-
Aroclor-1254		< 0.1	< 0.1	<1	-
Aroclor-1260		< 0.1	< 0.1	<1	-
Total PCB		< 1	< 1	<1	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID	BUS 40-C	BUS 40-C	BUS 40-C	BUS 40-C
71 Belair Rd	Lab Number	05-MY01748	05-MY01748	05-MY01748	05-MY01748
Kingswood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
South Australia 5062	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery
Heavy Metals (7)					
Mercury		< 0.1	< 0.1	<1	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	BUS 42-A	BUS 42-A	BUS 42-A	BUS 42-A
	Lab Number	05-MY01750	05-MY01750	05-MY01750	05-MY01750
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery
Total Recoverable Hydrocarbons					
TRH C10-C14 Fraction by GC		< 50	< 50	3.0	-
TRH C15-C28 Fraction by GC		< 100	< 100	5.8	-
TRH C29-C36 Fraction by GC		< 100	< 100	8.6	-
Heavy Metals (13)					
Antimony		< 10	< 10	<1	-
Arsenic		7.8	9.2	16	-
Beryllium		< 2	< 2	4.4	-
Cadmium		< 0.5	< 0.5	12	-
Chromium		7.7	8.2	5.7	-
Cobalt		< 5	< 5	6.3	-
Lead		54	50	7.4	-
Molybdenum		< 10	< 10	5.5	-
Nickel		5.1	5.9	14	-
Selenium		<2	<2	-	-
Tin		10	14	19	-
Zinc		72	88	20	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**	**BUS 43-A**	**BUS 43-A**	**BUS 43-A**	**BUS 43-A**
71 Belair Rd	**Lab Number**	**05-MY01751**	**05-MY01751**	**05-MY01751**	**05-MY01751**
Kingswood	**QA Description**		**Duplicate**	**Duplicate % RPD**	**Spike % Recovery**
South Australia 5062	**Matrix**	**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date	**May 13, 2005**	**May 13, 2005**	**May 13, 2005**	**May 13, 2005**
Analysis Type	**Units**			% RPD	% Recovery
Monocyclic Aromatic Hydrocarbons					
Benzene		< 0.05	< 0.05	<1	96
Toluene		< 0.05	< 0.05	<1	86
Ethylbenzene		< 0.05	< 0.05	<1	87
Xylenes(ortho.meta and para)		< 0.05	< 0.05	<1	89
Fluorobenzene (surr.)		71	75	-	87

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**	**BUS 43-B**	**BUS 43-B**	**BUS 43-B**	**BUS 43-B**
71 Belair Rd	**Lab Number**	**05-MY01752**	**05-MY01752**	**05-MY01752**	**05-MY01752**
Kingswood	**QA Description**		**Duplicate**	**Duplicate % RPD**	**Spike % Recovery**
South Australia 5062	**Matrix**	**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date	**May 13, 2005**	**May 13, 2005**	**May 13, 2005**	**May 13, 2005**
Analysis Type	**Units**			% RPD	% Recovery
Cyanide (total)		< 5	< 5	12	93
pH (1:5 aqueous extract)		8.7	8.8	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID	BUS 44-A	BUS 44-A	BUS 44-A	BUS 44-A
71 Belair Rd	Lab Number	05-MY01754	05-MY01754	05-MY01754	05-MY01754
Kingswood	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
South Australia 5062	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery
Organochlorine Pesticides					
4,4'-DDD		< 0.05	< 0.05	<1	-
4,4'-DDE		<0.05	<0.05	<1	-
4,4'-DDT		<0.05	<0.05	<1	-
a-BHC		< 0.05	< 0.05	<1	-
Aldrin		0.23	0.20	<1	-
b-BHC		< 0.05	< 0.05	<1	-
Chlordane		< 0.1	< 0.1	<1	-
d-BHC		< 0.05	< 0.05	<1	-
Dieldrin		0.95	0.79	<1	-
Endosulfan I		< 0.05	< 0.05	<1	-
Endosulfan II		<0.05	<0.05	<1	-
Endosulfan sulphate		< 0.05	< 0.05	<1	-
Endrin		<0.05	<0.05	<1	-
Endrin aldehyde		< 0.05	< 0.05	<1	-
Endrin ketone		<0.05	<0.05	<1	-
g-BHC (Lindane)		< 0.05	< 0.05	<1	-
Heptachlor		< 0.05	< 0.05	<1	-
Heptachlor epoxide		< 0.05	< 0.05	<1	-
Hexachlorobenzene		< 0.05	< 0.05	<1	-
Methoxychlor		< 0.05	< 0.05	<1	-
Toxophene		< 0.1	< 0.1	<1	-
Dibutylchlorendate (surr.)		93	84	-	-
Tetrachloro-m-xylene (surr.)		88	78	-	-
Chlorinated Hydrocarbons					
1.2-Dichlorobenzene		< 0.05	< 0.05	<1	-
1.2.3-Trichlorobenzene		< 0.05	< 0.05	<1	-
1.2.3.4-Tetrachlorobenzene		< 0.05	< 0.05	<1	-
1.2.3.5-Tetrachlorobenzene		< 0.05	< 0.05	<1	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample	BUS 44-A	BUS 44-A	BUS 44-A	BUS 44-A
	Lab Number	05-MY01754	05-MY01754	05-MY01754	05-MY01754
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery
Chlorinated Hydrocarbons					
1.2.4-Trichlorobenzene		< 0.05	< 0.05	<1	-
1.2.4.5-Tetrachlorobenzene		< 0.05	< 0.05	<1	-
1.3-Dichlorobenzene		< 0.05	< 0.05	<1	-
1.3.5-Trichlorobenzene		< 0.05	< 0.05	<1	-
1.4-Dichlorobenzene		< 0.05	< 0.05	<1	-
Benzal chloride		< 0.05	< 0.05	<1	-
Benzotrichloride		< 0.05	< 0.05	<1	-
Benzyl chloride		< 0.2	< 0.2	<1	-
Hexachlorobutadiene		< 0.05	< 0.05	<1	-
Hexachlorocyclopentadiene		< 0.05	< 0.05	<1	-
Hexachloroethane		< 0.05	< 0.05	<1	-
Pentachlorobenzene		< 0.05	< 0.05	<1	-
Polychlorinated Biphenyls					
Aroclor-1016		< 0.1	< 0.1	<1	-
Aroclor-1221		< 0.1	< 0.1	<1	-
Aroclor-1232		< 0.1	< 0.1	<1	-
Aroclor-1242		< 0.1	< 0.1	<1	-
Aroclor-1248		< 0.1	< 0.1	<1	-
Aroclor-1254		< 0.1	< 0.1	<1	-
Aroclor-1260		< 0.1	< 0.1	<1	-
Total PCB		< 1	< 1	<1	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**	**RPD**	**BUS 45-A**	**Method blank**
71 Belair Rd	**Lab Number**	**BATCH**	**05-MY01757**	**Batch**
Kingswood	**QA Description**		**Spike % Recovery**	
South Australia 5062	**Matrix**	**Soil**	**Soil**	**Soil**
	Sample Date	**May 13, 2005**	**May 13, 2005**	**May 13, 2005**
Analysis Type	**Units**		% Recovery	mg/L
Monocyclic Aromatic Hydrocarbons				
Benzene		-	104	-
Toluene		-	118	-
Ethylbenzene		-	124	-
Xylenes(ortho.meta and para)		-	120	-
Fluorobenzene (surr.)		-	114	-
Chlorinated Hydrocarbons				
1.2-Dichlorobenzene		-	126	< 0.005
1.3-Dichlorobenzene		-	-	< 0.02

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	BUS R1	BUS R1	BUS R1	BUS R1
	Lab Number	05-MY01758	05-MY01758	05-MY01758	05-MY01758
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Water	Water	Water	Water
	Sample Date	May 13, 2005	May 13, 2005	May 13, 2005	May 13, 2005
Analysis Type	**Units**			% RPD	% Recovery
Heavy Metals (7)					
Mercury		< 0.0001	< 0.0001	<1	106
Heavy Metals (13)					
Antimony		< 0.05	< 0.05	<1	100
Arsenic		< 0.001	< 0.001	<1	106
Beryllium		< 0.001	< 0.001	<1	107
Cadmium		< 0.0002	< 0.0002	<1	110
Chromium		< 0.001	< 0.001	7.0	102
Cobalt		< 0.001	< 0.001	<1	102
Copper		< 0.001	0.001	6.0	104
Lead		< 0.001	< 0.001	<1	112
Molybdenum		< 0.005	< 0.005	<1	96
Nickel		< 0.001	< 0.001	<1	108
Selenium		< 0.001	< 0.001	<1	101
Tin		< 0.005	< 0.005	<1	93
Zinc		< 0.001	< 0.001	<1	104

COMMENTS:

Chain of Custody

FAXED 12/5/05

FAXED

COC No: D0020
Page 1 of 9

PROJECT NAME: Bus Station	PROJECT NO: AAA 05 002 01	CONTACT PERSON: Daryl Burrows	CONTACT NO: 08 8373 2512
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Vic EPA Screen	PAH	Metals	pH		Hold												
BUS 22-A			10/05/05	Soil	1		X	X															
BUS 22-B			10/05/05	Soil	1		X	X															
BUS 22-C			10/05/05	Soil	1		X	X															
BUS 22-D			10/05/05	Soil	1		X	X															
BUS 23-A			10/05/05	Soil	1		X	X															
BUS 23-B			10/05/05	Soil	1						X												
BUS 23-C			10/05/05	Soil	1						X												
BUS 24-A			10/05/05	Soil	1		X	X															

COMMENTS:	
DESPATCH METHOD:	DATE/TIME: 11-05-05 15.00
RECEIVED BY: (signature) C Mills.	DATE/TIME: 13/5/05 9-

PREPARED BY (signature)

CHECKED BY: (signature) 182641.

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\AAA_05_002\01\COC 12-05-05.doc

sample 'A' has been split for missing sample 'O'

Chain of Custody

COC No: D0020
Page 2 of 9

PROJECT NAME: Bus Station	PROJECT NO: AAA 05 002 01	CONTACT PERSON: Daryl Burrows	CONTACT NO: 08 8373 2512
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Vic EPA Screen	PAH	Metals	pH		Hold													
BUS 24-B			10/05/05	Soil	1		X	X																
BUS 24-C			10/05/05	Soil	1		X	X																
BUS 25-A			10/05/05	Soil	1		X	X																
BUS 25-B			10/05/05	Soil	1						X													
BUS 25-C			10/05/05	Soil	1						X													
BUS 26-A			10/05/05	Soil	1		X	X																
BUS 26-B			10/05/05	Soil	1		X	X																
BUS 26-C			10/05/05	Soil	1		X	X																

COMMENTS:		
DESPATCH METHOD:	DATE/TIME: 11-05-05 15:00	PREPARED BY (signature)
RECEIVED BY: (signature) C Mills.	DATE/TIME: 13/5/05 9—.	CHECKED BY: (signature) 18264.

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\AAA_05_002\01\COC 12-05-05.doc

Chain of Custody

COC No: D0020
Page 3 of 9

PROJECT NAME: Bus Station	PROJECT NO: AAA 05 002 01	CONTACT PERSON: Daryl Burrows	CONTACT NO: 08 8373 2512
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Vic EPA Screen	PAH	Metals	pH		Hold														
BUS 27-A			10/05/05	Soil	1	X			X																
BUS 27-B			10/05/05	Soil	1	X			X																
BUS 27-C			10/05/05	Soil	1	X			X																
BUS 27-D			10/05/05	Soil	1	X			X																
BUS 28-A			10/05/05	Soil	1		X	X																	
BUS 28-B			10/05/05	Soil	1						X														
BUS 28-C			10/05/05	Soil	1						X														
BUS 29-A			10/05/05	Soil	1	X			X																

COMMENTS:

DESPATCH METHOD:	DATE/TIME: 11-05-05 15:00	PREPARED BY (signature)
RECEIVED BY (signature): C Mills.	DATE/TIME: 13/5/05 9am.	CHECKED BY (signature): 182641.

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\AAA_05_002\01\COC 12-05-05.doc

Chain of Custody

COC No: D0020
Page 4 of 9

PROJECT NAME: Bus Station	PROJECT NO: AAA 05 002 01	CONTACT PERSON: Daryl Burrows	CONTACT NO: 08 8373 2512
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Vic EPA Screen	PAH	Metals	pH		Hold
BUS 29-B			10/05/05	Soil	1	X			X		
BUS 29-C			10/05/05	Soil	1						X
BUS 30-A			10/05/05	Soil	1	X			X		
BUS 30-B			10/05/05	Soil	1	X			X		
BUS 30-C			10/05/05	Soil	1	X			X		
BUS 31-A			10/05/05	Soil	1	X			X		
BUS 31-B			10/05/05	Soil	1						X
BUS 31-C			10/05/05	Soil	1						X

COMMENTS:			
DESPATCH METHOD:	DATE/TIME: 11-05-05 15:00	PREPARED BY (signature)	
RECEIVED BY: (signature) C Mais.	DATE/TIME: 13/5/05 9am	CHECKED BY: (signature) 182641.	

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\AAA_05_002\01\COC 12-05-05.doc

Chain of Custody

COC No: D0020
Page 5 of 9

PROJECT NAME: Bus Station	PROJECT NO: AAA 05 002 01	CONTACT PERSON: Daryl Burrows	CONTACT NO: 08 8373 2512
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Vic EPA Screen	PAH	Metals	pH		Hold													
BUS 32-A			10/05/05	Soil	1	X			X															
BUS 32-B			10/05/05	Soil	1	X			X															
BUS 32-C			10/05/05	Soil	1	X			X															
BUS 33-A			10/05/05	Soil	1	X			X															
BUS 33-B			10/05/05	Soil	1						X													
BUS 33-C			10/05/05	Soil	1						X													
BUS 34-A			10/05/05	Soil	1	X			X															
BUS 34-B			10/05/05	Soil	1	X			X															
COMMENTS:																								

DESPATCH METHOD:	DATE/TIME: 11-05-05 15:00	PREPARED BY (signature)
RECEIVED BY: (signature) C Meiss	DATE/TIME: 13/5/05 9—	CHECKED BY: (signature) 182641.

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\AAA_05_00201\COC 12-05-05.doc

Chain of Custody

COC No: D0020
Page 6 of 9

PROJECT NAME: Bus Station	PROJECT NO: AAA 05 002 01	CONTACT PERSON: Daryl Burrows	CONTACT NO: 08 8373 2512
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO :	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Vic EPA Screen	PAH	Metals	pH		Hold												
BUS 34-C			10/05/05	Soil	1	X			X														
BUS 34-D			10/05/05	Soil	1	X			X														
BUS 35-A			10/05/05	Soil	1	X			X														
BUS 35-B			10/05/05	Soil	1	X			X														
BUS 35-C			10/05/05	Soil	1	X			X														
BUS 36-A			10/05/05	Soil	1	X			X														
BUS 36-B			10/05/05	Soil	1						X												
BUS 36-C			10/05/05	Soil	1						X												

COMMENTS:

DESPATCH METHOD:	DATE/TIME: 11-05-05 15:00	PREPARED BY (signature)
RECEIVED BY: (signature) C Mills.	DATE/TIME: 13/5/05 9—	CHECKED BY: (signature) 182641.

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\AAA_05_00201\COC 12-05-05.doc

Chain of Custody

COC No: D0020
Page 7 of 9

PROJECT NAME: Bus Station	PROJECT NO: AAA 05 002 01	CONTACT PERSON: Daryl Burrows	CONTACT NO: 08 8373 2512
LABORATORY: MGT	LAB CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Vic EPA Screen	PAH	Metals	pH		Hold												
BUS 37-A			10/05/05	Soil	1	X			X														
BUS 37-B			10/05/05	Soil	1						X												
BUS 37-C			10/05/05	Soil	1						X												
BUS 40-A			10/05/05	Soil	1	X			X														
BUS 40-B			10/05/05	Soil	1	X			X														
BUS 40-C			10/05/05	Soil	1	X			X														
BUS 41-A			10/05/05	Soil	1	X			X														
BUS 41-B			10/05/05	Soil	1						X												

COMMENTS:

DESPATCH METHOD:	DATE/TIME: 11-05-05 15:00	PREPARED BY (signature):
RECEIVED BY: (signature) C Meis.	DATE/TIME: 12/5/05 9—	CHECKED BY: (signature) 18241.

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\AAA_05_002\01\COC 12-05-05.doc

Chain of Custody

COC No: D0020
Page 8 of 9

PROJECT NAME: Bus Station	PROJECT NO: AAA 05 002 01	CONTACT PERSON: Daryl Burrows	CONTACT NO: 08 8373 2512
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Vic EPA Screen	PAH	Metals	pH		Hold
BUS 41-C			10/05/05	Soil	1						X
BUS 42-A			10/05/05	Soil	1	X			X		
BUS 42-B			10/05/05	Soil	1						X
BUS 42-C			10/05/05	Soil	1						X
BUS 43-A			10/05/05	Soil	1	X			X		
BUS 43-B			10/05/05	Soil	1	X			X		
BUS 43-C			10/05/05	Soil	1	X			X		
BUS 44-A			10/05/05	Soil	1	X			X		

COMMENTS:

DESPATCH METHOD:	DATE/TIME: 11-05-05 15:00	PREPARED BY (signature):
RECEIVED BY: (signature) C Mais.	DATE/TIME: 13/5/05 9	CHECKED BY: (signature) 1826 4.

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\AAA_05_002\01\COC 12-05-05.doc

Chain of Custody

COC No: D0020
Page 9 of 9

PROJECT NAME: Bus Station	PROJECT NO: AAA 05 002 01	CONTACT PERSON: Daryl Burrows	CONTACT NO: 08 8373 2512
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO :	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Vic EPA Screen	PAH	Metals	pH		Hold
BUS 44-B			10/05/05	Soil	1	X			X		
BUS 44-C			10/05/05	Soil	1	X			X		
BUS 45-A			10/05/05	Soil	1	X			X		
BUS 45-B			10/05/05	Soil	1						X
BUS 45-C			10/05/05	Soil	1						X
BUS R1			10/05/05	Water	6	X			X		
BUS R2			10/05/05	Water	6		X	X			
BUS T1			10/05/05	Water	6						X

COMMENTS:			
DESPATCH METHOD:	DATE/TIME: 11-05-05 15:00	PREPARED BY (signature)	
RECEIVED BY: (signature) C Mills.	DATE/TIME: 13/5/05 9-	CHECKED BY: (signature) 182641.	

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\AAA_05_002\01\COC 12-05-05.doc

Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION AAA 05 002 01

Order Number:
Date Received: Jul 01, 2005
Date Sampled: May 10, 2005
Date Reported: Jul 05, 2005
Contact: Daryl Burrows

Methods

- USEPA 6010B Heavy Metals USEPA 7470/71 Mercury
- USEPA 8270C Polycyclic Aromatic Hydrocarbons

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All soil results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 22-B	BUS 24-A	BUS 24-B	BUS 24-C
71 Belair Rd	Lab Number		05-JL00135	05-JL00136	05-JL00137	05-JL00138
Kingswood	Matrix		TCLP	TCLP	TCLP	TCLP
South Australia 5062	Sample Date		May 10, 2005	May 10, 2005	May 10, 2005	May 10, 2005
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/l	0.001	<0.0002	<0.0002	<0.0002
Acenaphthylene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Anthracene	0.001	mg/l	< 0.001	<0.0002	<0.0002	<0.0002
Benz(a)anthracene	0.001	mg/l	< 0.001	<0.0002	<0.0002	<0.0002
Benzo(a)pyrene	0.001	mg/l	< 0.001	<0.0002	<0.0002	<0.0002
Benzo(b)fluoranthene	0.001	mg/l	< 0.001	<0.0002	<0.0002	<0.0002
Benzo(g.h.i)perylene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(k)fluoranthene	0.001	mg/l	< 0.001	<0.0002	<0.0002	<0.0002
Chrysene	0.001	mg/l	< 0.001	<0.0002	<0.0002	<0.0002
Dibenz(a.h)anthracene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Fluoranthene	0.001	mg/l	0.002	<0.0002	< 0.001	<0.0002
Fluorene	0.001	mg/l	< 0.001	<0.0002	<0.0002	<0.0002
Indeno(1.2.3-cd)pyrene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Naphthalene	0.001	mg/l	< 0.001	<0.0002	< 0.001	<0.0002
Phenanthrene	0.001	mg/l	0.003	<0.0002	< 0.001	<0.0002
Pyrene	0.001	mg/l	0.001	<0.0002	< 0.001	<0.0002
Total PAH	0.02	mg/l	< 0.02	< 0.0032	< 0.0064	< 0.0032
Chrysene-d12 (surr.)	1	mg/l	110	100	110	94
2-Fluorobiphenyl (surr.)	1	mg/l	63	-	79	-
Heavy Metals (13)						
Antimony	0.05	mg/l	< 0.05	< 0.05	< 0.05	< 0.05
Arsenic	0.01	mg/l	< 0.01	< 0.01	< 0.01	< 0.01
Beryllium	0.01	mg/l	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	0.01	mg/l	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	0.01	mg/l	< 0.01	< 0.01	< 0.01	< 0.01
Cobalt	0.01	mg/l	< 0.01	< 0.01	< 0.01	< 0.01
Copper	0.01	mg/l	< 0.01	< 0.01	0.01	< 0.01
Lead	0.01	mg/l	< 0.01	0.01	< 0.01	< 0.01
Molybdenum	0.05	mg/l	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	0.01	mg/l	< 0.01	< 0.01	< 0.01	< 0.01

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**BUS 22-B**	**BUS 24-A**	**BUS 24-B**	**BUS 24-C**
71 Belair Rd	**Lab Number**		**05-JL00135**	**05-JL00136**	**05-JL00137**	**05-JL00138**
Kingswood	**Matrix**		**TCLP**	**TCLP**	**TCLP**	**TCLP**
South Australia 5062	**Sample Date**		**May 10, 2005**	**May 10, 2005**	**May 10, 2005**	**May 10, 2005**
Analysis Type	**LOR**	**Units**				
Selenium	0.05	mg/l	<0.02	< 0.05	< 0.05	<0.02
Tin	0.5	mg/l	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	0.01	mg/l	0.08	0.01	0.07	0.10

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		BUS 26-B	BUS 30-A	BUS 40-A	BUS 44-B
71 Belair Rd	Lab Number		05-JL00139	05-JL00140	05-JL00141	05-JL00142
Kingswood	Matrix		TCLP	TCLP	TCLP	TCLP
South Australia 5062	Sample Date		May 10, 2005	May 10, 2005	May 10, 2005	May 10, 2005
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Acenaphthylene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Anthracene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Benz(a)anthracene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(a)pyrene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(b)fluoranthene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(g.h.i)perylene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(k)fluoranthene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Chrysene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Dibenz(a.h)anthracene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Fluoranthene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Fluorene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Indeno(1.2.3-cd)pyrene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Naphthalene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Phenanthrene	0.001	mg/l	<0.0002	< 0.001	<0.0002	<0.0002
Pyrene	0.001	mg/l	<0.0002	<0.0002	<0.0002	<0.0002
Total PAH	0.02	mg/l	< 0.0032	< 0.004	< 0.0032	< 0.0032
Chrysene-d12 (surr.)	1	mg/l	94	85	-	-
Heavy Metals (13)						
Antimony	0.05	mg/l	< 0.05	< 0.05	< 0.05	< 0.05
Arsenic	0.01	mg/l	0.02	< 0.01	< 0.01	0.02
Beryllium	0.01	mg/l	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	0.01	mg/l	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	0.01	mg/l	< 0.01	< 0.01	0.02	< 0.01
Cobalt	0.01	mg/l	< 0.01	0.02	< 0.01	< 0.01
Copper	0.01	mg/l	0.01	0.01	0.03	0.01
Lead	0.01	mg/l	0.02	0.03	0.22	< 0.01
Molybdenum	0.05	mg/l	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	0.01	mg/l	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	0.05	mg/l	< 0.05	< 0.05	< 0.05	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**BUS 26-B**	**BUS 30-A**	**BUS 40-A**	**BUS 44-B**
71 Belair Rd	**Lab Number**		**05-JL00139**	**05-JL00140**	**05-JL00141**	**05-JL00142**
Kingswood	**Matrix**		**TCLP**	**TCLP**	**TCLP**	**TCLP**
South Australia 5062	**Sample Date**		**May 10, 2005**	**May 10, 2005**	**May 10, 2005**	**May 10, 2005**
Analysis Type	**LOR**	**Units**				
Tin	0.5	mg/l	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	0.01	mg/l	0.91	0.48	0.21	0.05

COMMENTS:

Chain of Custody

FAXED 30/6/05

COC No: D0029
Page 1 of 1

PROJECT NAME: Bus Station	PROJECT NO: AAA 05 002 01	CONTACT PERSON: Daryl Burrows	CONTACT NO: 08 8373 2512
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: TCLP of metals*	TCLP of PAH**
BUS 22-B	MM 1711		10/05/05	Soil	1	X	X
BUS 24-A	MM 1715		10/05/05	Soil	1	X	X
BUS 24-B	MM 1716		10/05/05	Soil	1	X	X
BUS 24-C	MM 1717		10/05/05	Soil	1	X	X
BUS 26-B	MM 1720		10/05/05	Soil	1	X	X
BUS 30-A	MM 1729		10/05/05	Soil	1	X	X
BUS 40-A	MM 1746		10/05/05	Soil	1	X	X
BUS 44-B	MM 1755		10/05/05	Soil	1	X	X

COMMENTS:
* Class 1 leaching fluid and metals as analysed for regular samples
** Class 1 leaching fluid
48 Hour turnaround

DESPATCH METHOD: Samples held By MGT	DATE/TIME:	PREPARED BY (signature):
RECEIVED BY: (signature) Carroll Lee	DATE/TIME: 1/7/05 2:50pm 184470	CHECKED BY: (signature)

Tierra Environment Pty Ltd
ACN 64 (11 615 680)
[illegible] Road [illegible] SA 5062
[illegible]
[illegible]
[illegible]

LT:21653

Your Ref: **Bus Station - AAA0500201**

25 May 2005

Tierra Environment Pty Ltd
71 Belair Road
KINGSWOOD SA 5062

Date Received: 13/05/2005

Date Sampled: 10/05/2005

Attention: **Mr. Daryl Burrows**

Certificate of Analysis

WSL Report Number: **815214**

The sample(s) referred to in this report were analysed by the following method(s):

Analyte(s)	Method
Cyanide	APHA 4120
Fluoride	WSL 077
Metals	WSL-032
OCs	WSL8000
PAHs	WSL8000
PCBs	WSL8000
pH	WSL 062
Total Phenolics	APHA 4120
TPH	WSL030
Volatiles	WSL3810A

Results pertain to samples as received

Yours faithfully
WSL Consultants Pty Ltd

Michael Clahsen
Client Manager

This laboratory is accredited by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its scope of accreditation. This document shall not be reproduced except in full. Accreditation No 1205

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au Web Page: www.ecowise.com.au

A NATA Accredited Laboratory
An Approved EPA Auditor & Analyst

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 23-May-2005
WSL Report No: 815214
WSL JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station - AAA0500201

LAB NUM	Received	Sample	pH (pH Units)	As	B	Ba	Be	Cd	Co	Cr	Cu	Hg	Mn	Mo	Ni	Pb	Sb	Se	Sn	Zn
815214	13-May-2005	BUS 23-D		<5	17	48	<5	<0.2	<5	<5	<5	<0.05	160	<5	5	<5	<5	<5	<5	13
815215	13-May-2005	BUS 30-D	9.2	5				0.6	15	17	31	0.77		<5	8	290		<5	18	290
815216	13-May-2005	BUS 43-C	9.3	<5				<0.2	7	20	7	0.07		<5	12	6		<5	<5	18

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 23-May-2005
WSL Report No: 815214
WSL JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station - AAA0500201

LAB NUM	Received	Sample	TPH C6-C9	TPH C10-C14	TPH C15-C28	TPH C29-C36	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES	STYRENE	CUMENE	1 2 4-TRI-METHYL BENZENE	TOTAL PHENOLS	SOLUBLE FLUORIDE	CYANIDE
815215	13-May-2005	BUS 30-D	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<5	<5
815216	13-May-2005	BUS 43-C	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	6	<5

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 23-May-2005
WSL Report No: 815214
WSL JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station - AAA0500201

LAB NUM	Received	Sample	NAP	ACY	ACE	FLU	PHE	ANT	FLA	PYR	BAA	CHR	BBF	BKF	BAP	DBA	BGP	IPY	TOTAL* PAH
815214	13-May-2005	BUS 23-D	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ND
815215	13-May-2005	BUS 30-D	<0.1	0.1	<0.1	<0.1	0.4	<0.1	1.5	1.7	0.9	1.0	0.9	1.1	1.3	0.1	0.9	0.9	11
815216	13-May-2005	BUS 43-C	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ND

ND = None detected at a concentration greater than the reporting limits specified above.

**** Total PAH's refers only to the sum of the positive individual PAH's tested above.***

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 23-May-2005
WSL Report No: 815214
WSL JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station - AAA0500201

LAB NUM	Received	Sample	HCB	a-BHC	LINDANE	HEPTACHLOR	ALDRIN	b-BHC	d-BHC	HEPTACHLOR-EPOXIDE	DDE	DIELDRIN
815215	13-May-2005	BUS 30-D	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
815216	13-May-2005	BUS 43-C	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 23-May-2005
WSL Report No: 815214
WSL JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station - AAA0500201

LAB NUM	Received	Sample	DDD	DDT	ENDRIN	METHOXYCHLOR	CHLORDANE	a-ENDO-SULPHAN	b-ENDO-SULPHAN	ENDOSULPHAN SULPHATE	ENDRIN ALDEHYDE
815215	13-May-2005	BUS 30-D	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
815216	13-May-2005	BUS 43-C	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 23-May-2005
WSL Report No: 815214
WSL JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station - AAA0500201

LAB NUM	Received	Sample	AROCLOR® 1016	AROCLOR® 1221	AROCLOR® 1232	AROCLOR® 1242	AROCLOR® 1248	AROCLOR® 1254	AROCLOR® 1260	TOTAL* PCBs
815215	13-May-2005	BUS 30-D	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ND
815216	13-May-2005	BUS 43-C	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ND

ND = None detected at a concentration greater than the reporting limit specified above.

**** Total PCB's refers only to the sum of the positive individual Aroclors® tested above.***

A blank space indicates no test performed

Results expressed as mg/kg dry weight

APPENDIX F – QUALITY ASSESSMENT

BALFOURS SITE	BUS 22-A Fill 05-MY01710	BUS 22-D Fill 05-MY01713	RPD %	BUS 27-A Fill 05-MY01722	BUS 27-D Fill 05-MY01725	RPD %	BUS 34-A Fill 05-MY01737	BUS 34-D Fill 05-MY01740	RPD %	BUS 23-A Fill 05-MY01714	BUS 23-D Fill 815214	RPD %	BUS 30-A Fill 05-MY01729	BUS 30-D Fill 815215	RPD %	BUS 43-C Natural 05-MY01753	BUS 43-C Natural 815216	RPD %	R1	R2
	Sample	Intra laboratory Duplicate		Sample	Intra laboratory Duplicate		Sample	Intra laboratory Duplicate		Sample	Inter Laboratory Duplicate		Sample	Inter Laboratory Duplicate		Sample	Inter Laboratory Duplicate			
CHLORINATED HYDROCARBONS				<LOR	<LOR		<LOR	<LOR					<LOR	-		<LOR	-		<LOR	
HEAVY METALS																				
Antimony	*5*	*5*	0.0%	*5*	*5*	0.0%	*5*	*5*	0.0%	*5*	-	-	*5*	-	-	*5*	-	-	< 0.05	< 0.05
Arsenic	*1*	*1*	0.0%	*1*	*1*	0.0%	6.1	8.8	36.2%	*1*	*2.5*	85.7%	3.4	5	38.1%	*1*	*2.5*	85.7%	< 0.001	< 0.001
Beryllium	< 2	< 2	-	< 2	< 2	-	< 2	< 2	-	< 2	*2.5*	-	< 2	-	-	< 2	-	-	< 0.001	< 0.001
Cadmium	*0.25*	*0.25*	0.0%	*0.25*	*0.25*	0.0%	*0.25*	*0.25*	0.0%	*0.25*	*0.1*	85.7%	*0.25*	0.6	82.4%	*0.25*	*0.1*	85.7%	< 0.0002	< 0.0002
Chromium	*2.5*	*2.5*	0.0%	*2.5*	*2.5*	0.0%	11	6.9	45.8%	*2.5*	*2.5*	0.0%	14	17	19.4%	13	20	42.4%	< 0.001	< 0.001
Cobalt	*2.5*	*2.5*	0.0%	*2.5*	*2.5*	0.0%	*2.5*	*2.5*	0.0%	*2.5*	*2.5*	0.0%	11	15	30.8%	*2.5*	7	94.7%	< 0.001	< 0.001
Copper	*2.5*	*2.5*	0.0%	*2.5*	*2.5*	0.0%	7.4	*2.5*	99.0%	*2.5*	*2.5*	0.0%	17	31	58.3%	6.3	7	10.5%	<0.001	<0.001
Lead	5.1	*2.5*	68.4%	*2.5*	*2.5*	0.0%	30	5.5	138.0%	*2.5*	*2.5*	0.0%	52	290	139.2%	5	6	18.2%	< 0.001	< 0.001
Mercury	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.025*	66.7%	0.1	0.77	154.0%	*0.05*	0.07	33.3%	< 0.001	< 0.001
Molybdenum	< 10	< 10	-	< 10	< 10	-	< 10	< 10	-	< 10	<5	-	< 10	*2.5*	-	< 10	<5	-	< 0.005	< 0.005
Nickel	*2.5*	*2.5*	0.0%	*2.5*	*2.5*	0.0%	*2.5*	*2.5*	0.0%	*2.5*	5	66.7%	7	8	13.3%	7.2	12	50.0%	< 0.001	< 0.001
Selenium	*1*	*1*	0.0%	*1*	*1*	0.0%	*1*	*1*	0.0%	*1*	*2.5*	85.7%	*1*	*2.5*	85.7%	*1*	*2.5*	85.7%	< 0.001	<0.001
Tin	*5*	*5*	0.0%	*5*	*5*	0.0%	*5*	*5*	0.0%	*5*	*2.5*	66.7%	12	18	40.0%	*5*	*2.5*	66.7%	< 0.005	< 0.005
Zinc	10	10	0.0%	*2.5*	*2.5*	0.0%	56	15	115.5%	9.2	13	34.2%	120	290	82.9%	11	18	48.3%	< 0.001	< 0.001
MISCELLANEOUS ANALYSES																				
pH (units) (1:5 aqueous extract)				8.9	8.7		8.8	7.6					8.2	9.2		9.5	9.3		8.6	-
CYANIDE				<LOR	<LOR	-	<LOR	<LOR	-				<LOR	<LOR		<LOR	<LOR		<LOR	
MAH's				<LOR	<LOR	-	<LOR	<LOR	-							<LOR	<LOR		<LOR	
Benzene				<0.05	<0.05	-	<0.05	<0.05	-				0.05	<0.5	-	<0.05	<0.05	-	<0.001	
Toluene				<0.05	<0.05	-	<0.05	<0.05	-				0.05	<0.5	-	<0.05	<0.05	-	<0.001	
Ethyl Benzene				<0.05	<0.05	-	<0.05	<0.05	-				0.12	<0.5	-	<0.05	<0.05	-	<0.001	
Xylenes				<0.05	<0.05	-	<0.05	<0.05	-				0.12	<0.5	-	<0.05	<0.05	-	<0.001	
ORGANOCHLORINE PESTICIDES				<LOR	<LOR		<LOR	<LOR					<LOR	<LOR		<LOR	<LOR		<LOR	
Aldrin				<0.05	<0.05	-	0.11	0.1	9.5%				<0.05	<0.05	-	<0.05	<0.05	-		
Dieldrin				<0.05	<0.05	-	0.48	0.08	142.9%				<0.05	<0.05	-	<0.05	<0.05	-		
POLYNUCLEAR AROMATIC HYDROCARBONS										<LOR	<LOR						<LOR		<LOR	<LOR
Naphthalene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Acenaphthylene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Acenaphthene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Fluorene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	0.3	*0.05*	142.9%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Phenanthrene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	0.1	0.4	120.0%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Anthracene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	0.3	*0.05*	142.9%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Fluoranthrene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	0.4	1.5	115.8%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Pyrene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	0.6	1.7	95.7%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Benzo(a)anthracene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	0.4	0.9	76.9%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Chrysene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	1	181.0%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Benzo(b)fluoranthene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	0.6	0.9	40.0%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Benzo(k)fluoranthene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	1.1	182.6%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Benzo(a)pyrene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	0.2	1.3	146.7%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Dibenzo(a,h)anthracene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	0.1	66.7%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Benzo(g,h,i)perylene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	0.1	0.9	160.0%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Indeno(1,2,3-cd)pyrene	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	*0.05*	*0.05*	0.0%	0.8	0.9	11.8%	*0.05*	*0.05*	0.0%	< 0.0001	< 0.0001
Total PAH	0.8	0.8	0.0%	0.8	0.8	0.0%	0.8	0.8	0.0%	0.8	0.8	0.0%	4.1	10.95	91.0%	0.8	0.8	0.0%	< 0.0016	< 0.0016
POLYCHLORINATED BIPHENYLS (PCB's)				<LOR	<LOR		<LOR	<LOR					<LOR	<LOR		<LOR	<LOR		<LOR	
PHENOLS & CRESOLS				<LOR	<LOR		<LOR	<LOR					<LOR	<LOR		<LOR	<LOR		<LOR	
TOTAL RECOVERABLE HYDROCARBONS				<LOR	<LOR		<LOR	<LOR					<LOR	<LOR		<LOR	<LOR		<LOR	

All concentrations are mg/L unless otherwise stated
<LOR indicates all analytes in the category were below the limit of detection, and so not shown
<LOR indicates some analytes in the category were below the limit of detection, and so not shown
Numbers in italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

APPENDIX G – PRO-UCL RESULTS

Balfours and Bus Stations Redevelopment **ProUCL for B(a)P for Task 3 Fill**

Data File	J:\05\AAA_05_002\01\Additional Invest Bus\S	Variable:	Benzo(a)Pyrene	
Raw Statistics		Normal Distribution Test		
Number of Valid Samples	9	Shapiro-Wilk Test Statisitic		0.44321
Number of Unique Samples	3	Shapiro-Wilk 5% Critical Value		0.829
Minimum	0.05	Data not normal at 5% significance level		
Maximum	11			
Mean	1.394444	95% UCL (Assuming Normal Distribution)		
Median	0.05	Student's-t UCL		3.639605
Standard Deviation	3.622106			
Variance	13.11965	Gamma Distribution Test		
Coefficient of Variation	2.597526	A-D Test Statistic		2.1342
Skewness	2.939801	A-D 5% Critical Value		0.810461
		K-S Test Statistic		0.484163
Gamma Statistics		K-S 5% Critical Value		0.301964
k hat	0.291592	Data do not follow gamma distribution		
k star (bias corrected)	0.268469	at 5% significance level		
Theta hat	4.782176			
Theta star	5.194065	95% UCLs (Assuming Gamma Distribution)		
nu hat	5.248657	Approximate Gamma UCL		6.267339
nu star	4.832438	Adjusted Gamma UCL		8.957984
Approx.Chi Square Value (.05)	1.075188			
Adjusted Level of Significance	0.02308	Lognormal Distribution Test		
Adjusted Chi Square Value	0.752241	Shapiro-Wilk Test Statisitic		0.570351
		Shapiro-Wilk 5% Critical Value		0.829
Log-transformed Statistics		Data not lognormal at 5% significance level		
Minimum of log data	-2.995732			
Maximum of log data	2.397895	95% UCLs (Assuming Lognormal Distribution)		
Mean of log data	-2.043323	95% H-UCL		49.87717
Standard Deviation of log data	1.969375	95% Chebyshev (MVUE) UCL		2.251104
Variance of log data	3.878437	97.5% Chebyshev (MVUE) UCL		2.972717
		99% Chebyshev (MVUE) UCL		4.390185
		95% Non-parametric UCLs		
		CLT UCL		3.380389
		Adj-CLT UCL (Adjusted for skewness)		4.644593
		Mod-t UCL (Adjusted for skewness)		3.836795
		Jackknife UCL		3.639605
		Standard Bootstrap UCL		N/R
		Bootstrap-t UCL		N/R
RECOMMENDATION		Hall's Bootstrap UCL		N/R
Data are Non-parametric (0.05)		Percentile Bootstrap UCL		N/R
		BCA Bootstrap UCL		N/R
Use 99% Chebyshev (Mean, Sd) UCL		95% Chebyshev (Mean, Sd) UCL		6.657243
		97.5% Chebyshev (Mean, Sd) UCL		8.93446
		99% Chebyshev (Mean, Sd) UCL		13.40761
Recommended UCL exceeds the maximum observation				
Consider using 95% or 97.5% Chebyshev (Mean, Sd) UCL				

Balfours and Bus Stations Redevelopment — ProUCL for PAH for Task 3 Fill

Data File	J:\05\AAA_05_002\01\Additional Invest Bus\S	Variable:	Total PAH		

Raw Statistics	
Number of Valid Samples	9
Number of Unique Samples	4
Minimum	0.8
Maximum	164.5
Mean	20.15
Median	0.8
Standard Deviation	54.22367
Variance	2940.206
Coefficient of Variation	2.691001
Skewness	2.980887

Gamma Statistics	
k hat	0.303009
k star (bias corrected)	0.27608
Theta hat	66.49962
Theta star	72.98603
nu hat	5.454166
nu star	4.969444
Approx.Chi Square Value (.05)	1.137696
Adjusted Level of Significance	0.02308
Adjusted Chi Square Value	0.801467

Log-transformed Statistics	
Minimum of log data	-0.223144
Maximum of log data	5.102911
Mean of log data	0.731184
Standard Deviation of log data	1.845746
Variance of log data	3.406779

RECOMMENDATION

Data are Non-parametric (0.05)

Use 99% Chebyshev (Mean, Sd) UCL

Recommended UCL exceeds the maximum observation

Consider using 95% or 97.5% Chebyshev (Mean, Sd) UCL

Normal Distribution Test	
Shapiro-Wilk Test Statisitic	0.422382
Shapiro-Wilk 5% Critical Value	0.829
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	53.76051

Gamma Distribution Test	
A-D Test Statistic	2.058619
A-D 5% Critical Value	0.806729
K-S Test Statistic	0.419436
K-S 5% Critical Value	0.301349
Data do not follow gamma distribution	
at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	88.01499
Adjusted Gamma UCL	124.9388

Lognormal Distribution Test	
Shapiro-Wilk Test Statisitic	0.618764
Shapiro-Wilk 5% Critical Value	0.829
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	396.1563
95% Chebyshev (MVUE) UCL	29.42607
97.5% Chebyshev (MVUE) UCL	38.72674
99% Chebyshev (MVUE) UCL	56.99611

95% Non-parametric UCLs	
CLT UCL	49.88
Adj-CLT UCL (Adjusted for skewness)	69.06988
Mod-t UCL (Adjusted for skewness)	56.75374
Jackknife UCL	53.76051
Standard Bootstrap UCL	N/R
Bootstrap-t UCL	N/R
Hall's Bootstrap UCL	N/R
Percentile Bootstrap UCL	N/R
BCA Bootstrap UCL	N/R
95% Chebyshev (Mean, Sd) UCL	98.93516
97.5% Chebyshev (Mean, Sd) UCL	133.0256
99% Chebyshev (Mean, Sd) UCL	199.9896

APPENDIX H – GROUND PENETRATING RADAR (TASK 1) REPORT

Ecophyte Technologies Pty Ltd

Report on Ground-Penetrating Radar (GPR) Investigations at the Franklin Street Bus Station, Adelaide City, South Australia.

STRICTLY CONFIDENTIAL

For the attention of the addressee/s only.

Report Reference: ET117

22 July 2005

Mr. Daryl Burrows
Tierra Environment Pty. Ltd.
71 Belair Road
Torrens Park 5062
SOUTH AUSTRALIA

Important information about your Ecophyte Technologies survey report.

These notes have been prepared by Ecophyte Technologies to help you interpret and understand the limitations of your report.

Your report is based on project specific criteria and has been developed on the basis of your unique project specific requirements as understood by Ecophyte Technologies and applies only to the Site(s) investigated.

Project criteria typically include:

- the general nature of the project;
- its size and configuration;
- the location of any structures on the Site;
- other Site improvements;
- the presence of underground utilities;
- the additional risk imposed by scope-of-service limitations imposed by the client.

Your report should not be relied upon if there are any material changes to the project criteria, without first asking Ecophyte Technologies to assess how factors that changed subsequent to the date of the report affect the report's recommendations. Ecophyte Technologies cannot accept responsibility for consequences that may occur due to changed factors if it is not consulted.

Natural processes and human activity create or vary subsurface conditions. For example, water levels can vary with time, fill may be placed on a Site and pollutants may migrate with the passing of time. Because a report is based on conditions extant at the time of the subsurface exploration, decisions should not be based on a report whose adequacy may have been affected by time. You should consult Ecophyte Technologies to be advised how time may have impacted on the project.

Site assessment identifies actual subsurface conditions only at those points where samples are taken and when they are taken. Data derived from literature and external data source review, sampling and subsequent laboratory testing are interpreted by geologists, engineers or scientists to provide an opinion about the overall Site conditions, their likely impact on the proposed development and recommended actions. Actual conditions may differ from those inferred to exist, because no professional, no matter how qualified, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual existing Site conditions, but steps may be taken to reduce the impact of unexpected conditions. For this reason the services of Ecophyte Technologies should be retained through the development stage, to:

- identify variances;
- conduct additional testing as required; and,
- recommend solutions to problems encountered.

Your report is based on the assumption that the Site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until project implementation has commenced and therefore your report recommendations can only be regarded as preliminary. Only Ecophyte Technologies, who has prepared the report, is fully familiar with the background information needed to assess whether or not the reports recommendations are valid and whether or not changes should be considered as a project develops. If another party undertakes the implementation of the recommendations of this report there is a risk that the report will be misinterpreted, and Ecophyte Technologies cannot be held responsible for such misinterpretation.

To avoid misuse of the information contained in your report, it is recommended that you confer with Ecophyte Technologies before passing your report on to another party who may not be familiar with the background and purpose of the report. Your report should not be applied to any other project other than that originally specified at the time the report as issued.

CONTENTS

Table of Abbreviations

m	=	metres
BGS	=	below ground surface

0.0 EXECUTIVE SUMMARY

Ground penetrating radar (GPR) surveys were undertaken over external and internal spaces within the Franklin Street Bus Station site, Adelaide City, South Australia. Approximately 400 profiles were collected in order to locate any underground fuel storage tanks (USTs) prior to redevelopment.

A total of fourteen anomalies were interpreted from radar time-slices collected in external areas. Each anomaly was checked against profile data and a likely cause determined after consideration of relevant site features. Of the fourteen anomalies, few display characteristics associated with underground storage tanks, and of these, only FB-11, FB-12 and FB13 are considered worthy of any follow-up. All of these anomalies occur in the large car parks to the east of the site and so it is possible that all are due to foundation elements, former sublevels or other infrastructure remaining after demolition of previous buildings.

No significant anomalies were interpreted from profiles collected in any of the internal spaces. Many utilities and suspected foundation elements are seen, but none of the responses are consistent with the model for underground storage tanks. Data coverage of internal areas was significantly affected by many obstacles, many of which were immovable.

Coverage of external areas was generally excellent, with only small areas not accessible within the survey period. The presence of rocks and vegetation precluded surveying activities in gardens bordering the Greyhound and Premier buildings. It is recommended that these areas be resurveyed following demolition and site clearing work.

Coverage of internal areas was significantly affected by presence of fittings and furniture, building elements, and some internal spaces were not able to be easily accessed during the survey period. Despite internal surveys failing to find any indications of USTs, it is recommended that any areas missed be resurveyed following demolition, or at least, following vacation of buildings by all tenants and removal of all fittings and furniture.

1.0 BACKGROUND

Ground-penetrating radar (GPR) surveying was proposed to investigate the possibility that underground fuel storage tanks (USTs) exist within the present site of the Adelaide Bus Terminal. The GPR method for discovery of subsurface tanks is widely reported in literature and is used regularly in this application by Ecophyte Technologies.

1.1 Areas of Interest

The areas of interest lie within the Adelaide Bus Terminal and are shown on Sheet 01 (also reproduced overleaf in A4 size). The survey area includes all external and (where accessible) internal spaces.

1.2 Description of Ground-Penetrating Radar (GPR) Method and Equipment

GPR detects changes in electromagnetic properties (due to dielectric permittivity, conductivity, and magnetic permeability) that are a function of subsurface material, structure, water content, and bulk density. Data are normally acquired using antennas placed on the ground surface. The transmitting antenna radiates electromagnetic waves that propagate in the subsurface and reflect from boundaries where electromagnetic property contrasts exist.

The receiving GPR antenna records the reflected waves over a user-selectable two-way travel time (TWTT) range that is typically measured in tens of nanoseconds (10^{-9} seconds). Typically, scans obtained as the antennae are moved over the ground surface are displayed side by side to produce a 2-dimensional profile. The location of the reflecting interfaces in the recorded data is apparent as peaks of either negative or positive polarisation. The location of the amplitude peaks can be accurately converted to a depth of the causative interface if the dielectric properties of the intervening strata are well understood. Water and air content are the greatest factors affecting the dielectric properties of natural materials.

Earth materials that feature an elevated magnetic susceptibility or electrical conductivity adversely affect the GPR method. This scenario can occur due to natural conditions including abundance of magnetic minerals, conductive clays, and groundwater, or because of anthropogenic noise in the form of steel reinforcing in concrete, or fluid contaminants in groundwater. However, these signal-attenuating conditions also provide the contrast necessary for their detection should they be the target of interest.

A RAMAC X3M GPR control unit and 500 MHz antenna were used in this investigation (see Figure 01). The RAMAC GPR was developed by Malå GeoScience of Sweden.

Figure 01. The Mala RAMAC/GPR 500MHz GPR System.

LEGEND

- External Survey Areas
- Internal Survey Areas
- Building Edge/Wall

Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)
Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
AREAS OF INTEREST (AOIs)

SHEET 01

1.3 Expected Geophysical Responses

The interpretation of geophysical data relies on identification of unusual responses as compared to background signatures. Often there are is limited information available about subsurface conditions and it becomes problematic to predict what constitutes an anomalous response, especially where the ground has been significantly changed by anthropogenic processes. In these cases it is necessary to consider any data with reference to conceptual or actual models of target response.

It is expected that metal underground storage tanks will be evident as significant disturbance in the GPR record relative to surrounding (relatively) undisturbed materials, and that large hyperbolae may also accompany this signal perturbation.

Figure 02 gives an example of a radar profile collected over known metallic tanks. Tanks are indicated by the large hyperbolae shown as dashed red lines. Note that where tanks are crossed oblique to the edges, the resulting hyperbolae can be asymmetrical. Where the tanks are traversed along axis (along a 'flat' surface), the response will be a flat strong reflector associated with 'tails' at the start and end. It is not usually possible to retrieve useful information directly below tank features due to the high reflectivity of the tank surface. However, dimensions of tanks can often be estimated from anomaly width and knowledge of tank shapes and lengths.

Associated pipes were also detected in this profile and are evident as very small hyperbolae closer to the surface. Reinforcing bars in a concrete slab are seen on the far right of the profile. The effect of these bars is to increase noise in the data under the slab, although major reflectors at depth are still obvious.

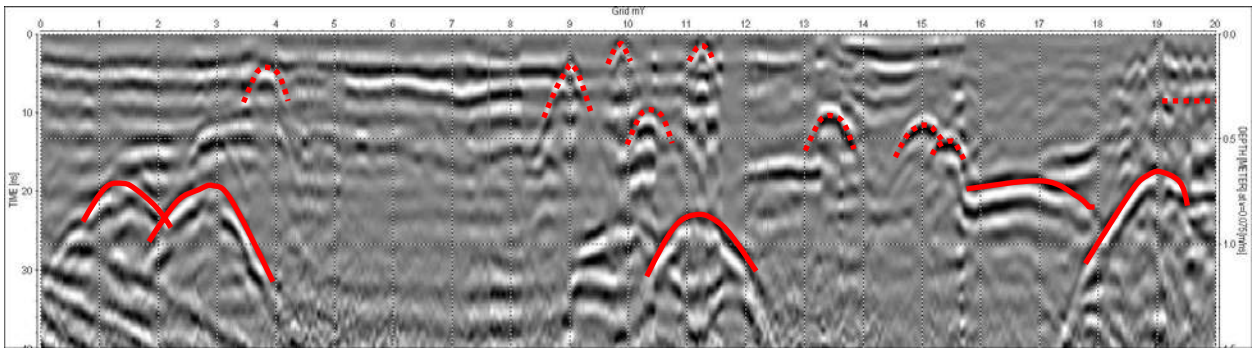


Figure 02. Typical GPR responses to underground storage tanks (USTs) are evident as large hyperbolae. Small near surface hyperbolae indicate pipework associated with deeper tanks. Reinforcing bar in concrete can be seen at the far right of the profile.

2.0 DATA ACQUISITION

2.1 Grid Emplacement

Grid lines were established using a sighting level and chain within the areas of interest.

2.2 Ground-Penetrating Radar Surveying

In the survey, approximately 400 GPR profiles were collected during the course of this survey. Profiles were collected in one direction (X or Y) for most of the grids, as dictated by site features and orientations, and internal fittings and furniture. Profiles were collected in X and Y directions where possible on some external grids (Bus Boarding West, Small Carpark #3). GPR profile lengths were crosschecked against total line length according to the physical grid. In the field, each GPR line was attributed with a unique identifying code, and start/end coordinates recorded.

Locations of all GPR profiles collected are shown in Sheet 02 (Appendix). Coverage of external areas was generally excellent, with only small areas not accessible within the survey period. The presence of rocks and vegetation precluded surveying activities in gardens bordering the Greyhound and Premier buildings. Coverage of internal areas was significantly affected by presence of fittings and furniture, building elements, and some internal spaces were not able to be easily accessed during the survey period.

A trace was collected at each 0.05-metre interval along survey lines, as determined by a calibrated survey wheel attached to the radar system. Signal stacking was employed throughout the acquisition, with the compromise between survey speed and data quality being found to be optimal at 16 stacks per measurement. This means that each recorded trace (0.05 metre) is the mean response from 16 individual radar pulses. The total time window of 50 nanoseconds was collected, with 250 samples being recorded in this time period. Each sample hence represents approximately 0.24 nanoseconds of the record, and assuming mean substrate velocity of 0.1 metres/nanosecond, equates to a sample interval of 0.01 metre.

The centre frequency of the antenna applied in this survey was 500 MHz (5x 10^8 cycles per second), and the dimension of the complete wavelength of this signal in a material with a dielectric constant equal to 9 (pulse velocity = 0.1 m/ns) is estimated to be 0.22m. The vertical resolution is considered equal to the thinnest horizontal structure capable of producing a reflection of the incident signal in a medium. Under these conditions, the vertical resolution of this survey is found to be 0.055m = ¼ of the wavelength.

3.0 DATA PROCESSING

Data were imported into ReflexW package from Ramac 16-Bit file type. Details of files upon import are summarised in the appendices.

Processing steps were applied to this data in the following scheme:

- Subtract Mean (DEWOW) – removal of low frequency effects in data.
- Static Corrections – a. Move Start Time as per first arrival pick.
- Gain – Energy Decay; applied to restore energy lost in spherical spreading and attenuation.
- Kirchoff Migration – this step was performed to correct for the pulse velocity variation through differing materials. This step is performed to return reflecting boundaries in the data to their correct geometry and position.
- 2D Filter – Background Removal; a mean trace is calculated for each file and subtracted from each trace of the file. This removes any consistent noise in the signal that is typically associated with poor coupling during acquisition or system noise.
- Frequency Filter – Bandpass; used to improve resolution of reflectors.
- 2D Filter – Average Filter; spatially averages the amplitude of the sample over a period of 3 traces and 3 samples. This is done to clarify reflector surfaces for interpretation.
- Envelope – Used to remove oscillatory character of radar data (uses Hilbert Transform to convert positive and negative components of the pulse to absolute values) which gives a better idea of the actual resolution of the data.

Following processing steps, profiles were converted to raster images for interpretation.

4.0 RESULTS

This section records the interpretations made on the basis of the geophysical data, incorporating elements of the expected geological and geophysical models.

A total of fourteen anomalies were interpreted to anomalous based on criteria discussed in Section 1.3. These anomalies are designated FB-01 to FB-13 (anomaly FB-09 consists of 2 parts – A & B). All anomalies are described in detail in Table 01 (overleaf) and locations are shown on Sheet 01 (reproduced as A4 sheet following table).

A few of the anomalies exhibit characteristics of underground storage tanks, although none are the 'classic' response usually seen. Anomalies FB-11, FB-12 and FB-13 are the most convincing anomalies, although they are likely related to utilities or foundation elements remaining after demolition of previous structures, respectively. Comparison of the anomaly locations with any historic plans or aerial photos would be useful to help determine a cause for these anomalies.

No significant anomalies were interpreted from profiles collected in any of the internal spaces. Many utilities and suspected foundation elements are seen, but none of the responses are consistent with the model for underground storage tanks. Data coverage of internal areas was significantly affected by many obstacles, many of which were immovable. Also, where very short lines have been collected, it is difficult to offer a definitive result on UST occurrence in that area. This is because recognition of anomalous responses generally relies on some indication of a background response, from which an anomaly would vary significantly. Very short lines do not offer that possibility.

Anomaly ID	Location	Description	Relevant Sheets
FB-01	Small Carpark #1, near boom gate	Small anomaly over three timeslices. Likely caused by subsurface boom gate infrastructure or utilities.	08, 09
FB-02	Small Carpark #1, Bus Boarding Area (West)	Spatially large, high-amplitude anomalies running in rough linear trend along southern edge of the carpark. Profile data indicate large subsurface utility in same location and likely that anomalies are due to the pipe, associated trenches and disturbed soil layers above.	08, 09
FB-03	Bus Boarding Area (West) – near Bowen Street	Wide anomaly consisting of several high-amplitude reflections which appear to have slumped as compared to surrounding ground. Does not exhibit tank-like features and probably related to nearby utilities, or a buried slab or previous land surface. Some small hyperbolae indicate this feature is associated with utilities also.	08, 10
FB-04	Directly SE of CoachFreight building	Small medium amplitude, bulls-eye anomaly seen on most timeslices. Profiles indicate slumping and disruption of near surface reflectors, similar to FB-03. Does not exhibit tank characteristics.	08, 10
FB-05	Southern end of roadway bordering Small Carpark #2	Small medium amplitude, bulls-eye anomaly seen on most timeslices. Profile BJ4 shows broad hyperbola, but not replicated on other lines. This anomaly is almost certainly related to nearby utilities, seen as small hyperbolae at the end of the profile.	08, 10
FB-06	Bus Boarding East – near ramp to rear of Greyhound Terminal	Deep (>1.5m) anomaly located adjacent to the western wall of the Greyhound Terminal. Exhibits hyperbola shape consistent with UST, but is more likely related to foundation elements of the present day building.	08, 11
FB-07	Small Carpark #4	Sharp-sided anomaly about 2m wide. In profile, this anomaly indicates some characteristics of a concrete structure, possibly a buried slab or foundation elements. Unlikely to be a concrete tank.	08, 12
FB-08	Small Carpark #4	Sharp-sided attenuation anomaly. Unknown cause but possibly related to buried slab containing high amounts of metal. Not likely to be a UST.	08, 12
FB-09A	Small Carpark #3	Small anomaly seen on two slices. Profiles indicate associated with utility.	08, 11
FB-09B	Small Carpark #3	Square (regular) shaped anomaly seen in one slice. Is almost certainly associated with a utility running across the area from SW to NE, which is very clear in the timeslice data.	08, 11
FB-10	Franklin Street Carpark	Large discrete hyperbolic anomaly at ~ 1.2m BGS on 3-4 adjacent profiles. Profiles run either side of large tree, and it is likely that the anomaly is due to large tree roots.	08, 13
FB-11	Franklin Street Carpark	Significant anomaly evident on all timeslices. Sharp edges and high-amplitude responses within generally disturbed matrix. Coincident with slight surface depression. Whilst not exhibiting classic tank characteristics, this anomaly is worthy of further consideration.	08, 13
FB-12	Grote Street Carpark	Strong reflectors which appear to be slightly inclined to the south. Adjacent data shows variation of near-surface reflectors which could indicate disturbed ground. Unusual anomaly which exhibits some characteristics of a UST and probably worthy of further investigation.	08, 14
FB-13	Grote Street Carpark	Large cluster of related anomalies which are evident on all timeslices. Profile data indicates a wide zone of anomalism with evidence of disturbed ground, sharp-edged elements (esp. profile X109 & X 108. Although this feature has several characteristics of a UST, it is most likely related to foundation elements from previous buildings.	08, 14

LEGEND

- Areas Excluded From Surveying
- Building Edge/Wall
- Interpreted Anomalous Response 0.0-0.4m
- Interpreted Anomalous Response 0.04-0.8m
- Interpreted Anomalous Response 0.8-1.2m
- Interpreted Anomalous Response 1.2-1.6m
- Interpreted Anomalous Response 1.6-2.0m

Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
EXTERNAL SURVEY AREAS – COMPILED ANOMALIES

SHEET 08

5.0 CONCLUSIONS

Ground penetrating radar (GPR) surveys were undertaken over external and internal spaces within the Franklin Street Bus Station site, Adelaide City, South Australia. Approximately 400 profiles were collected in order to locate any underground fuel storage tanks prior to redevelopment.

A total of fourteen anomalies were interpreted from radar timeslices collected in external areas. These are designated FG-01 to FG-13. Each anomaly was checked against profile data and, a likely cause determined after consideration of relevant site features. Of the thirteen anomalies, few display characteristics associated with underground storage tanks, and of these, only FB-11, FB-12 and FB13 are considered worthy of any follow-up. All of these anomalies occur in the large car parks to the east of the site and so it is possible that all are due to foundation elements, former sublevels or other infrastructure remaining after demolition of previous buildings.

No significant anomalies were interpreted from profiles collected in any of the internal spaces. Many utilities and suspected foundation elements are seen, but none of the responses are consistent with the model for underground storage tanks. Data coverage of internal areas was significantly affected by many obstacles, many of which were immovable.

Coverage of external areas was generally excellent, with only small areas not accessible within the survey period. The presence of rocks and vegetation precluded surveying activities in gardens bordering the Greyhound and Premier buildings. It is recommended that these areas be resurveyed following demolition and site clearing work.

Coverage of internal areas was significantly affected by presence of fittings and furniture, building elements, and some internal spaces were not able to be easily accessed during the survey period. Despite internal surveys failing to find any indications of USTs, it is recommended that any areas missed be resurveyed following demolition, or at least, following vacation of buildings by all tenants and removal of all fittings and furniture.

6.0 APPENDICES

Plan Sheets 01 to 19.

LEGEND

- External Survey Areas
- Internal Survey Areas
- Building Edge/Wall

Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
AREAS OF INTEREST (AOIs)

SHEET 01

LEGEND

- Areas Excluded From Surveying
- Building Edge/Wall
- GPR Profile

Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

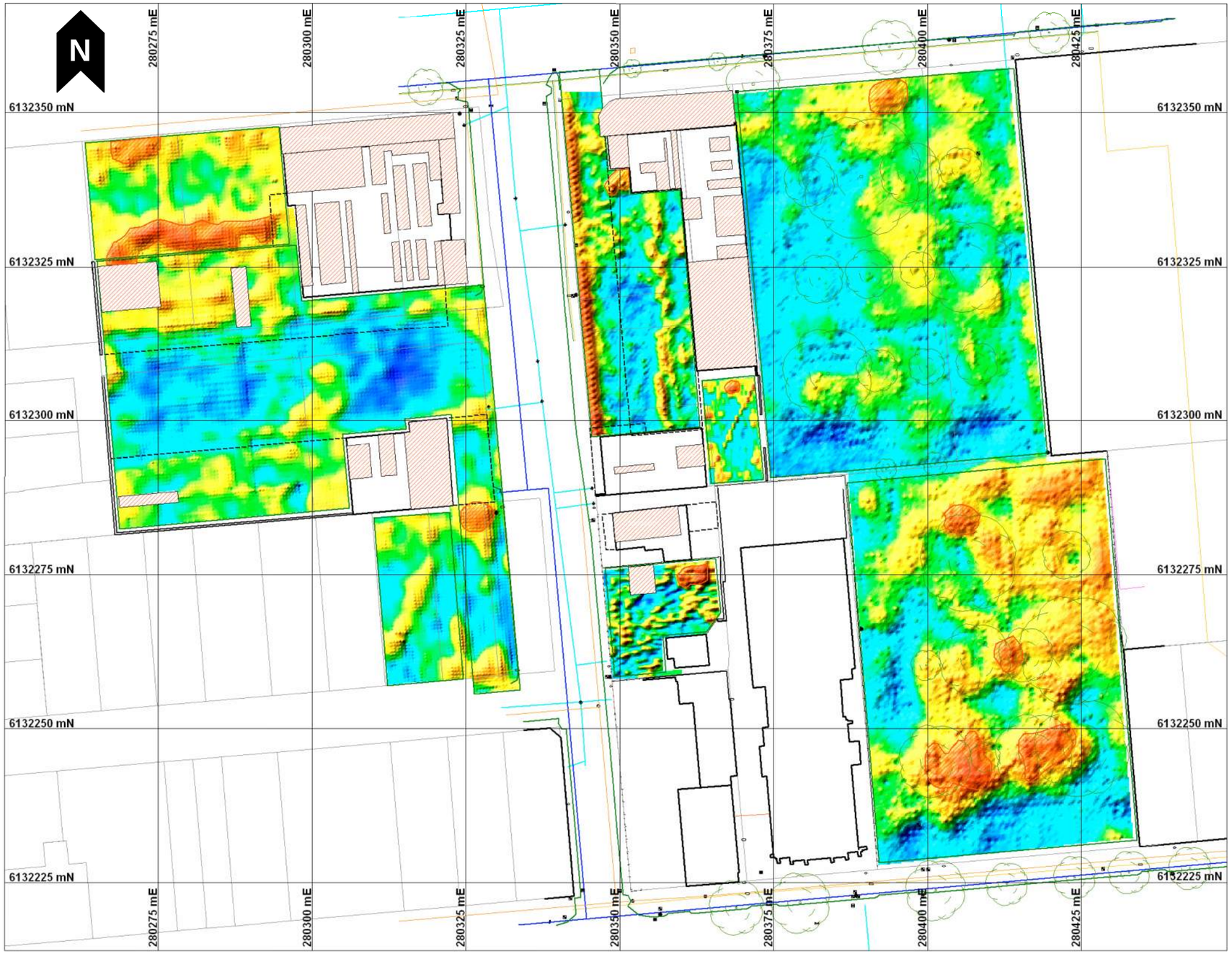
Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
ALL SURVEY GRIDS – GPR PROFILE LOCATIONS

SHEET
02

LEGEND

- Areas Excluded From Surveying
- Building Edge/Wall
- Interpreted Anomalous Response



Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

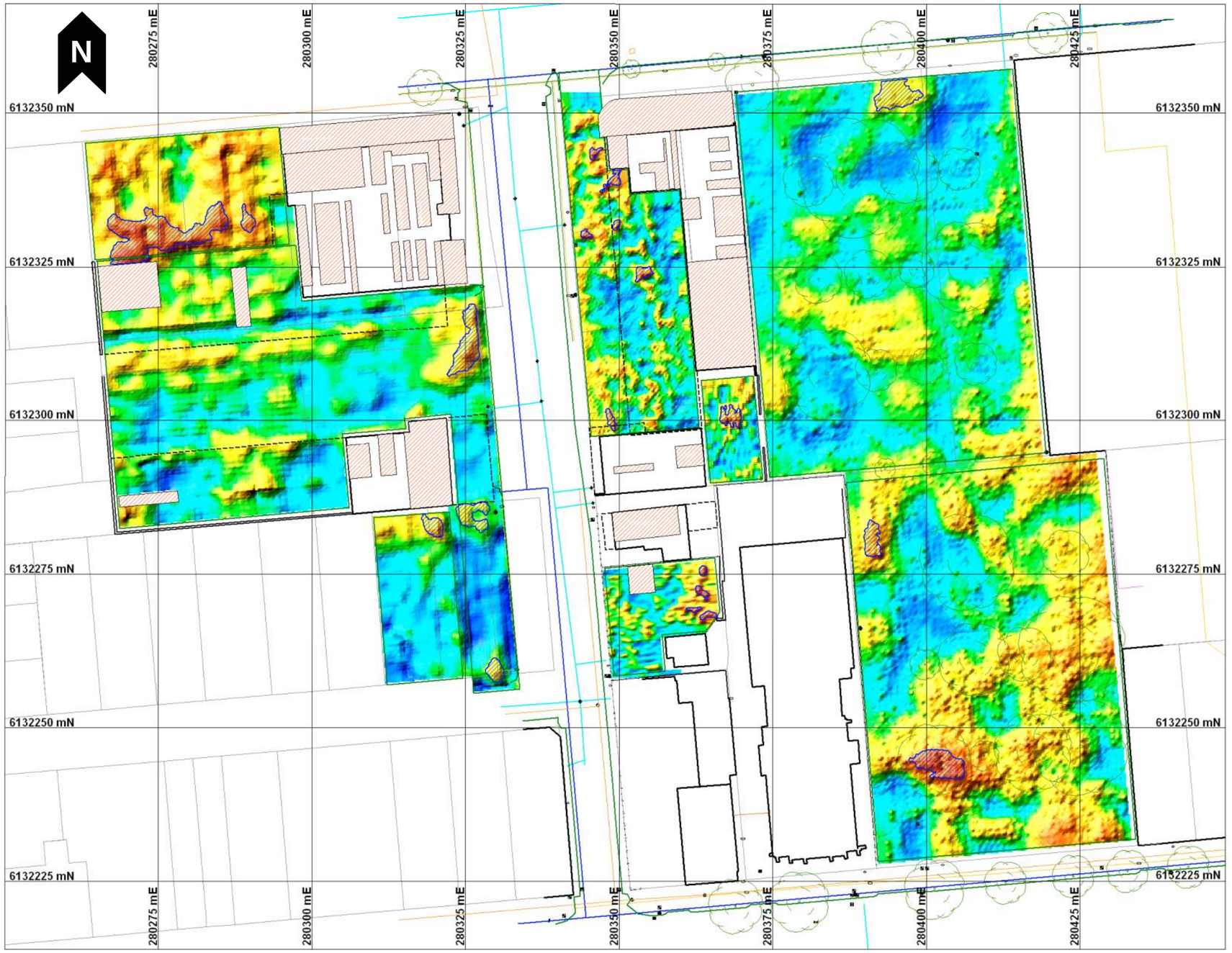
Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
EXTERNAL SURVEY AREAS – TIMESLICE 0.0 TO 0.4m BGS

SHEET 03

LEGEND

- Areas Excluded From Surveying
- Building Edge/Wall
- Interpreted Anomalous Response



Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

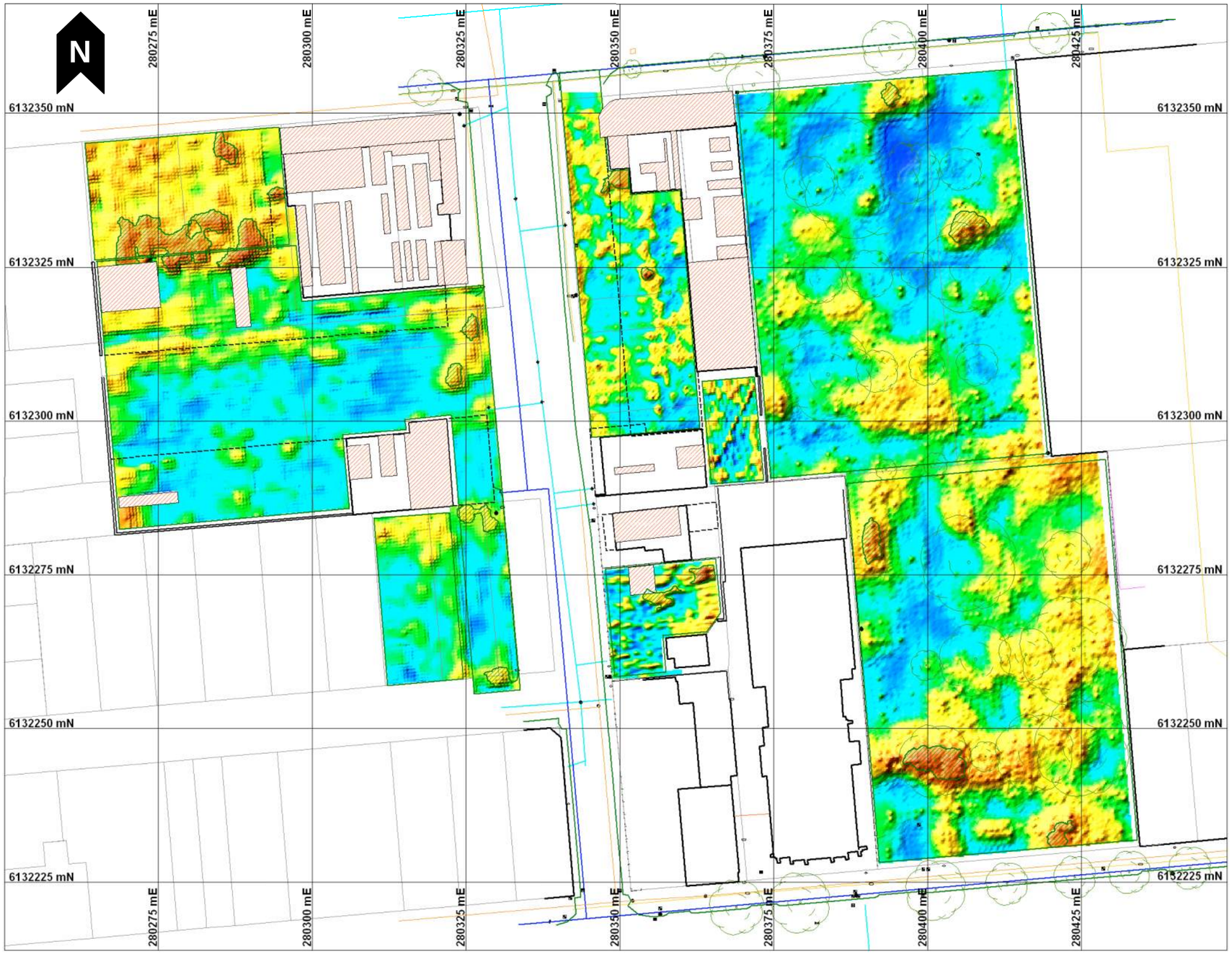
Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
EXTERNAL SURVEY AREAS – TIMESLICE 0.4 TO 0.8m BGS

SHEET 04

LEGEND

- Areas Excluded From Surveying
- Building Edge/Wall
- Interpreted Anomalous Response



Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

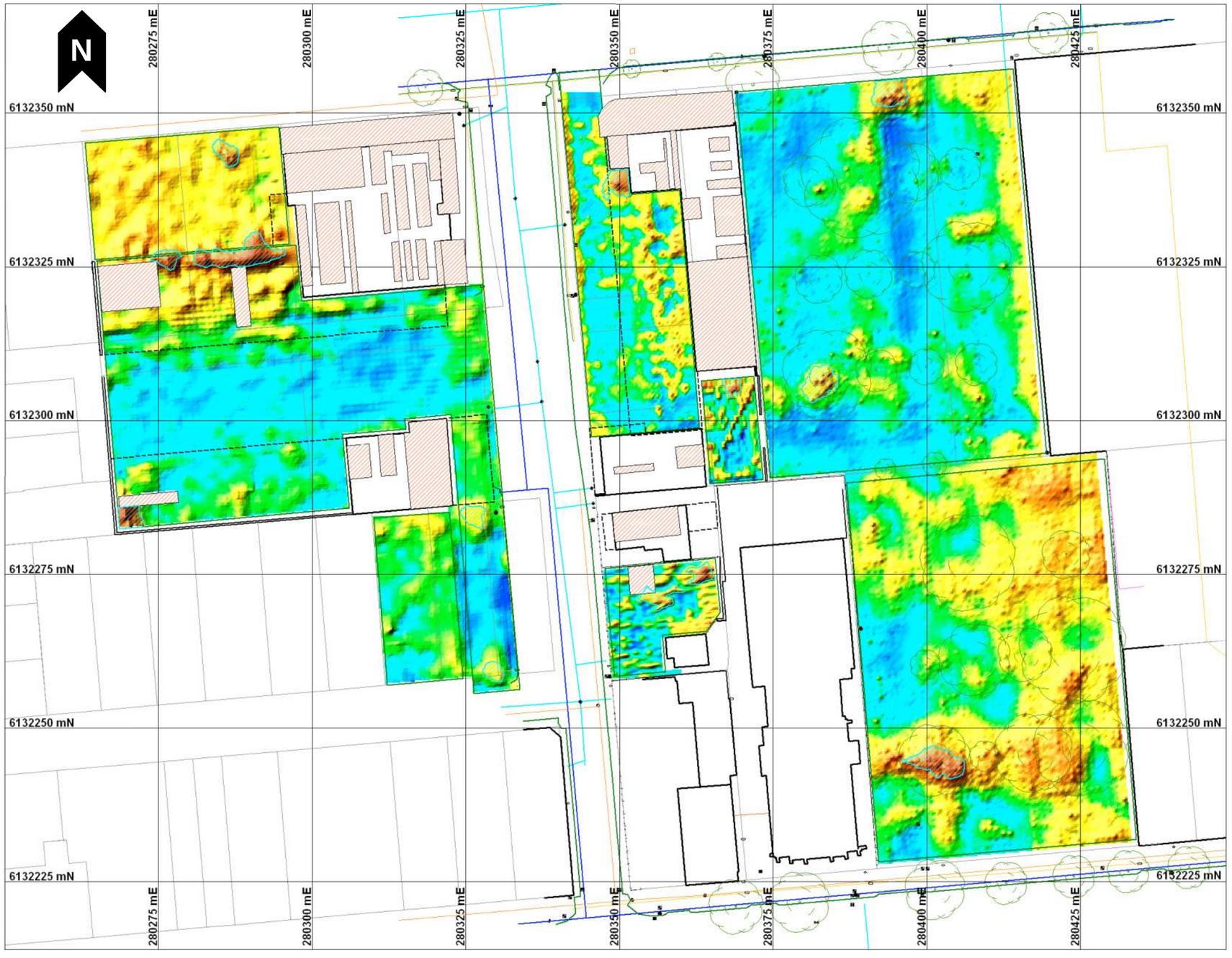
Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
EXTERNAL SURVEY AREAS – TIMESLICE 0.8 TO 1.2m BGS

SHEET 05

LEGEND

- Areas Excluded From Surveying
- Building Edge/Wall
- Interpreted Anomalous Response



Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

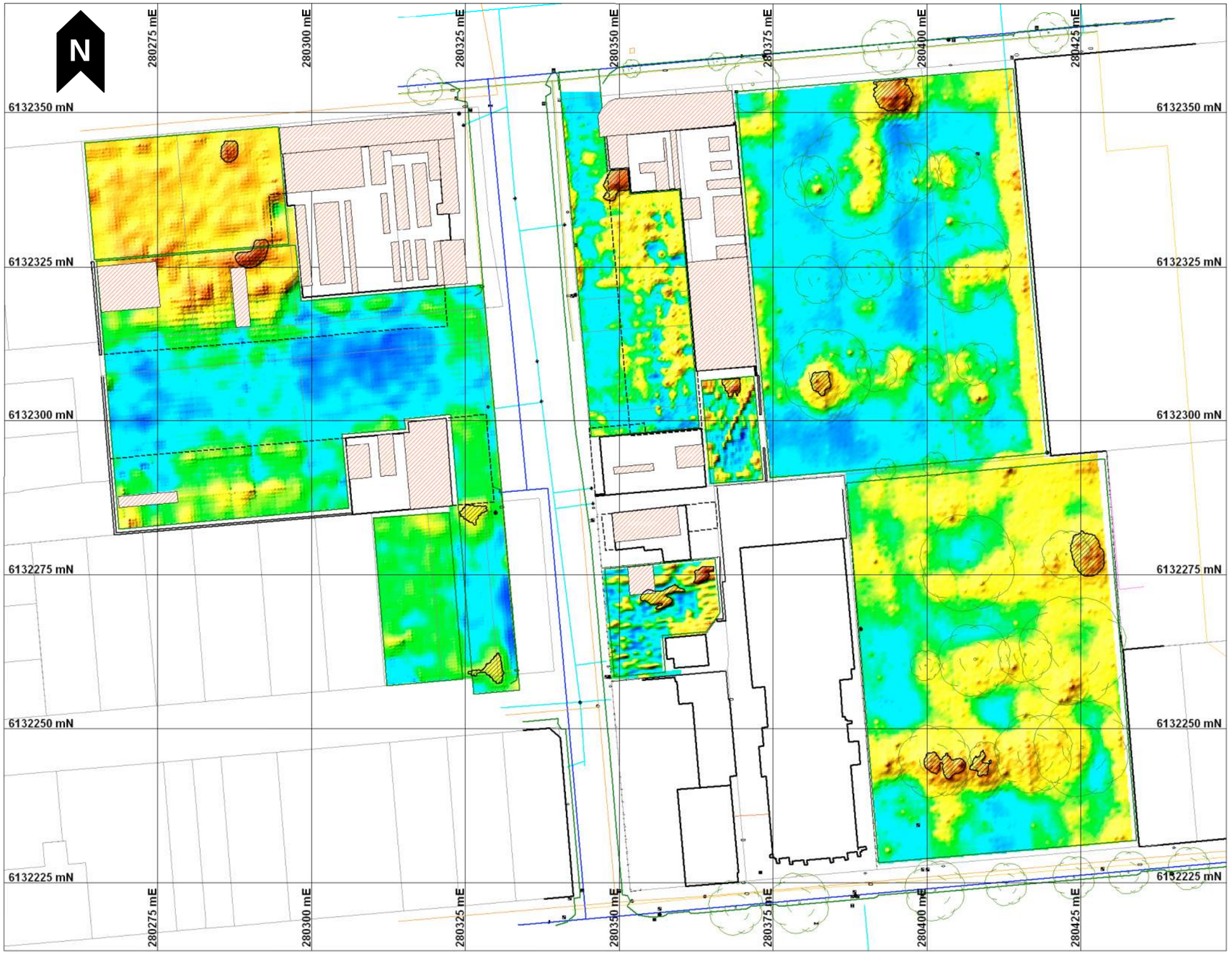
Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
EXTERNAL SURVEY AREAS – TIMESLICE 1.2 TO 1.6m BGS

SHEET 06

LEGEND

- Areas Excluded From Surveying
- Building Edge/Wall
- Interpreted Anomalous Response



Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
EXTERNAL SURVEY AREAS – TIMESLICE 1.6 TO 2.0m BGS

SHEET 07

LEGEND

- Areas Excluded From Surveying
- Building Edge/Wall
- Interpreted Anomalous Response 0.0-0.4m
- Interpreted Anomalous Response 0.04-0.8m
- Interpreted Anomalous Response 0.8-1.2m
- Interpreted Anomalous Response 1.2-1.6m
- Interpreted Anomalous Response 1.6-2.0m

Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

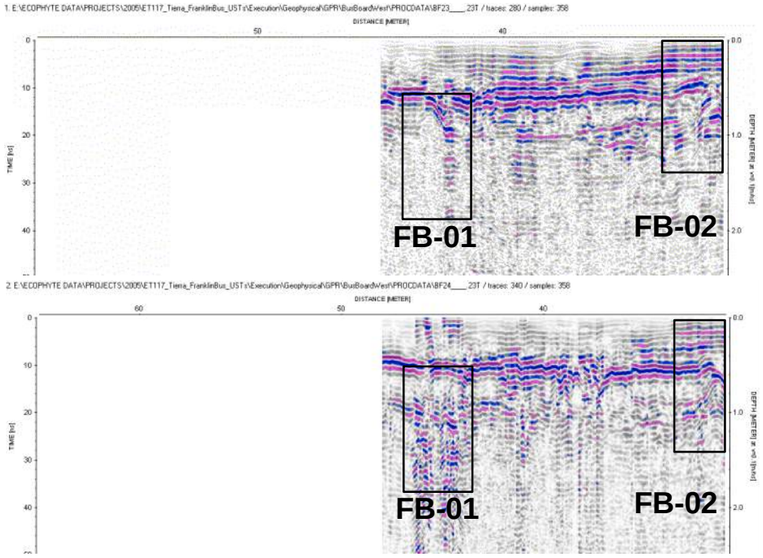
~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

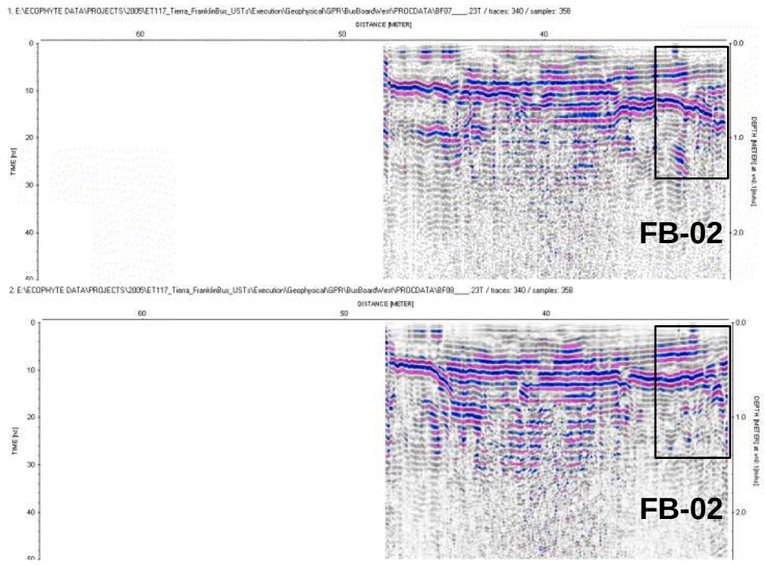
Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

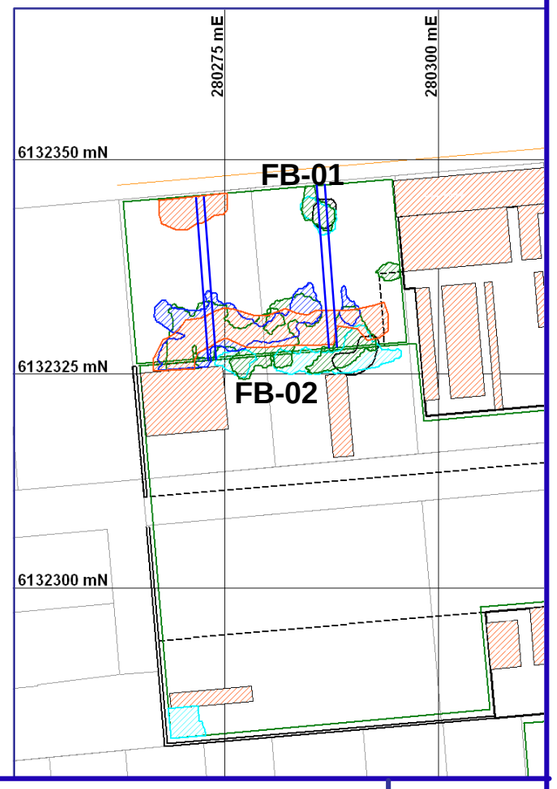
Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
EXTERNAL SURVEY AREAS – COMPILED ANOMALIES

SHEET
08







Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

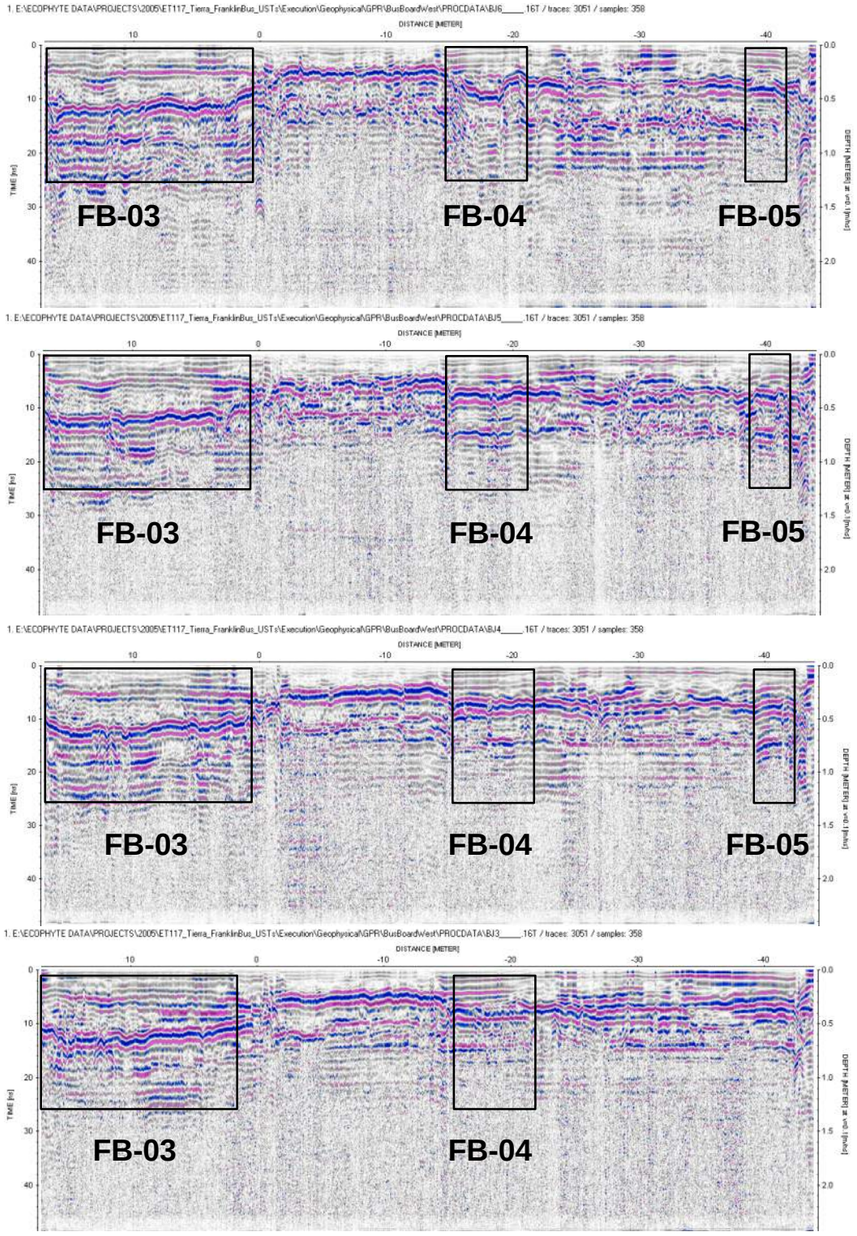
~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
ANOMALY ANALYSIS FB-01 & FB-02

SHEET
09



Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

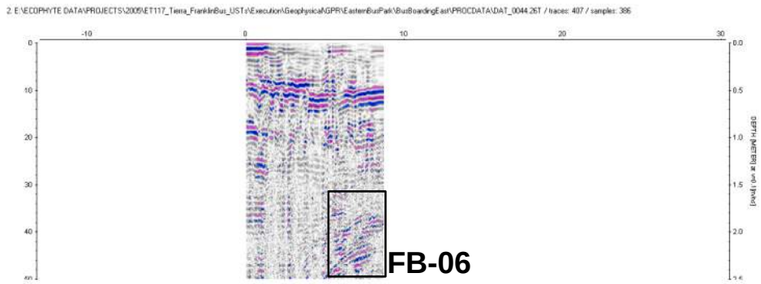
~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

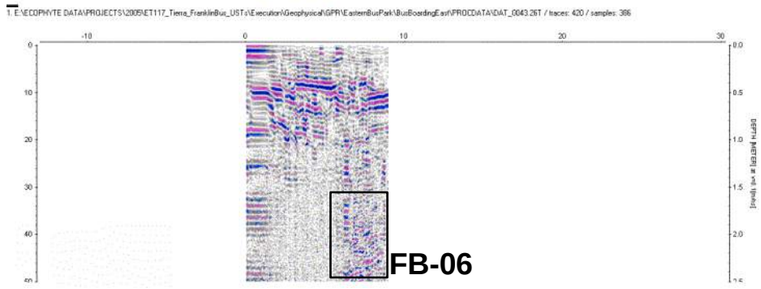
Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

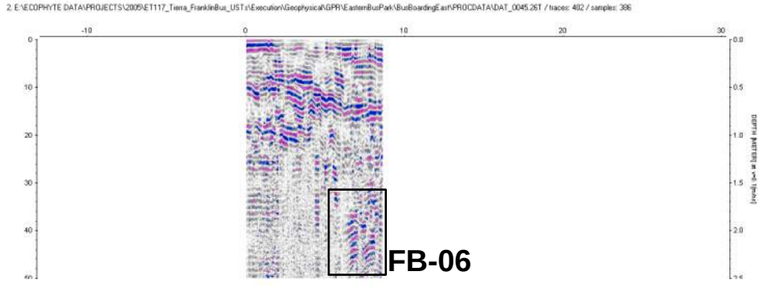
Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

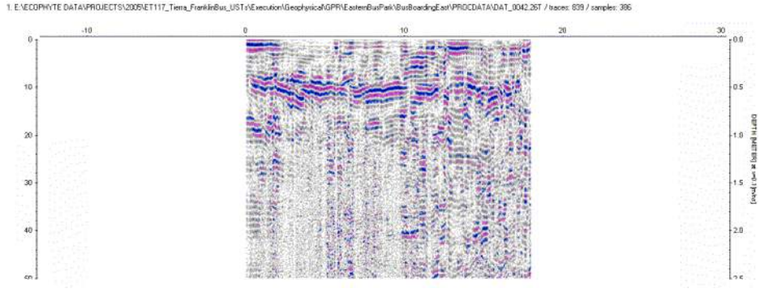
TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
ANOMALY ANALYSIS FB-03, FB-04 & FB-05

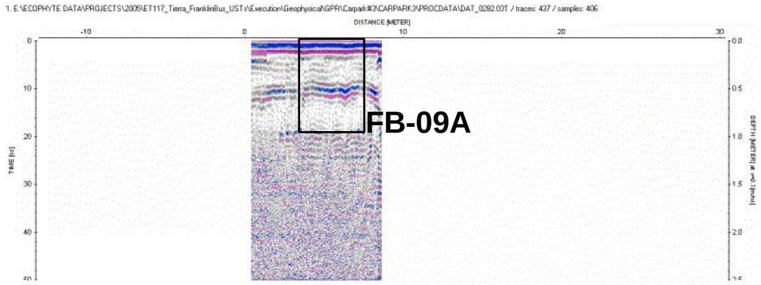
SHEET
10

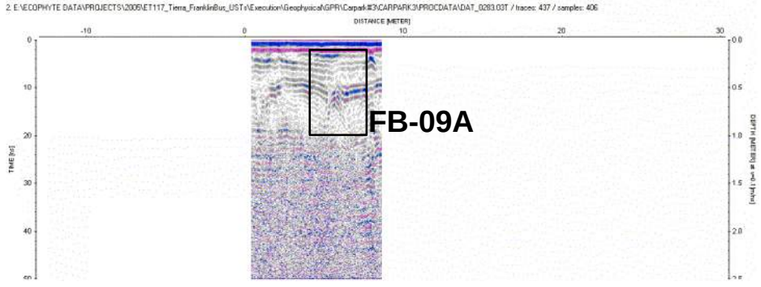


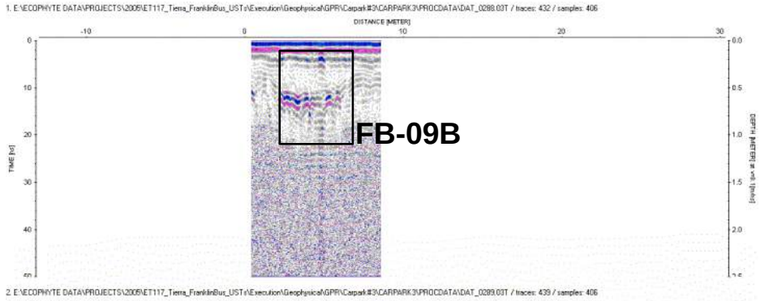


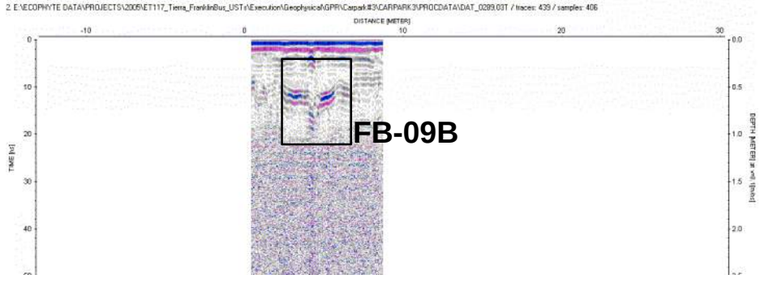


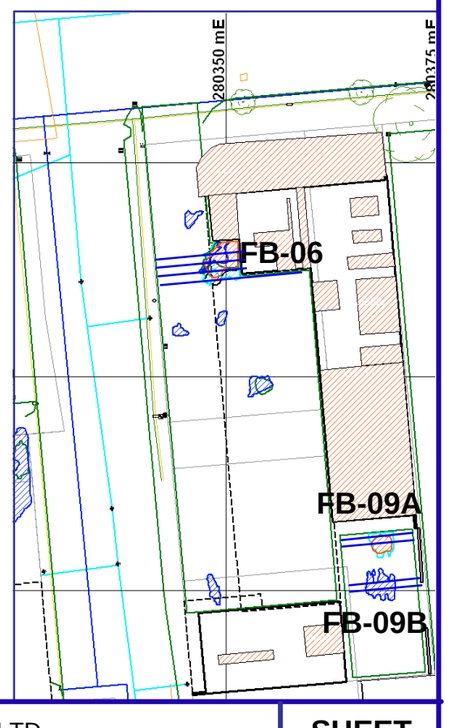












Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

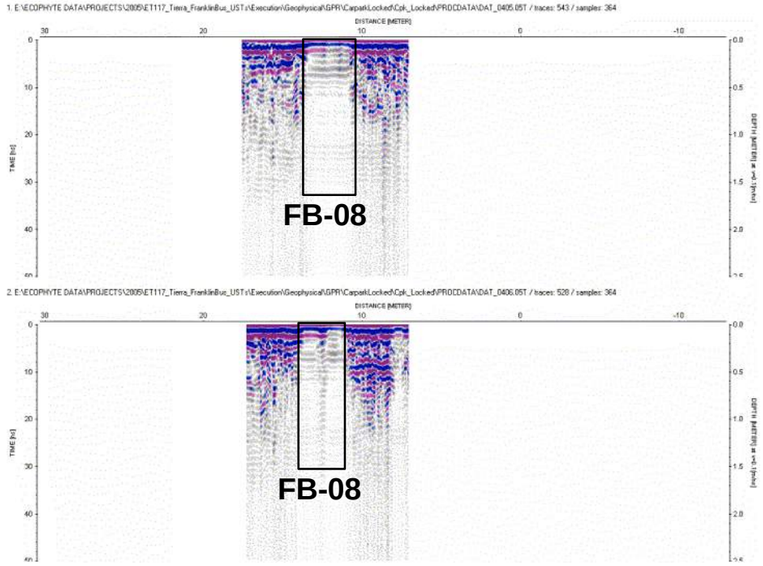
~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

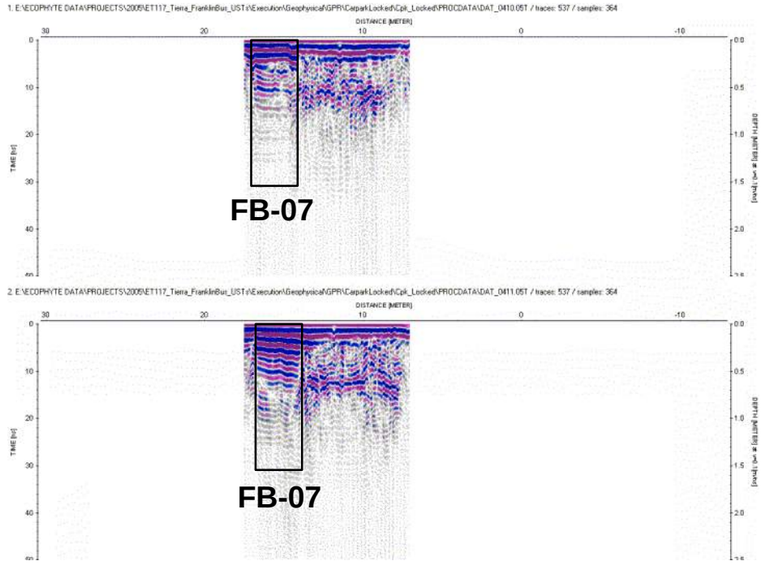
Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

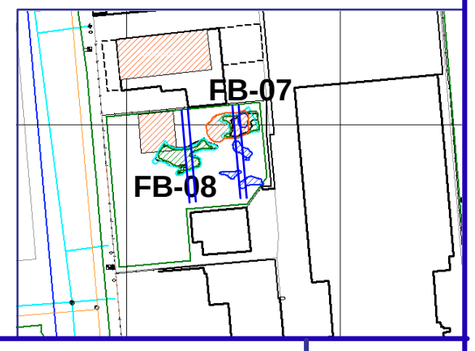
Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
ANOMALY ANALYSIS FB-06, FB-09A & FB-09B

SHEET
11







Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

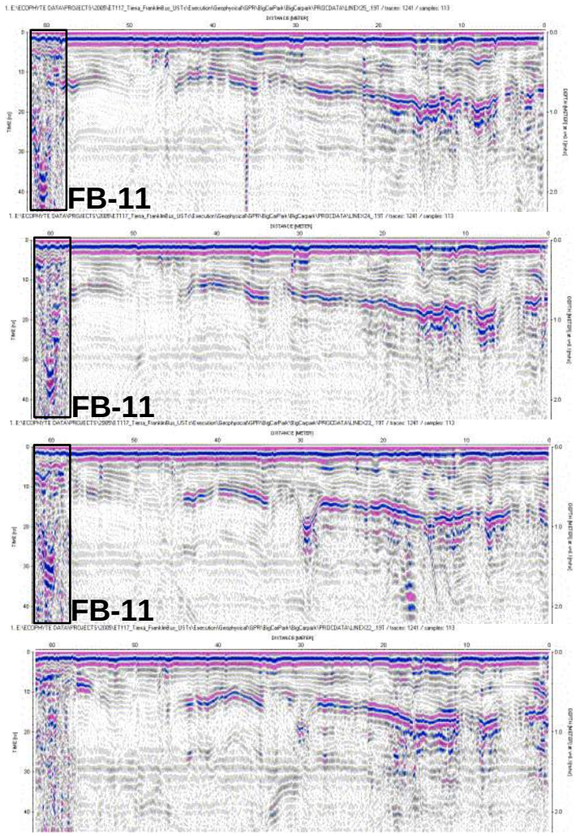
~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

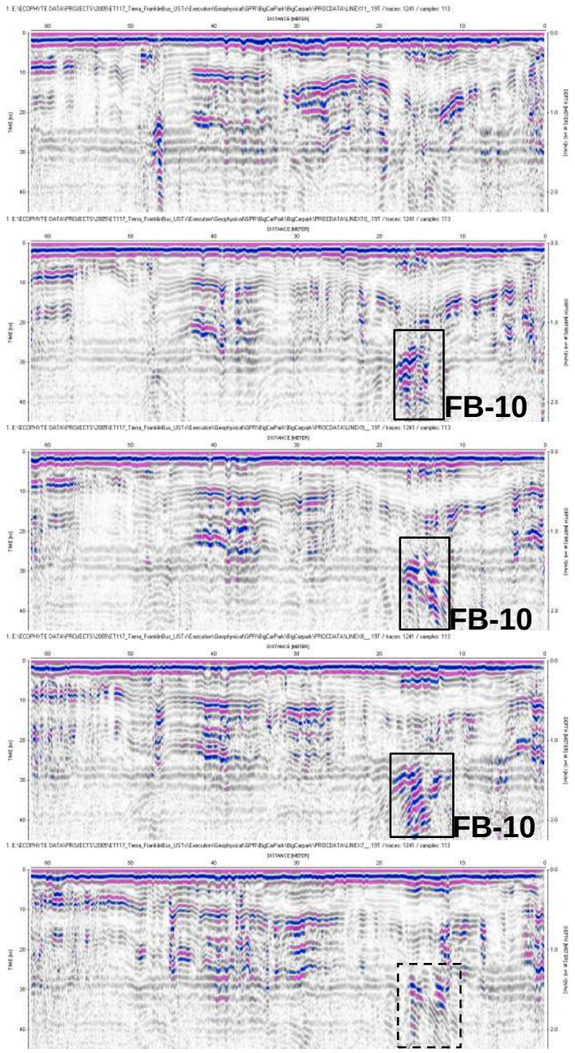
Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

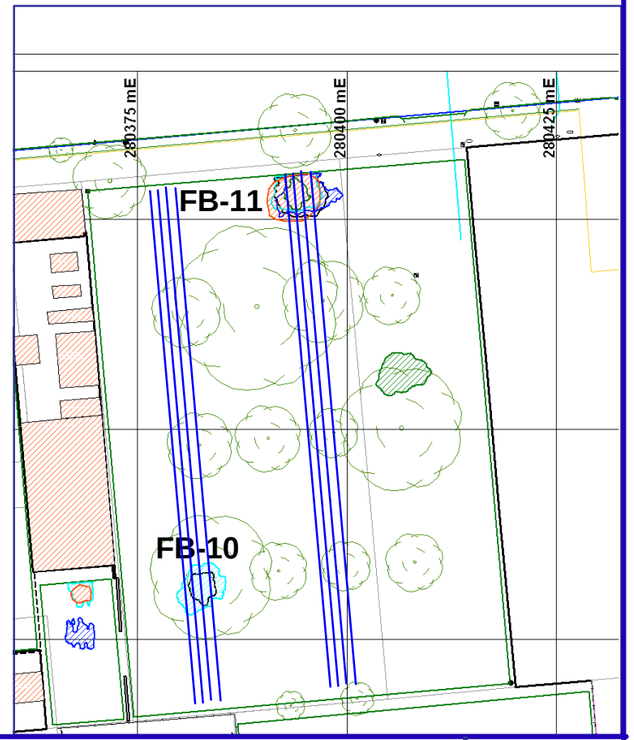
Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
ANOMALY ANALYSIS FB-07 & FB-08

SHEET
12



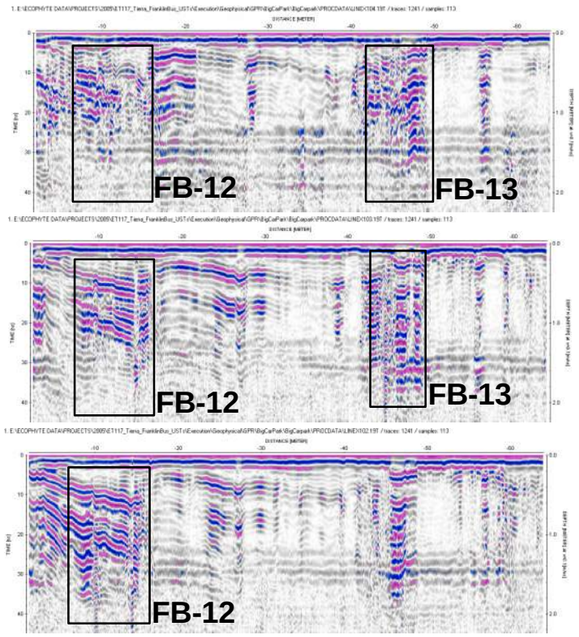


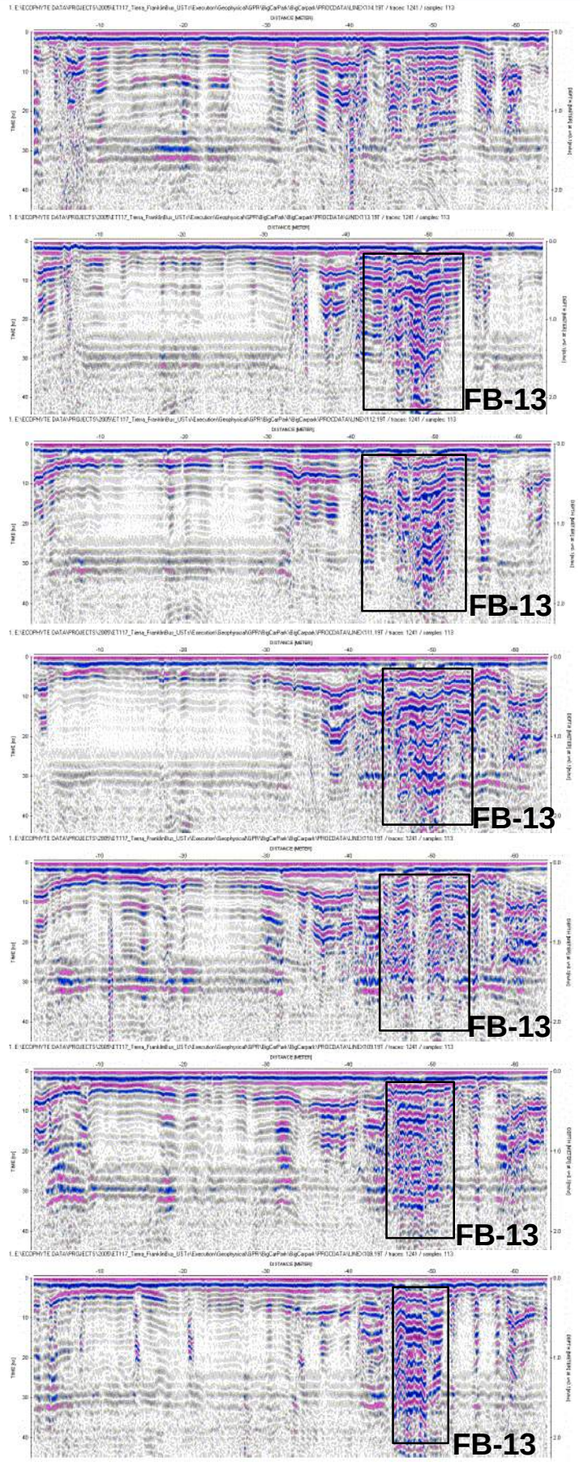


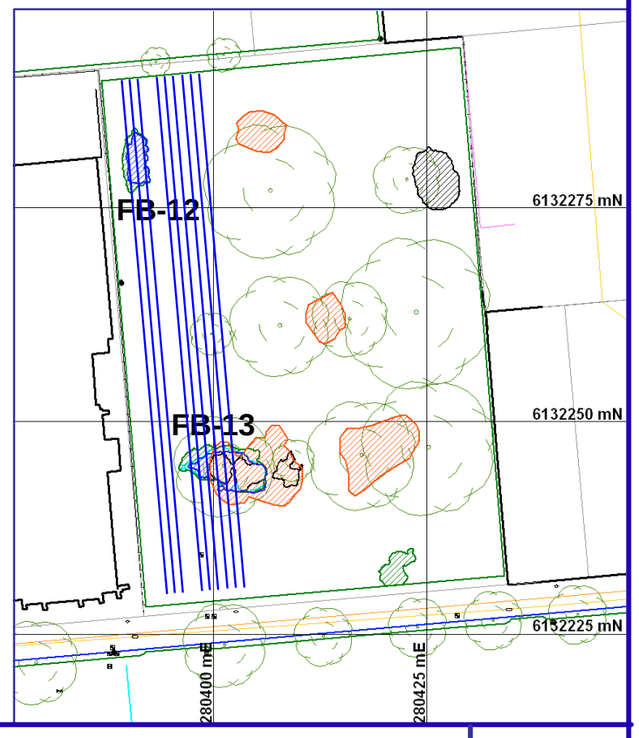
Ecophyte Technologies Pty Ltd ACN : 098 864 478	**MAP SCALE DETAILS** ~1:700 on A3 (1cm = 7m) ~1:1400 on A4 (1cm = 14m) Datum: Australian Geodetic Datum (AGD) 1994 Projection: Map Grid of Australia (MGA) 1994	Date	22 JULY 2005
		Drawn	PCM
		Version	2
		Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
ANOMALY ANALYSIS FB-10 & FB-11

SHEET
13







Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

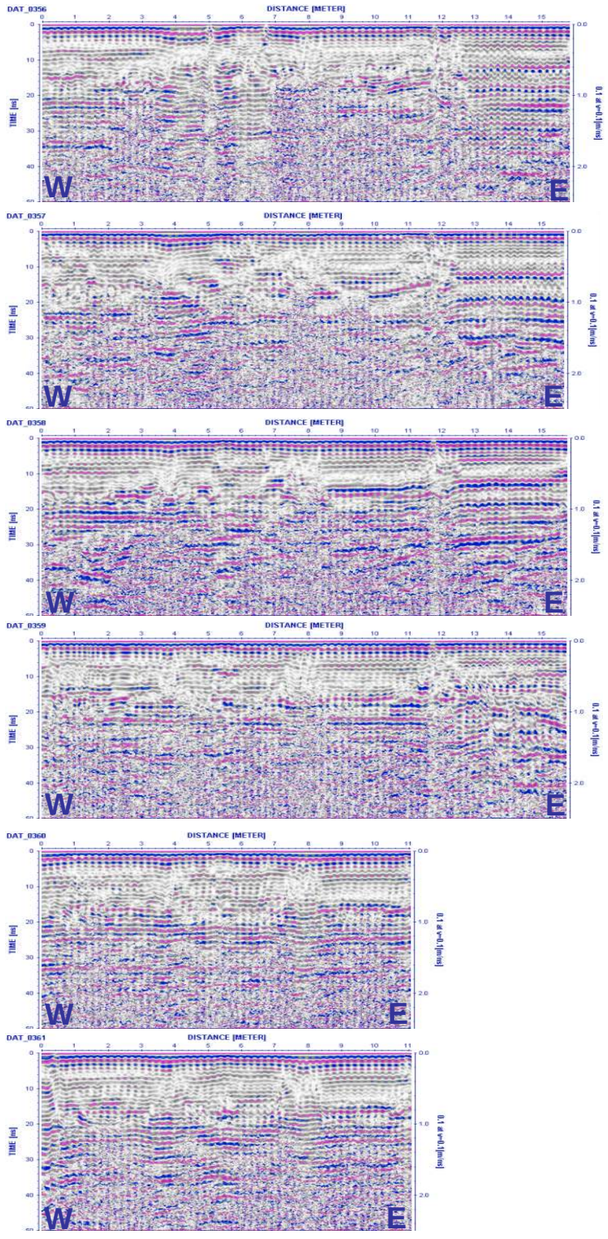
~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

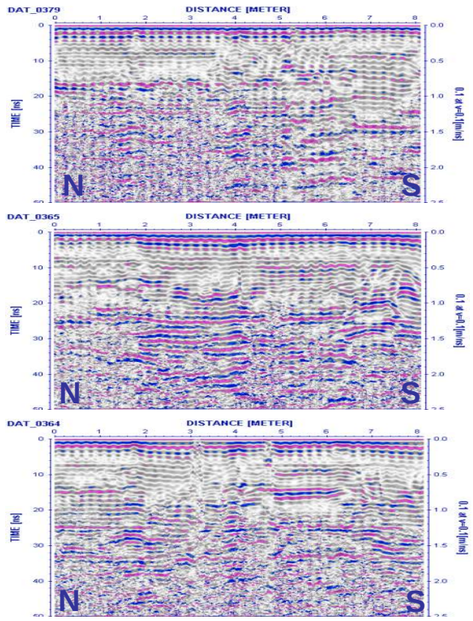
Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

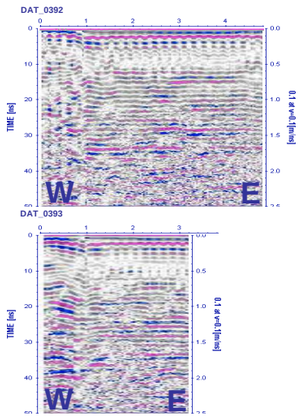
Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

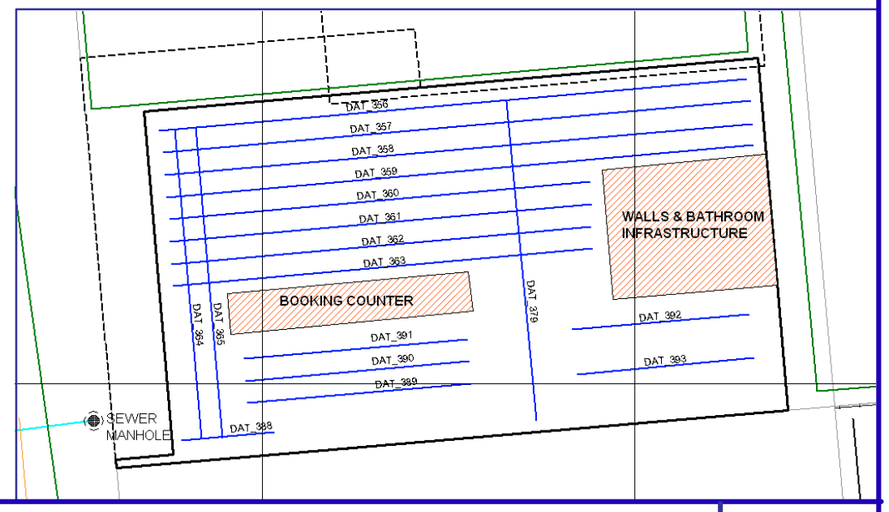
TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
ANOMALY ANALYSIS FB-12 & FB-13

SHEET
14







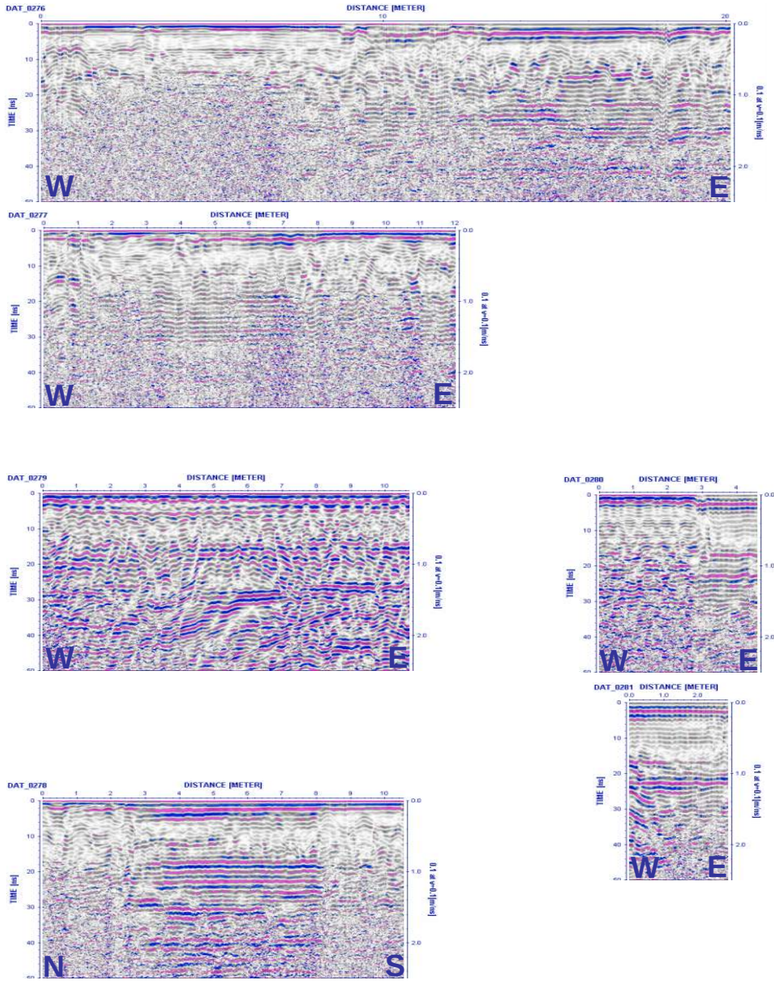


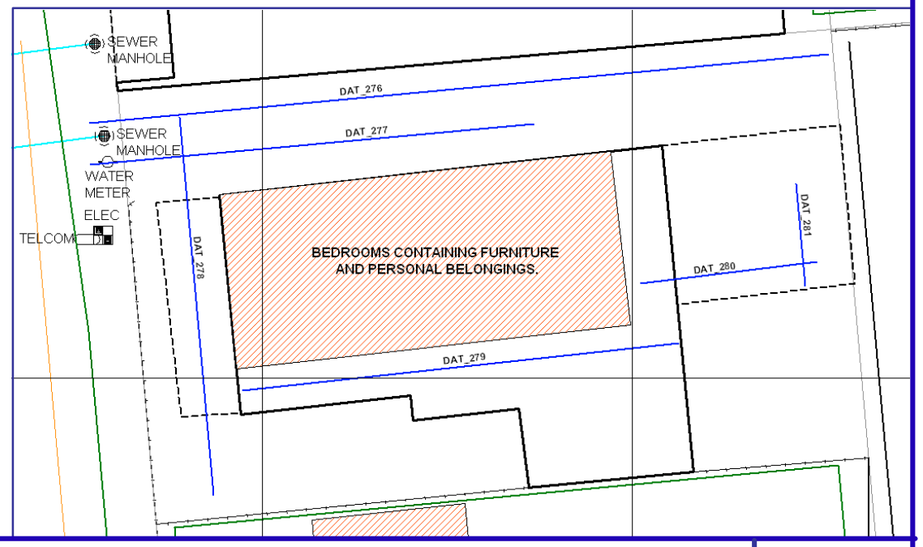
Ecophyte Technologies Pty Ltd ACN : 098 864 478	**MAP SCALE DETAILS** ~1:700 on A3 (1cm = 7m) ~1:1400 on A4 (1cm = 14m) Datum: Australian Geodetic Datum (AGD) 1994 Projection: Map Grid of Australia (MGA) 1994

Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
McCAFFERTYS OFFICE – GPR PROFILES

SHEET
15





Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

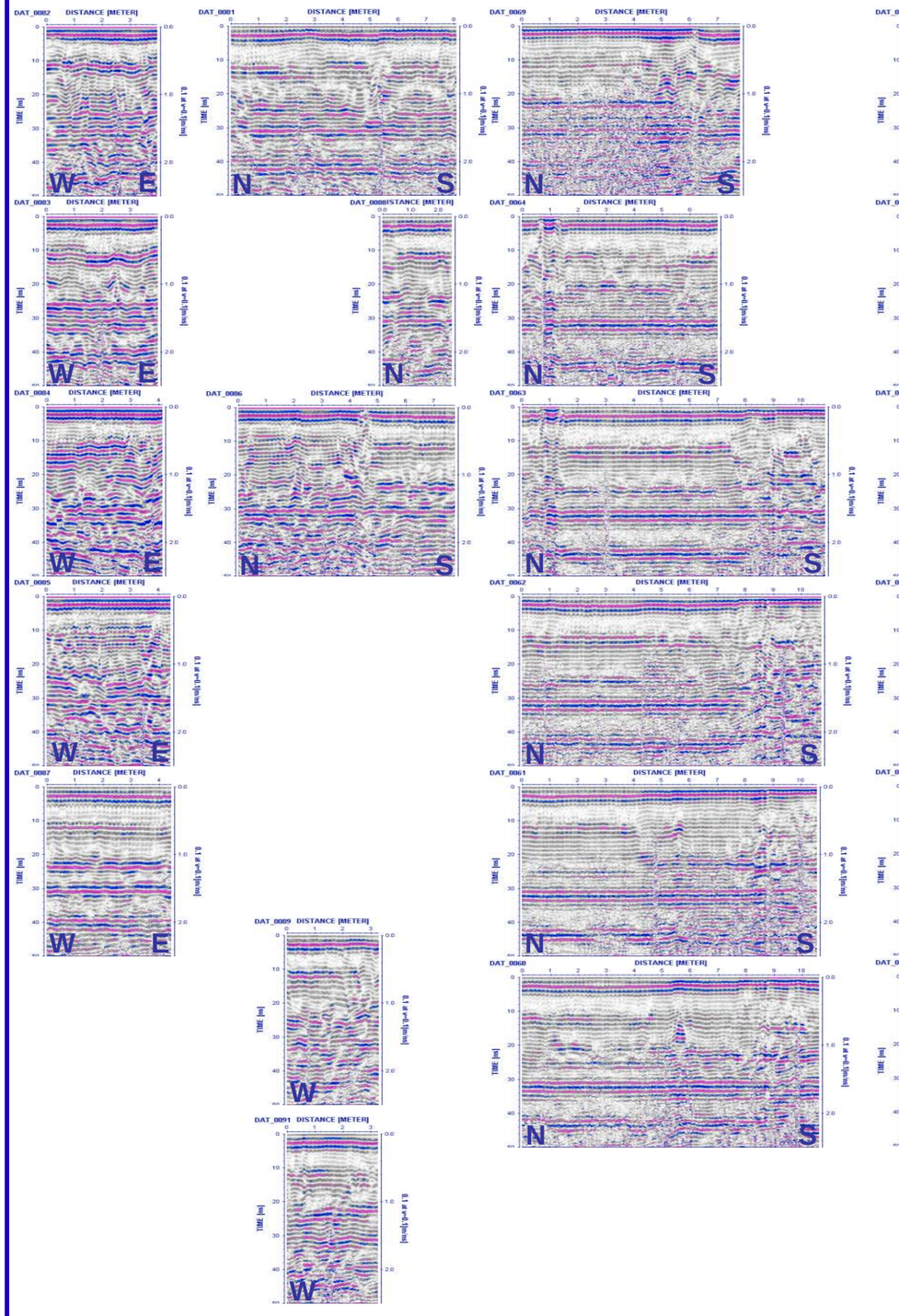
~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

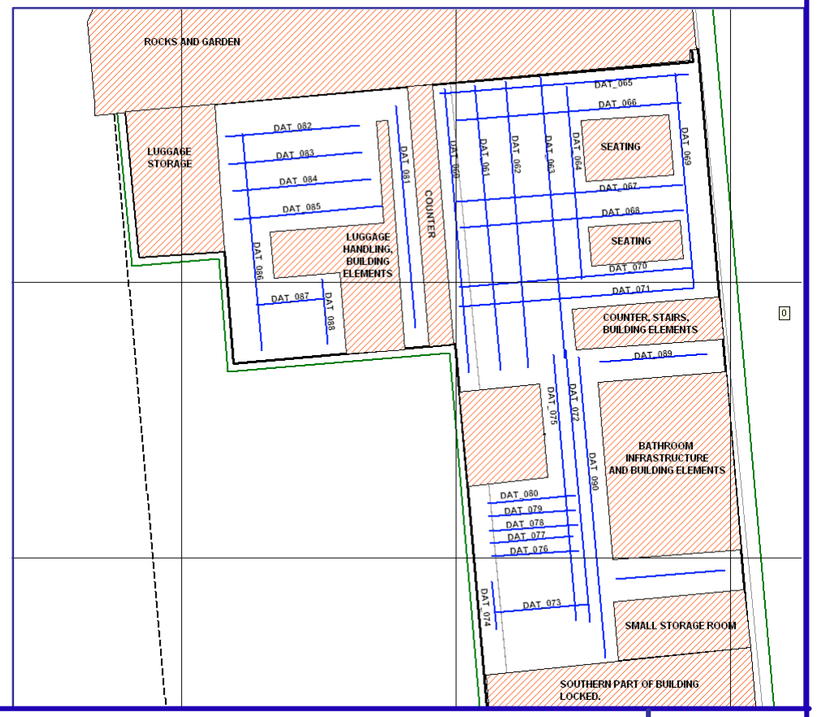
Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
OLD HOUSE – GPR PROFILES

SHEET
16





Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

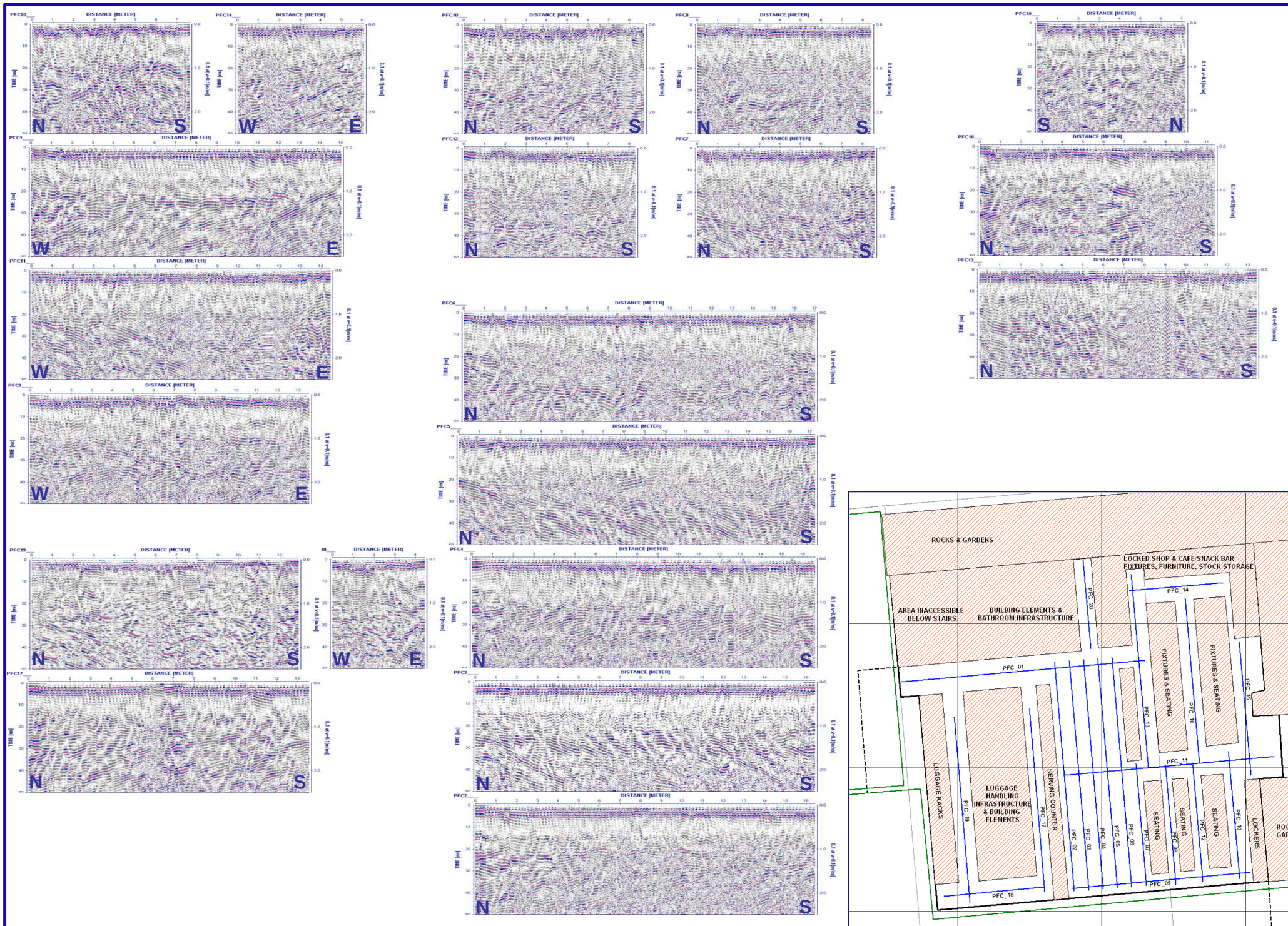
~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
GREYHOUND PASSENGER TERMINAL – GPR PROFILES

SHEET
17



Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

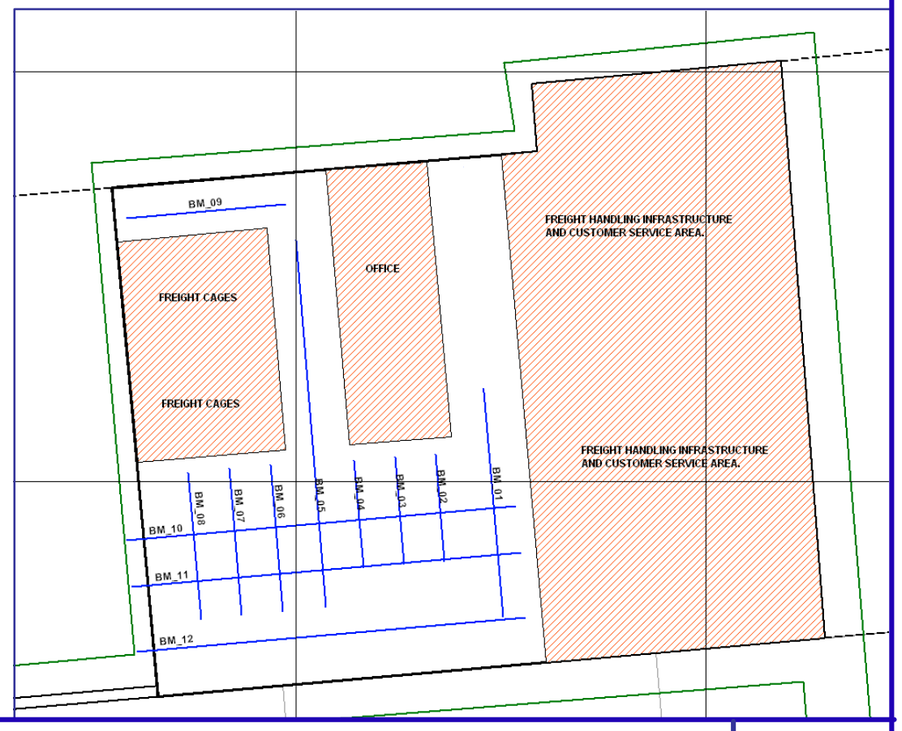
~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
PREMIER/STATELINE PASSENGER TERMINAL – GPR PROFILES

SHEET
18



Ecophyte Technologies Pty Ltd
ACN : 098 864 478

MAP SCALE DETAILS

~1:700 on A3 (1cm = 7m)
~1:1400 on A4 (1cm = 14m)

Datum: Australian Geodetic Datum (AGD) 1994
Projection: Map Grid of Australia (MGA) 1994

Date	22 JULY 2005
Drawn	PCM
Version	2
Checked	BAK

TIERRA ENVIRONMENT PTY. LTD.
ET 117 – ADELAIDE. BUS TERMINAL UST INVESTIGATION
FRANKLIN STREET, ADELAIDE CITY, SOUTH AUSTRALIA
COACHFREIGHT BUILDING – GPR PROFILES

SHEET
19

Central West Precinct
Remediation Report
Bus Station Site – Stage 1

Prepared for

Adelaide City Council

20 September 2006

Consulting Engineers and Scientists

Tierra Environment Pty. Ltd.
ABN: 84 111 615 680

71 Belair Road,
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515
general@tierra.com.au

Central West Precinct
Remediation Report
Bus Station Site – Stage 1

Prepared for

Adelaide City Council

20 September 2006

Document Status	Name	Signature	Date
Approved for Issue ☐	Prepared by Elmar Schaffeler		20/09/2006
Revision A	Reviewed by Daryl Burrows		20/09/2006

LIST OF APPENDICES

1 INTRODUCTION

1.1 Background

This report has been prepared by Tierra Environment for Adelaide City Council. It provides information on the remediation of Stage 1 of the Bus Station site, a portion of land which forms the Central West Precinct redevelopment area.

This report has been prepared to document the remediation works undertaken between 17 May and 14 July 2006. Remediation works were undertaken generally in accordance with the following documents:

- Central West Precinct, Remediation Action Plan, Bus Station Site; Tierra Environment; 30 September 2005
- Central West Precinct, Validation Plan, Bus Station Site – Stage 1; Tierra Environment; 7 December 2005
- Central West Precinct, Materials Tracking Plan, Bus Station Site – Stage 1; Tierra Environment; 7 December 2005

The remediation proposal developed for the site was based on the removal of all fill materials from their locations and reuse of these materials elsewhere on site in a designated Reuse Area below pavements and concrete slabs.

A plan showing the proposed redevelopment scheme for Stage 1 of the Bus Station site is provided in Appendix 1.

1.2 Roles and responsibilities

The following parties were involved in the remediation of the bus station site:

Developer	Multiplex Developments / Urban Construct
Construction Manager	Hansen Yuncken
Contractor	PD Excavations
Environmental Consultant	Tierra Environment
Environmental Auditor	Andrew Nunn (Soil and Groundwater Pty Ltd)

1.3 Site definition

The extent of the site subject to remediation is as follows:

- eastern boundary as shown on the proposed redevelopment scheme provided in Appendix 1
- northern boundary as defined by Franklin Street road reserve
- southern boundary as defined by Grote Street road reserve
- western boundary as defined by survey provided in Appendix 1

The site does not include the church allotment as shown on the proposed development scheme provided in Appendix 1.

1.4 Contents of this report

The report contains the following information:

Section 2	Acceptance criteria
Section 3	Site specific clean up goals
Section 4	Soil remediation methodology
Section 5	Remediation reporting
Section 6	Post remediation status of the site

Supporting information including schematic drawings and tables are provided in appendices to this report.

2 SITE-SPECIFIC CLEAN UP GOALS

The Environmental Auditor provided site-specific clean up goals for the project. These are presented in Appendix 2 of this report. A summary is provided below.

Location	Reference	B(a)P	Total PAHs	Lead
		mg/kg	mg/kg	mg/kg
Garden Beds or where plants / trees will be grown	Clean Fill / NEPM EILs	-	-	600
Beneath Pavements	Site specific HRA	8	164	5,700
Beneath Buildings	Site specific HRA	75	1,500	17,000

3 SOIL CONTAMINATION STATUS PRIOR TO REMEDIATION

The following summary is based on a review of available documents as listed in Section 1.1 above.

3.1 General

Fill materials encountered generally consisted of:

- sand, clay and silt
- concrete, bricks, tiles and other construction and demolition wastes
- timber, plastic and steel
- ash and slag

On the basis of available investigation results, it was expected that over 95% of the materials consist of soil, with less than 5% consisting of inert waste materials and some commercial/industrial wastes.

Fill materials encountered during previous investigations were generally dry. Some cohesive materials such as clays displayed slightly moist conditions. Significant quantities of wet materials were not encountered.

During field investigations the presence of materials containing asbestos was assessed. Visual observations did not detect significant amounts of these materials.

During field investigations the presence of volatile organic substances was investigated using a PID. No significant quantities of volatile organic substances were detected.

Fill depths ranged form approximately 0.2m to 1.45m. The average fill depth was expected to be in the order of 0.7m. Based on groundwater data obtained during site investigations, fill materials do not extend into the groundwater which was observed below a depth of 17m below surface levels. The interface between fill and natural materials was generally between 0.5m and 1m.

Natural soils encountered during field investigations generally consisted of sandy clays and clays. Natural soils were generally moist. Significant quantities of wet materials were not encountered.

3.2 Summary of status of roil contamination

The contamination status of fill materials at the Bus Station site was summarised as follows:

- Contaminants of concern are metals and PAH. The 95% UCL of the mean complies with the clean up goals stipulated by the Environmental Auditor.
- Other chemicals are present but are not of concern when considering the clean up goals.
- Lead and investigated PAH species revealed a very low leachability at site specific pH values as observed during site investigations.
- The potential for generation of volatiles is low based on the results of site investigations.
- The potential for the presence of significant amounts of materials containing asbestos fibres is low based on the observations made during site investigations.

The results of site investigations indicate that natural soils generally contain concentrations of contaminants well below the clean up goals.

4 SOIL REMEDIATION METHODOLOGY

The site contains shallow fill materials containing contaminants, underlain by natural material which is largely uncontaminated.

Remediation works generally involved:

1 Excavation of all fill materials in the Reuse Area and stockpiling on site, including removal of at least 100mm of natural materials at the base of the fill layer
2 Excavation of all fill materials in area to be used for stockpiling of natural materials excavated from Reuse Area, including removal of at least 100mm of natural materials at the base of the fill layer
3 Visual inspection of base of excavated areas to ensure all fill had been removed
4 Excavation of natural materials in Reuse Areas to a depth of approximately 7m to 8m and stockpiling in previously stripped area
5 Survey of extent of Reuse Area (base of excavated areas and horizontal extent of void created by excavations)
6 Excavation of all fill materials outside the Reuse Area and placement in Reuse Area together with previously stockpiled fill materials, including removal of at least 100mm of natural materials at the base of the fill layer
7 Validation testing of fill materials in Reuse Area
8 Survey of surface of fill materials in Reuse Area
9 Placement of marker layer on top of reused fill materials
10 Placement of 1m of natural clay materials over Reuse Area
11 Visual inspection of base of excavated areas to ensure all fill had been removed
12 Validation testing of surface of natural materials
13 Placement of stockpiled natural soils in areas where fill had been removed
14 Placement of PM2/20 subgrade material (typically 150mm thick) over entire site

During remediation works a large quantity of gravel fill was encountered. This material was stockpiled and tested, prior to reuse on site outside the Reuse Area or disposal off site (see also Section 5.5 below)

5 REMEDIATION REPORTING

5.1 General

The following information is provided:

- inspection records
- as-constructed drawings detailing excavation levels and surfaces of fill materials in the Reuse Area
- analytical results for natural materials remaining after the removal of fill

- analytical results for gravel fill reused on site
- analytical results for materials placed in Reuse Area
- tracking of materials

5.2 Inspection records

Remediation works commenced on 17 May 2006 and were completed on 7 July 2006. Inspection records are provided in Appendix 3 to this report, together with a CD containing photos taken during the site inspections.

In summary inspections undertaken during remediation works established the following:

- All fill materials were removed and placed in the Reuse Area
- All fill materials were removed within the site boundaries with the exception of the eastern boundary of the church allotment where fill remains within 0.5m of the site boundary
- Fill materials were consistent with the observations reported in the investigation reports
- The Reuse Area pit was excavated in natural clays
- The Reuse Area pit excavations did not reveal perched water or layers capable of being a perched water aquifer due to high permeabilities

5.3 As-constructed drawings

Survey drawings of the Reuse Area are provided in Appendix 4.

The following compliance assessment was undertaken:

▪ Reuse Area within site boundaries	Yes
▪ Depth of Reuse Area	7m to 8m
▪ Depth of surface of reuse fill at least 1.2m below finished surface levels	See below
▪ Thickness of clay cap at least 1m	See below
▪ Thickness of clay cap at least 600mm below stormwater pipes	Yes

The requirements of having 1.2m between the finished surface levels and the top of the fill in the Reuse Area and 1m of clay on top of the fill in the Reuse Area were achieved in most parts of the Reuse Area. However an assessment of survey data indicated that a small area did not meat these requirements, i.e. the separation distance between the finished surface levels and the top of the fill is around 1m and the clay layer has a thickness of approximately 0.8m in this area. A plan showing this area is provided in Appendix 4.

5.4 Validation testing – natural surfaces

Natural surfaces exposed during remediation works as a result of the removal of fill materials were tested as required in the Validation Plan prepared by Tierra Environment dated 7 December 2005. Sampling locations were not surveyed using a surveyor but recorded by Tierra Environment using a site grid provided by Hansen Yuncken.

A report detailing the validation testing of natural surfaces is provided in Appendix 5 to this report.

5.5 Validation testing – stockpiled materials

During remediation works gravel fill was encountered. Due to its clean visual appearance the materials were excavated and stockpiled. Subsequent analytical testing revealed that the materials were suitable for reuse on site or disposal off site.

In addition surplus natural materials was stockpiled and tested prior to removal from site.

A report detailing the investigations undertaken on these materials are provided in Appendix 6 to this report.

5.6 Validation testing – fill in Reuse Area

Fill materials placed in the Reuse Area were tested as required in the Validation Plan prepared by Tierra Environment dated 7 December 2005.

A report detailing the validation testing of fill in the Reuse Area is provided in Appendix 7 to this report.

5.7 Tracking of materials

Tracking of materials was undertaken as required in the Tracking Plan prepared by Tierra Environment dated 7 December 2006. The base of excavations outside the Reuse Area was not surveyed by a surveyor as all sampling locations were measured using a site grid (see Section 5.4 above).

The following movements of materials were undertaken:

Fill materials other than gravel fill	▪ Excavation ▪ Transfer to stockpile located on fill materials or placement directly into Reuse Area pit ▪ Transfer from stockpile into Reuse Area pit ▪ Transfer from stockpile to off site location using soil tracking form (for small quantity of material excavated after completion of the Reuse Area pit)
Gravel fill used on site	▪ Excavation ▪ Transfer to stockpile located on fill materials ▪ Transfer from stockpile to site area bounded by Bowen Street, Grote Street and the western boundary of the church allotment, or ▪ Transfer form stockpile to site area measuring 10m by 60m along the north-eastern boundary of the site, or ▪ Transfer from stockpile into Reuse Area pit ▪ Sacrificial layer of 300mm remained at base of stockpiles and was removed as fill materials into Reuse Area pit
Gravel fill removed from site	▪ Excavation ▪ Transfer to stockpile located on fill materials ▪ Transfer from stockpile to off site locations using soil tracking form ▪ Sacrificial layer of 300mm remained at base of stockpiles and was removed as fill materials into Reuse Area pit
Natural soils	▪ Excavation ▪ Transfer to stockpile on previously validated natural soil surfaces or placement directly for use as site fill ▪ Transfer from stockpile to site areas for use as site fill, or ▪ Disposal off site of surplus materials using soil tracking form

In summary the following quantities of materials were relocated:

Fill placed in Reuse Area	6,850m^3
Fill removed from site	50m^3
Gravel fill reused on site out side Reuse Area	1,200m^3
Gravel fill removed from site	1,400m^3
Natural soil removed from site	3,600m^3

Stockpiled materials were relocated as follows:

Stockpile no	Approximate volume (m^3)	Utilisation
1	700	$600m^3$ in location 1 $100m^3$ off site (1)
2	1200	$600m^3$ off site (1) $600m^3$ on site in reuse area
3	1250	$600m^3$ in location 2 $650m^3$ off site (1)
4	50	Off site (2)
5	3600	Off site (3)

Notes to table\:

(1) Refer waste tracking form for Kalbeeba Road site
(2) Refer waste tracking form for Garden Island site
(3) Refer waste tracking form for Brompton site
(4) Sampling was undertaken for PD Excavations

Waste tracking forms are provided in Appendix 8 to this report.

The following site locations apply:

- Location 1 consists of a 10m wide and 60m long area along the north-eastern boundary of the site
- Location 2 consists of the area bounded by Bowen Street, Grote Street and the church allotment

6 POST REMEDIATION STATUS OF THE SITE

On the basis of observations made during site inspection, analytical testing, survey information supplied by Hansen Yuncken and soil tracking forms supplied by Hansen Yuncken, it is concluded that the remediation works achieved the following site conditions:

1 All fill materials have been removed and placed in the Reuse Area other than listed in items 2 to 4 below
2 Fill materials remain in a 0.5m wide strip along the full extent of the eastern boundary of the church allotment
3 Fill materials were removed off site as identified in Section 5.7
4 Gravel fill materials were reused in area bounded by Bowen Street, Grote Street and the western boundary of the church allotment, and in an area measuring 10m (east-west) by 60m (north-south) along the north-eastern boundary of the site
5 Materials outside the Reuse Area consist of natural soils overlain by natural materials sourced from the Reuse Area pit, with the exception of an area bounded by Bowen Street, Grote Street and the western boundary of the church allotment, and an area measuring 10m (east-west) by 60m (north-south) along the north-eastern boundary of the site
6 Materials in the Reuse Area consist of fill materials sourced from on site fill only overlain by natural materials sourced from the Reuse Area pit
7 The materials outside the Reuse Area comply with the Clean Up Goals and NEPM HIL A and NEPM EIL
8 The materials inside the Reuse Area below a depth of 1.2m relative to finished surface levels comply with the Clean Up Goals (refer to Section 5.3 for area with a separation distance of 1m to 1.2m)
9 The materials inside the Reuse Area between a depth of 1.2m and 0.2m relative to finished surface levels comply with the Clean Up Goals and NEPM HIL A and NEPM EIL (refer to Section 5.3 for area with a clay layer thickness of 0.8m to 1m)

10 LIMITATIONS OF USE

Site contamination is generally a product of man-made processes and therefore exhibits characteristics and properties that vary from place to place and can change with time. Contamination assessments involve gathering and assimilating limited facts about these characteristics and properties in order to better understand or predict the status of contamination on a particular site under certain conditions.

The facts reported and utilised in this document may have been obtained by inspection, excavation, probing, sampling, testing, and other means of investigation or from the client. They are directly relevant only to the ground at the place where and time when an investigation was carried out.

Any interpretation or recommendation given in this report is based on judgment and experience and not on greater knowledge of the facts than the sources of information indicate. The interpretations and recommendations are opinions provided for the sole use by the Client identified on the cover sheet and in accordance with a specific brief.

Tierra does not represent that the information or interpretation contained in this document addresses completely existing features such as surface and subsurface contamination, groundwater and geotechnical conditions or ground or contamination behaviour on the subject site.

The responsibility of Tierra Environment Pty Ltd is solely to its Client. It is not intended that this document be relied upon by any third party, other than the Environment Protection Authority or an Environmental Auditor (engaged by the Client) for the purpose of a contaminated land audit. Tierra does not undertake any duty or accept any responsibility to any other parties who may rely upon this document

APPENDIX 1 – SITE AREA AND REDEVELOPMENT PLAN

INTERFACE WITH EXISTING TO BE CONFIRMED

BOWEN STREET

FRANKLIN STREET

HOLD
LEVELS/INTERFACE WITH GROTE ST. TO BE CONFIRMED

KERB & GUTTER PROFILE TO MATCH EXISTING.

CONNECT NEW STORMWATER PIPE INTO EXISTING CATCH PIT.

CATCH PIT TO A.C.C. STANDARD DETAIL C210-1. CONNECT TO EXISTING STREET STORMWATER SYSTEM.

CONNECT TO EXISTING STREET STORMWATER PIPE.

CLOSE OFF EXISTING CROSSOVER & CONSTRUCT NEW KERB & GUTTER TO MATCH EXISTING.

REGRADE EXISTING FOOTPATH TO MATCH INTO NEW KERB & GUTTER. PAVEMENT DEPTH TO MATCH EXISTING.

HOLD
CHURCH PAVING LEVELS & EXTENT TO BE CONFIRMED

REINSTATE FOOTPATH AFTER PIPEWORK INSTALLATION. PAVEMENT DEPTH TO MATCH EXISTING.

CONNECT NEW STORMWATER PIPE INTO EXISTING CATCH PIT. LOCATE ALL EXISTING SERVICES PRIOR TO ANY PIPEWORK INSTALLATION.

HOLD
LEVELS/INTERFACE WITH GROTE ST. TO BE CONFIRMED

FL.43.700

FL.43.350

FL.43.600

RAMP UP LOCALLY AT DOORWAYS. TYPICAL.

ALL PUMPS SPEL STORMCEPTER TYPE 200/30 OR SIMILAR APPROVED.

900 SQ. JUNCTION BOX FOR SYPHONIC DOWNPIPE CONNECTION.

150ØPVC @ 0.5%

230 WIDE GRATED BOX DRAIN TO BOTTOM OF RAMP.

JUNCTION BOX FOR SYPHONIC DOWNPIPE CONNECTION.

TAPER HEIGHT OF KERB OVER 3.0m. TYPICAL EACH SIDE OF ENTRY.

PRAM RAMPS TO A.C.C. STANDARD DETAILS. TYPICAL.

EXISTING LIGHT TO BE RELOCATED.

NEW SPOON DRAIN TO ADELAIDE CITY COUNCIL DETAILS.

CONNECT NEW STORMWATER PIPE INTO EXISTING CATCH PIT.

KERB & GUTTER PROFILE TO MATCH EXISTING.

BREAK INTO EXISTING STORMWATER PIPE & CONSTRUCT NEW 600 SQ. JUNCTION BOX.

SPOON DRAIN TO A.C.C. DETAILS.

NO PARKING

NO PARKING

CIVILWORKS PLAN
SCALE 1:200

LEGEND:

- EXISTING LEVELS
- DESIGN LEVELS (P- PAVEMENT, G- GRATE, WT- WATER TABLE)
- STORMWATER PIPE - RCP
- STORMWATER PIPE - uPVC
- DOWNPIPE CONNECTION
- DIRECTION OF FALL TO PAVEMENT
- KERB ONLY - 100 HIGH REFER A.C.C. DETAIL C112-01
- KERB & GUTTER - 100 HIGH REFER A.C.C. DETAIL C111-01
- SPOON DRAIN REFER A.C.C. DETAIL C212-02
- GRATED INLET PIT (G.) U.N.O.
- JUNCTION BOX (JB.)
- SIO STORMWATER INSPECTION OPENING

LEGEND:

- A.C. PAVEMENT - HEAVY DUTY
- A.C. PAVEMENT - FOOTPATH
- BLOCK PAVING
- LANDSCAPING (BY ARCHITECT)

NOTES:

1. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE ARCHITECTS DRAWINGS, OTHER CONSULTANTS DRAWINGS & THE SPECIFICATION.
2. ALL UPVC STORMWATER PIPES ARE TO BE SEWER CLASS 'SN4'.
3. ALL R.C. STORMWATER PIPES ARE TO BE CLASS '2' WITH BEDDING TYPE 'H52'. U.N.O.
4. ALL EXISTING SERVICES ARE TO BE LOCATED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.
5. CONTRACTOR TO CONFIRM INVERTS OF ALL EXISTING PIPES & SUMPS PRIOR TO CONNECTING & LAYING OF ALL NEW PIPEWORK.

4 2 0 4 8
SCALE 1:200

CONSTRUCTION ISSUE

REV.	DATE	DESCRIPTION	DRAFT	ENG.	APPD.
4	10.08.06	DPs ADDED/REVISED, GRATED DRAIN ADDED	MJ	MW	
3	07.07.06	FFL's REVISED	MJ	MW	
2	20.06.06	ROAD WIDTHS/LEVELS REVISED, SPOON DRAIN ADDED	MJ	MW	
1	13.06.06	SIO's & CANOPY DOWNPIPES ADDED	MJ	MW	
Ø	1.06.06	ISSUED FOR CONSTRUCTION	MJ	MW	
F	16.05.06	PLAZA PAVEMENT LEVELS REVISED	MJ	MW	
E	11.05.06	ISSUED FOR COMMENT, ROAD & PAVEMENT LEVELS & STORMWATER REVISED	MJ	MW	
D	7.04.06	ISSUED FOR INFORMATION	MJ	EJS	
C	02.11.05	D&C TENDER ISSUE	FG	EJS	
B	9.09.05	ENTRIES, PAVING & FLOOR LEVEL REVISED. CHURCH DOWNPIPES ADDED	MWRJ	CH	
A	22.07.05	GMP ISSUE	MWRJ	CH	

W&G
WALLBRIDGE & GILBERT
Consulting Engineers
60 Wyatt Street Adelaide South Australia 5000
Telephone (08) 8223 7433 Facsimile (08) 8232 0967
Email adelaide@wgeng.com
W&G Engineers Pty Ltd ACN 052 528 926 trading as Wallbridge & Gilbert

CENTRAL CITY BUS TERMINAL
CIVIL WORKS PLAN

B1

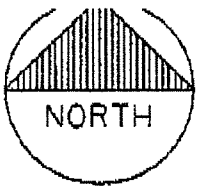
DRAWING NUMBER
Job Number C030830 Sheet No. C002 Rev. 4

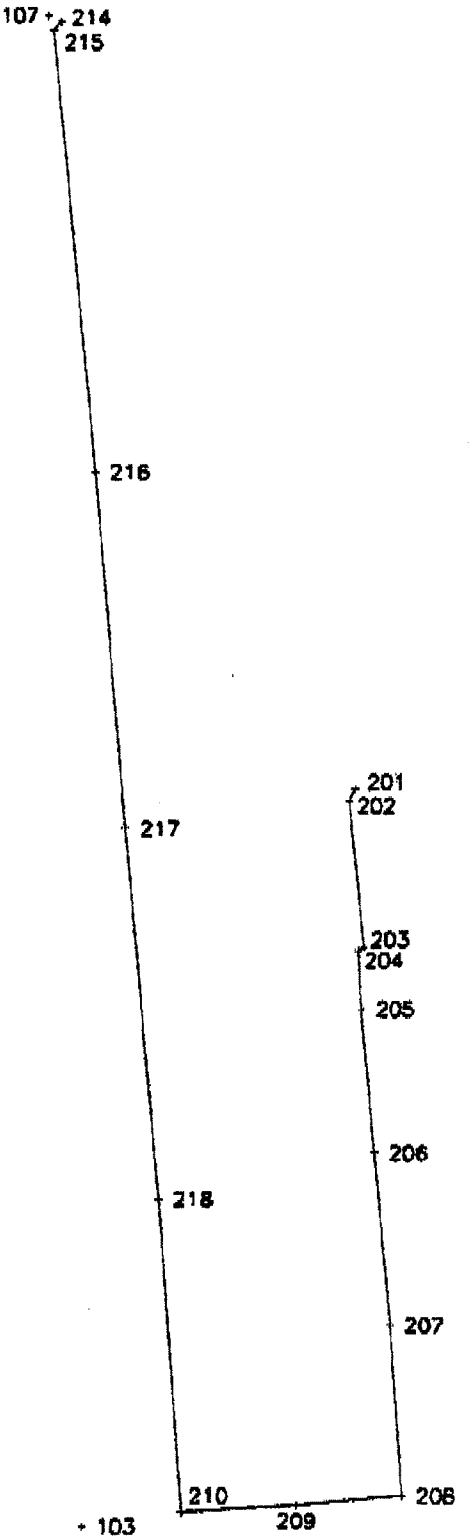
Design MWRJ Drawn MWRJ

ADELAIDE BUS DEPOT

SURVEY OF EXTENT OF EXCAVATION

SCALE 1 : 1000





Lock Surveys
LICENSED AND ENGINEERING SURVEYS
67 SPRINGBANK ROAD, CLAPHAM S.A. 5062
PH. (08) 8277 9552 FAX. (08) 8357 6491
MOBILE 0407 719455

DATE: 15/09/06

REFERENCE: 06050XX

06050xx.1st

Point	East	North
103	280343.148	6132222.280
107	280339.737	6132352.705

Survey Marks

201	280366.257	6132286.148
202	280365.764	6132285.179
203	280367.082	6132272.509
204	280366.590	6132272.225
205	280366.907	6132267.240
206	280368.107	6132254.728
207	280369.525	6132240.078
208	280370.675	6132225.167
209	280361.482	6132224.314
210	280351.646	6132223.637
214	280340.850	6132352.194
215	280340.221	6132351.451
216	280343.810	6132313.304
217	280346.506	6132282.607
218	280349.497	6132250.591

APPENDIX 2 – CLEAN UP GOALS

SG051157
Doc. No.: 1/1354

21 December 2005

Tierra Environment
71 Belair Road
Kingswood SA 5062

Attention: Mr Elmar Schaffaler

CC: *Mr Mark Pivovaroff, Multiplex*
Mr Matthew Rodda, Adelaide City Council

PRELIMINARY CLEAN UP GOALS
REDEVELOPMENT OF BUS STATION SITE

Dear Elmar,

INTRODUCTION

Further to your Remediation Action Plan (RAP) document, and our recent discussions, please find attached a summary of the risk based site specific clean up goals developed by the Auditor for the proposed redevelopment of the Bus Station site in Adelaide.

Fill materials have been identified over the majority of the site, with concentrations of lead and PAHs (in particular naphthalene, benzo(a)pyrene and total PAHs) that exceed the NEPM health based investigation levels for high density residential use and environmental investigation levels that are protective of plant growth in an urban setting. The samples reporting the more elevated concentrations of lead and PAHs have been analysed for toxic characteristic leachate potential (TCLP). The results indicate that the concentrations of lead and PAHs are not significantly leachable. The total concentrations that exceed the health based screening levels and the TCLP results are summarised in Table 1.

Table 1 – Summary of HIL 'D' Exceedences & TCLP Results

Location No	Material	Contaminant	Concentrations Exceeding HIL 'D' (mg/kg)	TCLP (mg/L)
BUS16-A	Fill	BaP	12	--
BUS16-A	Fill	Naphthalene	0.46	--
BUS16-A	Fill	Total PAH	113.5	--
BH14	Fill	Lead	1600	--
BUS22-B	Fill	BaP	11	<0.001 mg/L
BUS22-B	Fill	Total PAH	164.5	<0.02 mg/L
BUS40A	Fill	Lead	1700	0.22 mg/L

207 The Parade Norwood SA 5067 • PO Box 3166 Norwood SA 5067
T: + 61 8 8431 7113 • F: + 61 8 8431 7115
ACN 100 220 479 • ABN 62 100 220 479

The proposed development of the site includes high density residential with an underground carpark and paved promenade. It is proposed to excavate all of the fill, which will be stored in an on-site re-use and management facility to be located in the paved promenade area. Some landscaping (including trees) is proposed for the promenade area.

RISK ASSESSMENT

The risk assessment has been undertaken in accordance with the methodology presented in the National Environment Protection (Assessment of Site Contamination) Measure, 1999. The following key assumptions were made in preparing the preliminary clean up goals:

1. The soils are not readily leachable. Additional leachability testing during classification sampling and testing is required to confirm that the elevated lead and PAH results in the fill materials are not leachable. The TCLP testing is to be undertaken in accordance with AS4439.2, with acidic elutriant.

2. The location for the burial of the contaminated material is to be reviewed and approved by the Auditor prior to the commencement of any excavation works. Contaminated soil shall not be placed in areas where drains or other underground infrastructure potentially requiring maintenance are to be located. All underground services are to be placed within clean fill material. Such structures are only to be located within clean soils. Suitable buffers shall be allowed to ensure the contaminated soils cannot be readily accessed around the perimeter of buildings or pavements. Survey plans are to be prepared detailing the location, depth, construction, etc of the area where fill materials will be placed.

3. The earthworks and future assessment / management works associated with the materials to be placed beneath buildings will be performed in accordance with ANZECC Guidelines for the Assessment of On-site Containment of Contaminated Soil dated September 1999.

4. A marker layer ('Geogrid' or similar) is to be placed over contaminated soils contained beneath buildings and impermeable pavements to provide a visual indicator to future users where the contaminated soil is located. The areas where the fill materials are located will need to be surveyed by a licensed surveyor for future reference. "As built" plans are to be prepared and verified following construction. These plans will form part of the environment management plan for the site.

5. All earthworks at the site will be performed in accordance with a Construction Management Plan, to be agreed with the Auditor, which will specify OH&S and environmental management procedures to minimise exposure of site users and adjacent users to the contamination identified in the fill.

6. Ongoing exposure to the contaminated soils will be minimal. The preliminary clean up goals for the placement of contaminated soils beneath buildings are based on exposure during construction activities only (eg. maximum of 4 months construction time and no exposure during the future). The preliminary clean up goals for the placement of contaminated soils beneath

impermeable pavements are based on exposure for a total of 12 months for any one adult worker (including any maintenance activities for underground services in the future). Please note that conditions restricting access to these materials will be placed in the Site Audit Report and will be implemented for the site through the development and execution of an Environment Management Plan (EMP).

7. Validation sampling and testing of all excavation works is required to confirm that the contaminated materials have been removed. Validation testing should be conducted on a grid basis with both floor and walls of excavations.

8. All materials movements are to be tracked so there is a verifiable record of the transport and placement of contaminated materials both within the site and off site, if off site disposal is required. This methodology for tracking soils is to be agreed with the Auditor prior to the commencement of works.

9. If contaminated materials do not meet the preliminary clean up goals, then the more highly contaminated materials will require off site disposal. These materials may also require treatment / stabilisation prior to disposal.

10. No deep rooted trees are to be located above the re-use facility if possible. Where trees must be placed above the re-use facility, a minimum of 2 m buffer of growing medium must be placed around the roots of the trees, or the trees are to be placed in concrete planter boxes.

The following preliminary clean up goals are provided for your consideration, and are subject to all of the assumptions listed above.

Table 2 – Preliminary Clean Up Goals

Location	**Reference**	**B(a)P**	**Total PAHs**	**Lead**
		mg/kg	mg/kg	mg/kg
Garden Beds or where plants / trees will be grown	Clean Fill / NEPM EILs	--	--	600
Beneath Pavements	Site specific HRA	8	164	5,700
Beneath Buildings	Site specific HRA	75	1,500	17,000

These preliminary clean up goals are intended to be used as representative criteria for 95% upper confidence limits of average concentrations. The 95% UCL should be calculated in accordance with the NSW EPA Sampling Design Guidelines based on an appropriate sampling/validation program.

The US EPA ProUCL program is also suitable for calculating mathematically valid statistics.

CLOSURE

I trust that this provides you with sufficient information in which to continue progressing the development of the site. Should you have any queries or if you wish to discuss our proposal, please do not hesitate to contact me on 0428 154 976.

Regards,

Andrew Nunn
Accredited Environmental Auditor

APPENDIX 3 – INSPECTION RECORDS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Tierra Staff
Elmar Schaffeler (EMS)
Daryl Burrows (DPB)
Tom Dolling (TPD)
Scott Slater (SKS)

HY Staff
Marcus Booth (MB)
Graeme Hodson (GH)

Date:	17/05/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	3:00pm
Weather:	Clear Skies and Sunny
Tierra staff present:	SKS and TPD

Work Being Performed

SKS and TPD met with MB on Site at 3:00pm. SKS and TPD collected vallidation samples from Stockpile 1. MB instructed PD worker to dig 9 pits around stockpile and in top of stockpile to enable samples to be taken. MB informed SKS and TPD that a second stockpile of similar material on the SE portion of the Site will be ready for testing next week providing results for samples of Stockpile 1 taken today comply with relevant criteria.

TPD and SKS inspected progress of removal of shallow fill from on top of natural material on northern portion of Site.

Sampling	**Yes**	STF	
Photos in Folder	**Yes**	**Folder Name**	Photos/06-05-17
Other Comments			
Left Site	3:50pm	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

71 Belair Road
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515

Tierra Staff
Elmar Schaffeler (EMS)
Daryl Burrows (DPB)
Tom Dolling (TPD)
Scott Slater (SKS)

HY Staff
Marcus Booth (MB)
Graeme Hodson (GH)

Date:	1/07/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	8:30am
Weather:	overcast and light drizzle
Tierra staff present:	SKS

Work Being Performed

~8:30am - 9:00am SKS inspected backfilling of reuse pit and removal of fill from SE portion of Site. SKS sampled 12th lift of reuse fill then left site.

~11:20am - 12:00pm SKS inspected backfilling of reuse pit and removal of fill from SE portion of Site. SKS sampled 13th lift of reuse fill. Rain became heavy and PDE ceased work for the rest of the day. SKS then left site.

Sampling	**RF**		
Photos in Folder	**No**	**Folder Name**	
Other Comments			
Left Site	12:00pm	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

71 Belair Road
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515

Date:	3/07/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	9:00am
Weather:	overcast
Tierra staff present:	SKS, EMS

Work Being Performed

~9:00am - 9:30am SKS marked out Grid marks on SE portion of Site for sampling of natural soils below fill. SKS sampled 14th lift and inspected backfilling of reused fill. SKS, EMS and MB discussed validation process for natural soils in SE portion of Site. SKS informed EMS and MB he would return to Site at 1:30pm to validate final lift of reuse pit and natural soils.

~1:30pm -4:00pm SKS discussed new approach to validation method for SE portion of Site. SKS marked up new grid for collection of 6 samples from this portion of Site. SKS had PDE excavate three pits to 1m depth into top of stockpiled natural clays on northern portion of Site. SKS collected samples from each pit. SKS collected validation samples from 15th lift of reuse pit. SKS collected validation samples from SE portion of Site. SKS observed final scraping of fill from around entrance into reuse pit. Approximately 100m3 of fill still had to be placed into reuse pit. SKS took sample of this material (16th lift). 90 validation samples collected from reuse pit in total. SKS then left Site.

EMS visited the site between 9.30am and 10am, and inspected the excavated areas to the east of the church.

Sampling	**RF, STN and SB**		
Photos in Folder	**Yes**	**Folder Name**	Photos/20060703
Left Site	4:00pm	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

71 Belair Road
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515

Date:	4/07/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	9.30am
Weather:	Sunny
Tierra staff present:	EMS

Work Being Performed

Placement of separation layer in the reuse area, and placement of clay over separation layer. EMS inspected the separation layer, connection of this layer to previously installed materials.

EMS inspected boundaries along southern boundary east of church and established that all fill within the site boundaries had been removed based on survey pegs provided by HY.

EMS inspected boundaries along eastern boundary of church. Aproximately 0.5m of fill remains below foundations. EMS inspected boundaries along eastern boundary of site south of grid 12. Aproximately 0.5m of fill remains below foundations in some areas..

Sampling	**No**		
Photos in Folder	**Yes**	**Folder Name**	Photos/20060704
Other Comments	No		
Left Site	10.30am	**Completed By**	EMS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

71 Belair Road
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515

Date:	5/07/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	3.15pm
Weather:	Overcast
Tierra staff present:	EMS

Work Being Performed

Placement of clay over natural soils.
EMS discussed residual fill issue with HY. It was agreed that HY will remove residual fill along church boundaries.

Sampling	**No**		
Photos in Folder	**Yes**	**Folder Name**	Photos/20060705
Other Comments	No		
Left Site	3.45pm	**Completed By**	EMS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

71 Belair Road
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515

Date:	7/07/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	10.30am
Weather:	Overcast
Tierra staff present:	EMS

Work Being Performed

Placement of clay over natural soils.
EMS inspected removal of residual fill along south-estern boundary. All removable fill had been removed and was placed adjacent to boundary for stockpliling along western boundary.

Sampling	**No**		
Photos in Folder	**Yes**	**Folder Name**	Photos/20060707
Other Comments	No		
Left Site	11am	**Completed By**	EMS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

71 Belair Road
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515

Date:	27/07/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	12.30am
Weather:	Clear skies and Sunny
Tierra staff present:	SKS

Work Being Performed

Drill Rig boring piles across Site. SKS inspected material removed from bore holes and stockpiled on NE portion of Site. SKS noted some SKS met with MB to discuss stockpile that required testing. SKS sampled small stockpile of fill (<50m3) to be analysed for off site disposal General Site photos taken along with photos of stockpiled materials on Site.

Sampling	**Yes**	STF	
Photos in Folder	**Yes**	**Folder Name**	Photos/20060727
Other Comments	No		
Left Site	1:00pm	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

71 Belair Road
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515

Date:	28/07/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	11.15am
Weather:	Overcast
Tierra staff present:	EMS

Work Being Performed

Drill rig boring piles across site.
EMS inspected northern and western boundaries of church area. All fill had been removed from within the site boundaries.

Sampling	**Yes**	STF	
Photos in Folder	**No**	**Folder Name**	
Other Comments	No		
Left Site	11.45am	**Completed By**	EMS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	20/05/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	12:20pm
Weather:	Clear Skies and Sunny
Tierra staff present:	SKS

Work Being Performed

SKS met with MB from HY and inspected exposed natural material ready for validation on northern portion of Site. SKS also inspected removal of fill from SW portion of Site. Natural material in this portion off site was quite variable and thin patchy calcrete layer was making it difficult for excavator operator to define natural materials due to fill and calcrete layer possesing similar colour.

Stockpiling of removed fill onto SE portion of Site using two dump trucks.

Sampling	**No**		
Photos in Folder	**Yes**	**Folder Name**	photos/06-05-20
Left Site	12:45pm	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	22/05/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	10:40am
Weather:	Clear Skies and Sunny
Tierra staff present:	SKS, TPD and EMS

Work Being Performed

RDO for contractor today so no plant operating. Two PD workers on Site measuring volumes of Stockpiles.
SKS and TPD collected validation samples from base of natural material in northern portion of site up to 11.5 grid mark (HY site grid). MB was not on Site.
SKS was not able to sample stockpile 2 due to no contractors being on Site to dig sample pits with mini excavator.

HY employee on Site informed SKS and TPD that additonal material will be added to Stockpile 2 the following day. Sampling of the stockpile will take place after this material has been added.

Sampling	**Yes**	SB	
Photos in Folder	**Yes**	**Folder Name**	Photos/06-05-22
Other Comments			
Left Site	12:50pm	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	24/05/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	10:30am
Weather:	Clear Skies and Sunny
Tierra staff present:	SKS and DPB

Work Being Performed

DPB and SKS inspected SW corner of Site (between church and western boundary fence) were shallow fill had been stripped and natural material were ready for validation. SKS took validation samples of this area (3 samples in total).
DPB Collected samples from Stockpile 2 on SE corner of Site along Grote Street. 15 samples collected, 12 samples analysed.

No plant operating on site during site visit.

Sampling	**Yes**	SB and STF	
Photos in Folder	**Yes**	**Folder Name**	Photos/06-05-24
Other Comments			
Left Site	11:30am	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	25/05/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	11:30am
Weather:	Clear Skies and Sunny
Tierra staff present:	EMS

Work Being Performed

EMS inspected northern portion of Site were shallow fill had been stripped and natural material were validated. Stripping of fill was EMS inspected boundaries of excavations to confirm that excavations extended to the boundaries. Survey marks provided by HY were used to make this assessment. It was found that the excavations extended to the boundaries but one section along Franklin Street will require further excavation (apprx. 400mm) and reinspection.
No plant operating on site during site visit.

Sampling	**No**		
Photos in Folder	**Yes**	**Folder Name**	Photos/06-05-25
Other Comments			
Left Site	12 noon	**Completed By**	EMS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	26/05/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	3.30pm
Weather:	Clear Skies and Sunny
Tierra staff present:	EMS

Work Being Performed

EMS inspected surfaces and boundaries of excavations in south-western section of the site to confirm that excavations extended to the site boundaries. Survey marks provoied by HY were used to make this assessment.
It was found that the excavations extended to the site boundaries.
No plant operating on site during site visit.

Sampling	**No**		
Photos in Folder	**Yes**	**Folder Name**	Photos/06-05-26
Other Comments			
Left Site	4.30pm	**Completed By**	EMS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	29/05/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	1.30pm
Weather:	Clear Skies and Sunny
Tierra staff present:	EMS

Work Being Performed
EMS inspected the site.

No plant operating on site during site visit.

Sampling	**No**		
Photos in Folder	**Yes**	**Folder Name**	Photos/06-05-29
Other Comments			
Left Site	1.45pm	**Completed By**	EMS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	30/05/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	2.00pm
Weather:	Clear Skies and Sunny
Tierra staff present:	EMS

Work Being Performed

EMS visited the site. Natural soils in south-western corner were inspected to determine origin of high pH in validation sample. Natural materials are very limey clays, white to grey in colour.
EMS discussed works program with M Booth (HY).
EMS noticed 200mm sacrifical layer below
stockpile 1
No plant operating on site during site visit.

Sampling	**No**		
Photos in Folder	**Yes**	**Folder Name**	Photos/06-05-30
Other Comments			
Left Site	2.30pm	**Completed By**	EMS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	2/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	12.10pm
Weather:	Clear Skies and Sunny
Tierra staff present:	EMS

Work Being Performed

EMS visited the site. Natural soils wre excavated from the reuse area and stockpiled to the east of the reuse area

EMS discussed works program with M Booth (HY).
EMS noticed 200mm sacrifical layer below
stockpile 1

Sampling	**No**		
Photos in Folder	**Yes**	**Folder Name**	Photos/06-06-02
Other Comments			
Left Site	12.25pm	**Completed By**	EMS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	5/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	1pm
Weather:	Overcast but dry
Tierra staff present:	EMS

Work Being Performed

EMS visited the site. Natural soils were excavated from the reuse area and stockpiled to the east of the reuse area

EMS discussed works program with M Booth (HY).

Sampling **No**

Photos in Folder **No photos** **Folder Name**

Other Comments

Left Site 1.30pm **Completed By** EMS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	7/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	8:45am
Weather:	clear skies and sunny
Tierra staff present:	SKS and EMS (9:00am-9:10am) & (12:00pm-12:10pm)

Work Being Performed

Excavations of ramp into base of reuse pit and stockpiling of material of material onto stockpile on NE portion of site.
Surveyor on site to survey top, sides and base of reuse pit.
SKS measured out top of reuse pit and marked grid for sampling locations @ 8m 15m and 27m using NW corner of pit as zero point.
SKS was informed by MB that HY grid point "A" on Franklin Steet boundary fence lies at 10m across hole so SKS used "A" mark as grid for taking validation samples.

~9:45am SKS spoke with PDE worker/foreman (Peter) who said he expected to commence backfilling of reuse fill by 11:00am
Reuse pit extended from Franklin Street boundary to 30m south of boundary depth of pit was approximately 8m. Width was 20m (10m either side of the HY grid mark "A"). Materials excavated from pit consisted of natural moist olive clay.

Ramp completed at 11:30am. Backfilling commenced @ 11:35am.
Graeme from HY notified SKS that plant will need to stop operating when sampling is taking place. PDE workers notified of this by foreman @ 1:15pm

~1:30pm Golder & Associate consultant on site to perform compaction testing on 1st lift. SKS sampled 1st lift, 2 samples taken.
~2:30pm Addrian Webber from S&G on site as auditors representative for tour and inspection with SKS. Left site at 2:50pm and was happy with site works so far and asked to be notified when next validation of shallow base was to take place as he would like to attend/observe validation.
~2:50pm SKS asked PDE foreman to notify operators of plant in reuse pit to take care not to cover or dislodge grid and level marks painted on walls. PDE foreman notified plant operators shortly afterwards.
~3:00pm 2nd lift complete the SKS took validation samples.
~3:40pm SKS re-marked grid and height marks on walls of reuse pit with spray can.
~4:30pm 3rd layer reaching final compaction, layer appears to be thicker than previous layers. Final compacted level against height levels on wall marked by SKS show lift thickness to be 500m.
~4:45pm Plant removed from hole and SKS collected 3 samples due to thickness of layer

Sampling	**YES**	RF	
Photos in Folder	**YES**	**Folder Name**	Photos/20060607
Other Comments			
Left Site	4:50pm	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	8/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	7:05am
Weather:	overcast (am), clear skies and sunny (pm)
Tierra staff present:	SKS and EMS(10:15am to 10:35am)

Work Being Performed

~8:05am SKS spoke with MB about levels of fill in reuse pit. It was agreed to continue using SKS height mark as reference point and to incorporate a saftey factor to ensure density of samples is sufficient if not slightly higher to avoid the need to go back and take more samples with push tubes later.
~7:10am to 7:25am fully loaded dump truck used to compact 3rd layer prior to compaction testing.~7:30am plant stopped for Geotech to perform compaction test on 3rd lift.
~8:15am URS consultant on Site to check slope stability of reuse pit.
~9:15am SKS sampled 4th lift - 2 Samples collects, lift compacted to 300mm
~10:15am EMS on site for inspection of works, discussed progress with SKS
~11:00am SKS sampled 5th lift - 2 samples taken, lift compacted down to 300mm. Total height on wall was 1.7m
~11:50am SKS sampled 6th lift 2 samples taken, layer compacted down to 300mm, small portion of SE corner of pit not backfilled with rest of lift due to need for compaction testing by Golders.
~12:20pm SKS re-marked grid marks on walls of reuse pit with white spray paint, plant stopped while SKS was in pit.
~12:15pm excavator cut some natural material out of entrance ramp into pit to make slope less steep. Natural material pulled back and placed into 7th lift of reuse fill.
~12:30pm Lunchtime for PDE, SKS went into reuse pit to inspect materials in 7th lift. Also marked up height to 3.5m on eastern wall of pit. Marked up 250mm intervals.
~1:00pm Backfilling recommenced after lunch
~2:10pm SKS sampled 7th lift- 2 samples taken, lift compacted to 400mm.
~3:00pm Golder Associates geotech on site for compaction testing of 7th lift. SKS inspected material being placed into 8th lift (NW corner of pit) while plant was not operating for compaction test. Also marked heights to 4.0m on eastern wall of pit.

~4:15pm SKS sampled 8th lift - 300mm thickness, 2 samples taken

Sampling	**YES**	RF	
Photos in Folder	**YES**	**Folder Name**	Photos/20060608
Other Comments			
Left Site	4:30pm	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	9/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	7:30am
Weather:	clear skies and sunny
Tierra staff present:	SKS and EMS (9:45am - 10:05am)

Work Being Performed

~7:30am dump truck unloading in reuse pit, no excavator or compactor operating in pit. SKS informed by PDE worker that one worker did not come into work today so contractor team one man short resulting in backfilling process slowing down considerably.

~8:30am Backfilling and compaction going slowly only half of 9th lift backfilled after 1.5hrs of work. Excavator operator also operating compactor when enough material have been spread with excavator bucket.
~8:45am Compactor operator arrived on site, backfilling process back to normal speed.
~9:10am SKS sampled 9th lift, 2 samples taken, lift compacted to 300mm. Golder Associates Geotech performed compaction testing at same time.
~9:15am - 9:35am SMOKO - SKS marked up grid marks and heights to 4.5m on walls of pit
~11:45am SKS sampled 10th lift. 2 samples taken, lift compacted to 400mm.
~12:30pm LUNCH, SKS inspected material being placed into 11th lift and remarked grid lines on walls with paint
~1:45pm Golders geotech on site for compaction testing. SKS inspected materials placed during testing
~2:45pm SKS sampled 11th lift, 2 samples taken, lift compacted to 300mm.
~3:15pm PDE filling northern end of pit & battering up wall to support incase of collapse over the weekend, URS consultant supervising construction of batter. Peter from PDE advised SKS that they will only fill northern half of 12th lift 1st then build batter slope before continuing to backfill entire lift. Peter also advised SKS that toe of batter will not extend past 8m grid mark so sample locations will not be affected by batter slope or material.
~3:45pm PDE notified SKS that they did not expect to complete any further lifts today.

Sampling	**YES**	RF	
Photos in Folder	**YES**	**Folder Name**	Photos/20060609
Other Comments			
Left Site	3:55pm	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	13/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	7:30am
Weather:	Clear Skies and Sunny
Tierra staff present:	SKS

Work Being Performed

~8:00am SKS sampled 12 lift, 2 samples taken, lift compacted to 400mm, very uneven across surface of lift, compactor operating with one flat tyre.

~8:30am SKS and MB inspected stockpile #2. SKS advised that some loose material around western end of stockpile 2 should be pulled away with excavator bucket and placed into reuse pit. SKS advised MB that he will take 5 samples from western end of stockpile and mark out area sampled with paint and a peg in the top of the stockpile.
~9:00am compaction testing of 12th lift, SKS inpsected material being placed in 13th lift in NW corner of pit.
~11:15am SKS sampled 13th lift, material was quite dry and did not compact well. Lift only compacted to 500mm, 3 samples taken.

~12:35pm SKS remarked grid marks and height marks in pit with spray paint while PDE were at lunch
~1:05pm SKS inspected material being placed into 14th lift

~2:00pm SKS marked out western portion of stockpile #2 from which additional samples are to be taken with white spray paint at
~2:30pm - 3:00pm SKS took 5 samples from stockpile. Sampled taken from ~400-~600mm into stockpile material to ensure samples had not been exposed to air and elements.
~ 3:15pm SKS sampled 14th lift, 3 samples taken, compacted to 400mm.

Sampling	**YES**	RF	
Photos in Folder	**YES**	**Folder Name**	Photos/20060613
Other Comments			
Left Site	3:30pm	**Completed By**	

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	14/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	7:55am
Weather:	clear skies and sunny (very cold in at start of works ~1-2 degrees)
Tierra staff present:	SKS & EMS (3:30pm-3:45pm)

Work Being Performed

~8:50am SKS sampled 15th lift, 3 samples taken, lift compacted to 400mm.
10:45am HY staff requested SKS querry EMS on options for stockpile #2 if additonal testing still exceeds relevant criteria. Also asked whether bitumen at Franklin Street entrance could go back into reuse pit along with fill. EMS told SKS that bitumen had to go offsite as demoliton material and could not go back into the hole. SKS informed HY staff of this at 11:10am prior to PDE stripping back fill from Franklin Street access road. HY also informed by SKS that EMS had emailed Fred from HY in regards to options for Stockpile#2.
~11:00am PDE finished loading stockpiled fill into reuse pit. 2/3 of lift 16 backfilled and compacted. Material in this portion of 16th lift was visually the poorest placed into reuse pit, lots of slag, masonry, plastic, glass and metal.
~11:30am-11:45am SKS observed PDE excavator remove bitumen from Franklin St entrane and stockpile seperately.
~12:00pm SKS raised concerns with Graeme from HY over use as natural surface below access road as future access road for all vehicles entering and leaving site. SKS discussed with EMS . EMS said he was not too concerned about issue but would have a look when he visited Site later in the day. SKS informed Graeme of this at 12:10pm
~2:00pm Pde dug deep trench to remove sewer pipe running parallel to and in centre of access road. Trench went over 2m deep and extended into zone of influence for adjacent building footings.
~3:00pm HY requested whether trench can be backfilled due to fears of footings stability in adjacent building. EMS inspected trench with SKS at 3:30pm. EMS was happy for trench to be backfilled however an old groundwater well had been unearthed in eastern side of trench. EMS advised HY that this would need to be decomissioned by a licensed driller and would need to be protected from material falling into it until it has been decomissioned. DPB contacted by EMS to organie WB drillers to decomission the well as soon as possible.
~3:45pm-4:00pm SKS took additional samples of stockpile #2
~4:05pm SKS met with Mat from MGT at Franklin St entrance to collect samples to be sent to Melbourne
~4:20pm SKS inspected material being placed into reuse pit from stripping of road way. Backfilling progress slow. Material from roadway very dry and not compacting well. Visually material from roadway much better quality than other 2/3 of site backfilled from stockpiled fill.

Sampling	**YES**	RF	
Photos in Folder	**YES**	**Folder Name**	Photos/20060614

Other Comments

Sheep foot roller had tyre replaced and was not operating when SKS arrived on site.

Left Site	4:30pm	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	15/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	8:30am
Weather:	Clear Skies and Sunny (very cold at start of works 1-2 degrees)
Tierra staff present:	SKS

Work Being Performed

~8:30m PDE continued to strip from roadway. Smaller excavator with small compaction pad for compacting natural clays. ~9:00am SKS validated natural soils up to HY grid mark 9. SKS did not validate 1m strip of material along adjacent building. No more material could be scraped from this area yet due to fear of undermining building footings. Graeme (HY) said he will have this material removed later when he is ready to brace footings. Fill being removed from roadway being placed into 17th lift of reuse pit. Bulldozer now being used to spread and level fill placed into reuse pit.

~ 9:20am SKS measured and marked up to 7m height on eastern batter wall of resuse pit using right angle square.

~9:45am-10:50am meeting held between tierra and HY.

~11:00am SKS validated natural soils below fill removed from roadway up to grid mark 11.5. Once again 1m strip along building was not included in validation.

~11:15am SKS inspected excavator removing fill from along roadway.

~11:20am SKS remarked grid lines with spray painted wood steaks due to E and W batters of reuse pit being filled with natural clays.

~12:45pm SKS inspected natural materials under removed fill from access road. SKS validated natural soils between HY grid mark 11.5 and 16 and from 1m to 10m E of eastern boundary. 1 metre strip along building not validated.

~1:00pm SKS sampled 17th lift, lift compacted to 500mm, 4 samples taken. Compaction of material in 17th lift being performed with smoothdrom roller, sheeps foot roller removed from site.

~1:30pm PDE began stripping fill from HY grid mark 12 to HY Grid mark 18 along western boundary and placing material directly into reuse pit.

~2:10pm Excavator driver requested SKS inspect scraped surface and ask whether trench filled with sand needed to be excavated

~2:30pm SKS inspected excavation along western boundary, trench sand and pipe work had been removed.

~ 3:20pm SKS and Graeme (HY) inspected fill in the 1m strip running along building adjacent access road. SKS said that it would be fine to strip last of fill and immediately replace with natural clays to ensure footing stability of adjacent building. Graeme was very happy with this approach.

~4:00pm SKS advised excavator driver scraping back fill on western side of site to keep an eye out for another groundwater well that will need to protected and decomissioned.

~4:10pm PDE began placement of temporary ramp into Bowen Street so vehicles on site could leave at end of works.

~4:30pm SKS met with MGT courier for sample collection from site access gate so samples would arrive in Melbourne the following day.

~4:50pm temporary ramp on Bowen Street completed

~4:55pm SKS advised MB that DPB will be coming to site to take RF samples of 18th lift. Contact details for DPB were provided to MB.

Sampling	**YES**	RF	
Photos in Folder	**YES**	**Folder Name**	Photos/20060615
Other Comments			
Left Site	5:00pm	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	16/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	1.30pm
Weather:	Overcast but dry
Tierra staff present:	EMS

Work Being Performed

EMS visited the site. Gravel fill was excavated in area northeast of site office and stockpiled as stockplie 3 to the north of stockpile 2

EMS discussed works program with M Booth (HY) and advised HY to dig less deep when removing the gravel fill, as underlying fill

Sampling	**No**		
Photos in Folder	**Yes**	**Folder Name**	Photos/20060616
Other Comments			
Left Site	2.30pm	**Completed By**	EMS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	19/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	3:30pm
Weather:	clear skies and sunny
Tierra staff present:	SKS

Work Being Performed

SKS inspected trench excavated into reused fill layer in northern half of reuse pit.
SKS visually validated natural soils up from western boundary to Site Office doorway. Materials consisted of natural Hindmarsh Clays and come patches of calcrete. SKS informed MB that a sample location lies to the east of this validated area and will need to be taken from the access ramp into the reuse pit.
SKS sampled Stockpile 3. Stockpile volume estimated to be 1300-1400m3. 13 sample primary samples and 2 GC samples taken.

SKS inspected trench excavated into reused fill layer in northern half of reuse pit.
SKS inspected placement of rubble from stockpile 2 onto SW portion of Site.
SKS informed by PDE and MB that they will be laying tapex sheeting into trench first thing in the morning. SKS said he will be on Site at start of works to observe placement and commencement of backfilling.
Second groundwater well unearthed in from of toilet block. SKS contacted DPB in regards to decomissioning.

Sampling	**YES**	STF	
Photos in Folder	**Yes**	**Folder Name**	2006/20060619
Other Comments			
Left Site	4:25pm	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	20/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	7:00am
Weather:	clear skies, cold
Tierra staff present:	SKS

Work Being Performed

SKS observed placement of tapex sheeting into trench by PDE workers. SKS advised them that sheets need to overlap and should run up side of trench walls. PDE placed sheeting in this fashion.
SKS observed backfilling of natural clays into trench. PDE were using dump truck to empty large load of soil next to trench then push material into trench with loader. SKS raised concerns with PDE worker and MB that this method may result in cross contamination of clean clays with contaminated fill. Options for backfilling should be limited to the use of single loads from loader or if a dump truck is to be used then a sacraficial layer of 200mm needs to be left on top of the fill surface.

PDE had started excavation of second half of Resue pit. Material excavated from pit was being used to fill trench. This material had good moisture content for clay plug.

Sampling **No**

Photos in Folder **YES** **Folder Name** 2006/20060620

Other Comments

Left Site 7:50am **Completed By** SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	20/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	10:40am
Weather:	clear skies and sunny
Tierra staff present:	SKS

Work Being Performed

SKS observed placment of Tapex sheeting and placement of first lift of clay plug over sheeting. Excavated material from second half of resuse pit being used for plug and smooth drum roller being used for compaction.

SKS spoke with MB and advised that placement of layer looked fine along with materials being used for clay plug.

MB advised SKS that two types of sheeting was used. Tapex Budget sheeting and onion bag sheeting. SKS said this was fine providing the sheeting has atleast 100mm of overlap.

MB requested SKS inspect clay cap once it is finished at the end of the day. SKS said he will not be available but will visit site first thing in the morning to inspect finished clay cap on first half of resuse pit.

Sampling	**No**		
Photos in Folder	**YES**	**Folder Name**	2006/20060620
Other Comments			
Left Site	11:05am	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	21/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	10am
Weather:	clear skies and sunny
Tierra staff present:	EMS

Work Being Performed

EMS visited the site. Reuse area south was excavated and stockpiled in north-eastern area of the site on top of previously previously excavated materials from reuse area north
EMS discussed works program with M Booth (HY)

Sampling	**No**		
Photos in Folder	**Yes**	**Folder Name**	Photos/20060621
Other Comments			
Left Site	10.30am	**Completed By**	EMS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	22/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	11.30am
Weather:	clear skies and sunny
Tierra staff present:	EMS

Work Being Performed

EMS visited the site. Reuse area south was excavated and stockpiled in north-western area of the site on top of clay cap for reuse area north

EMS discussed works program with M Booth (HY) and Fred Arias and inspected investigation trenches in south-eastern area of the site

Sampling	**No**		
Photos in Folder	**Yes**	**Folder Name**	Photos/20060622
Other Comments			
Left Site	12.30pm	**Completed By**	EMS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	23/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	4pm
Weather:	clear skies and sunny
Tierra staff present:	EMS

Work Being Performed

EMS visited the site. Reuse area south was excavated and stockpiled in north-western area of the site on top of clay cap for reuse area north
EMS discussed works program with M Booth (HY) and Fred Arias.

EMS inspected natural surfaces north-east of site office which consisted of natural clays.
EMS sampled validation sample 1SB12 from area north-east of site office in the area of the proposed access ramp to reuse area 2.

Sampling	**Yes**		
Photos in Folder	**Yes**	**Folder Name**	Photos/20060622
Other Comments			
Left Site	4.45pm	**Completed By**	EMS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	26/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	1:50pm
Weather:	cleaar skies and sunny
Tierra staff present:	SKS

Work Being Performed

SKS inspected base of reuse pit and marked out sample grid along with lift elevation heights on walls of pit.
SKS discussed approach to sampling with MB.
SKS oberved removal of fill from between 11.5 HY grid mark south to church. SKS said he would take validation samples from this area in the morning.
Reuse pit was being surveyed during SKS inspection

Sampling **No**

Photos in Folder **No** **Folder Name**

Other Comments

Left Site 2:20pm **Completed By** SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	27/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	7:00am
Weather:	clear skies and sunny
Tierra staff present:	SKS, EMS

Work Being Performed

7:00am-7:45am SKS inspected backfilling activities and sampled first lift of Reused fill. SKS also sampled natural soils below removed fill (1SB13-A and 1 SB14-A). SKS then left site.
9:10am-9:25am SKS inspected backfilling activites and sampled 2nd lift of reused fill then left site
10:10am-10:35am SKS inspected backfilling activities and sampled 3rd lift of reused fill then left site
12:30pm-12:50pm SKS inspected backfilling activities and sampled 4th lift of reused fill then left site
2:35pm-2:55pm SKS inspected removal of fill in SE portion of site along church, backfilling activities and sampled 5th lift of reused fill then left site.
EMS visited site between 1pm and 1.30pm, and viewed the excavation of fill to the east of the site office

Sampling	**Yes**	RF and SB	
Photos in Folder	**Yes**	**Folder Name**	photos/20060627
Other Comments			
Left Site	2:55pm	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	28/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	7:00am
Weather:	clear skies and sunny
Tierra staff present:	SKS, EMS

Work Being Performed

7:00am - 7:25am SKS sampled 6th lift of Reused fill and inspected natural soils below removed fill in SE portion of Site at corner of Grote Street and the Church. SKS then left site.
9:30am - 10:30am SKS inspected backfilling activities and removal of fill from SE portion of Site. SKS sampled 7th lift of reuse pit. SKS discussed with Peter (PDE) and MB backfilling small portion of site from where samples 1SB13-A and 1SB14-A where taken from. Peter and MB said they may have to take risk and backfill prior to results being recieved. SKS informed them that results should be available tomorrow afternoon. MB and Peter then decided they could afford to wait for results prior to backfilling this area with natural clays mined from site. SKS then left site.

EMS visited site between 2.30pm and 3pm, and viewed the excavation of fill to the east of the church.

Sampling	**Yes**	RF	
Photos in Folder	**Yes**	**Folder Name**	Photos/20060628

Other Comments

SKS informed by PDE that works will cease for the remainder of the day at 11:00am due to union march. No further inspection or sampling required for day.

Left Site	10:30am	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	29/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	9:15am
Weather:	overcast
Tierra staff present:	SKS, EMS

Work Being Performed

~9:15am - 9:45am SKS inspected Site, 8th lift was not yet started. Peter from PDE informed SKS that things had slowed down significantly due to excavator encountering footings during fill removal in SE portion of Site along Grote Street. SKS inspected removal of fill and concrete and discussed progress with Peter. Peter informed SKS that the 8th lift should be ready to validate in approximately 2 hours. SKS then left site.

~12:00pm - 1:30pm SKS inpsected Site. PDE had decided to wear risk of sample failure and backfilled area between 11.5 and 15.5 HY grid marks and up to access ramp with natural clays mined from site. EMS also on Site for inspection of activities. SKS observed placement of clay and leveling with Bulldozer using laser guidance system. Rubble from Stockpile 3 was then placed onto clay using Dump Truck and spread out to level with bulldozer. SKS informed by GH that PDE had unearthed third and final goundwater well in far SE corner approximately 1m from site boundaries. SKS inspected and contacted DPB to arrange decomissioning. SKS informed MB that well will need to be protected until it could be decomissioned by licensed drillers on either thursday or friday of next week.

~1:15pm SKS sampled 8th lift if reused fill. SKS then left site.

EMS visited site between 11.30am and 12pm, and observed excavated areas to the east of the church.

Sampling	**Yes**	RF	
Photos in Folder	**Yes**	**Folder Name**	Photos/20060629
Other Comments			
Left Site	1:30pm	**Completed By**	SKS

SITE DIARY

Tierra Environment Pty Ltd
ABN: 84 111 615 680

12 Green Street
Kingswood SA 5062
T: 08 8340 9513
F: 08 8346 5478

Date:	30/06/2006
Project:	Bus Station Redevelopment
Project #:	AAA 05 002
Principal:	Urban Construct
Contract stage:	Stage 1
Contractor:	PDE
Arrived at site:	7:30am
Weather:	overcast and light drizzle
Tierra staff present:	SKS

Work Being Performed

~7:30am-7:50am SKS inspected backfilling of reused fill and removal of fill from SE portion of Site. SKS sampled 9th lift of reused fill. PDE worker informed SKS next lift should be ready around 9:30am. SKS then left Site.

~10:00am - 10:30am SKS inspected backfilling of resued fill and removal of fill from SE portion of Site. SKS sampled 10th lift and then left Site.

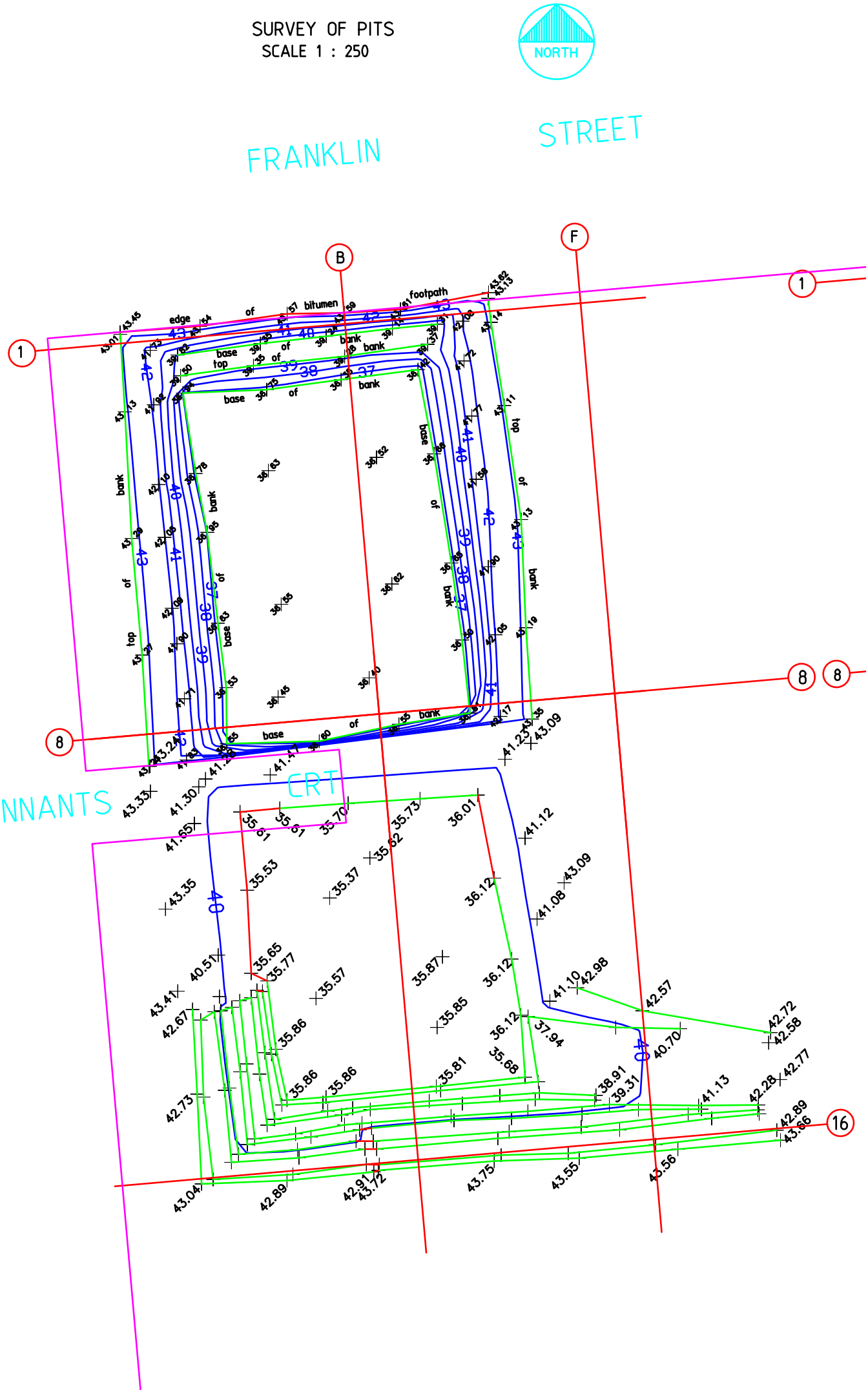
~1:15pm - 1:55pm SKS inpsected backfillinf of reused fill and removal of fill from SE portion of Site. Large pieces of concrete removed from SE portion of Site running from centre of Grote St boundary fence Northwards for 30m, extent of concrete slabs still not determined. Rock breaker being used to break concrete into small pieces. Rain made access to Ruse Pit very difficult even for foot access. SKS sampled 11th lift and was informed by HY that works for the day would cease due to dump truck sliding dangerously on access ramp. SKS then left Site.

Sampling	**Yes**	RF	
Photos in Folder	**Yes**	**Folder Name**	Photos/20060630
Other Comments			
Left Site	1:55pm	**Completed By**	SKS

APPENDIX 4 – SURVEY OF REUSE AREA

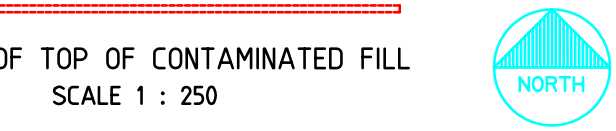
ADELAIDE BUS DEPOT

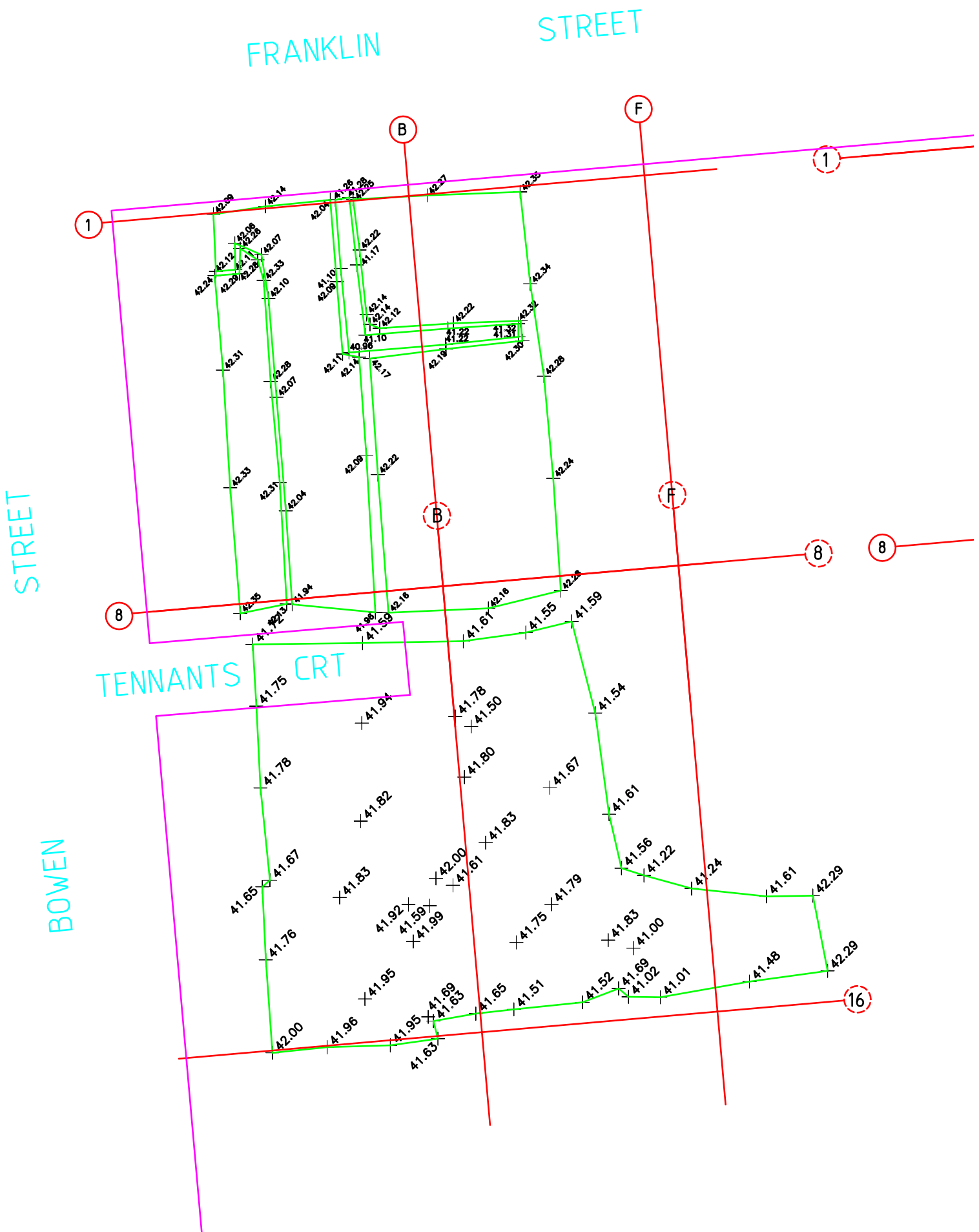
SURVEY OF PITS
SCALE 1 : 250



ADELAIDE BUS DEPOT

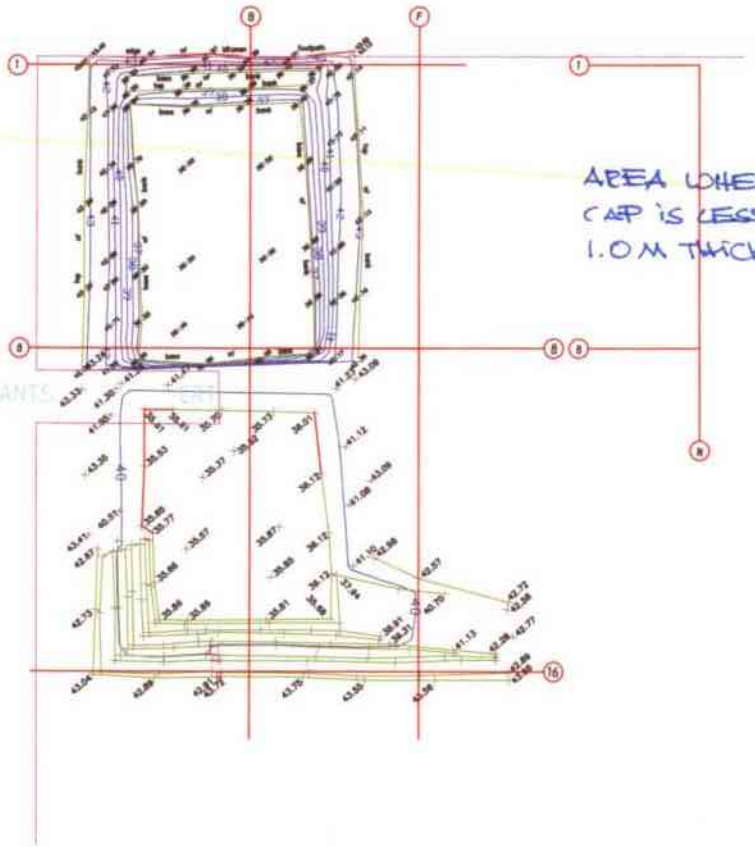
SURVEY OF TOP OF CONTAMINATED FILL
SCALE 1 : 250





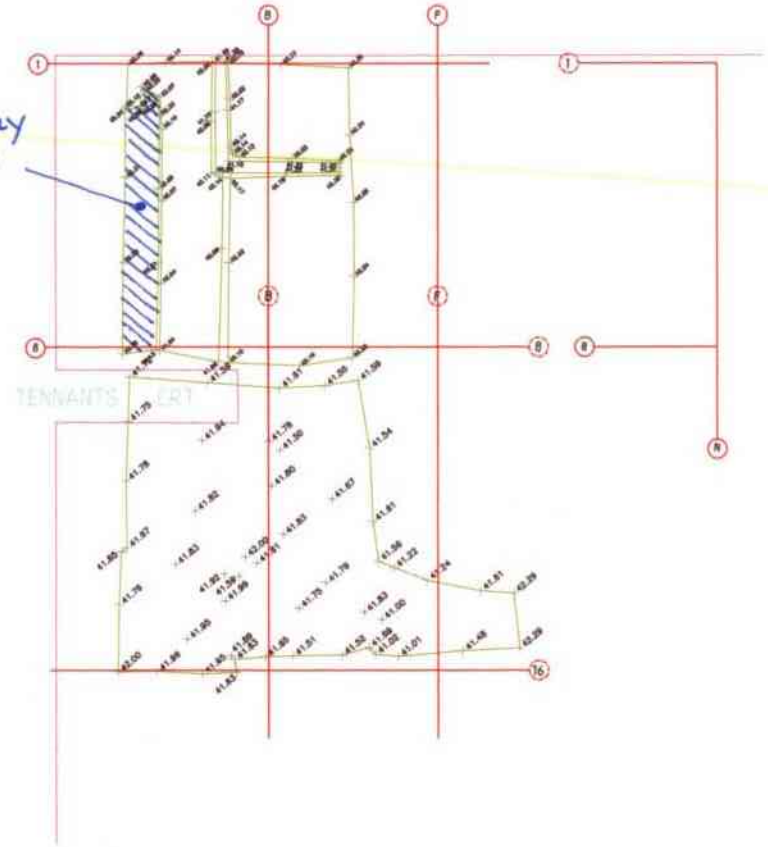
ADELAIDE BUS DEPOT

SURVEY OF PITS
SCALE 1 : 250



ADELAIDE BUS DEPOT

SURVEY OF TOP OF CONTAMINATED FILL
SCALE 1 : 250



AREA WHERE CLAY CAP IS LESS THAN 1.0M THICK

Lock Surveys

LICENSED AND ENGINEERING SURVEYS

The total volume of contaminated fill in the two pits is 6834m³

APPENDIX 5 – VALIDATION OF NATURAL SOILS

Central West Precinct
Base of Excavation Validation
Bus Station Site - Stage 1

Prepared for
Adelaide City Council

20 September 2006

Consulting Engineers and Scientists

Tierra Environment Pty. Ltd.
ABN: 84 111 615 680

71 Belair Road,
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515
general@tierra.com.au

Central West Precinct
Base of Excavation Validation
Bus Station Site - Stage 1

Prepared for
Adelaide City Council

20 September 2006

Document Status	Name	Signature	Date
Approved for Issue ☐	Prepared by Daryl Burrows		20/09/2006
Revision A	Reviewed by Elmar Schaffeler		20/09/2006

1 INTRODUCTION

1.1 General

This Base of Excavation Validation Report has been prepared by Tierra Environment for the Adelaide City Council. It contains validation results for the base of excavations across the remediated area of Stage 1 of the Bus Station site. Remediation and validation measures for the base of excavation are based on the following documents:

- Remediation Action Plan (Tierra Environment, 30 September 2005)
- Validation Plan (Tierra Environment, 7 December 2005)
- Materials Tracking Plan ((Tierra Environment, 7 December 2005)

The remediation works were based on the excavation and on site reuse or off site disposal of selected materials.

Validation testing was undertaken on materials once fill was excavated from an area and that area had been inspected by Tierra. As part of the inspection process the entire area was walked over to assess that the base consisted of natural, i.e all fill had been removed. Any remaining materials considered to be fill were removed and reinspected. When Tierra was satisfied that the area did not contain fill materials, validation samples were immediately collected from predetermined grid positions.

1.2 Summary of remediation activities

The following activities were undertaken to achieve the remediation goals for the areas requiring the removal of all fill materials:

- Excavation of fill materials in fill reuse areas (this included the removal of at least 100mm of natural materials at the base of the fill layer) and stockpiling elsewhere on site on top of fill materials
- Inspection of the base of excavated areas by an environmental engineer/scientist to ensure all fill was removed
- Excavation of natural soils in fill reuse areas to a sufficient depth to contain all reused materials and the 1m capping material
- Survey of the base and horizontal extent of the Reuse Area by a licensed surveyor engaged by the contractor
- Filling of Reuse Area by the progressive placement of fill materials in layers followed by compaction to a specified dry density suitable for geotechnical purposes to support future structures
- Survey of the surface of the reuse materials by a licensed surveyor
- Placement of a synthetic identification/marking layer over top of reused material
- Placement of clay materials over the marker layer and compaction to a specified dry density suitable for geotechnical purposes to support future structures
- Completion of filling in the Reuse Area by placement of approximately 200mm of subgrade (imported quarry rubble)
- Testing of stockpiled materials for off site disposal
- Removal of surplus materials to off site locations

2 GENERAL VALIDATION TESTING REQUIREMENTS

2.1 Need for validation testing

Previous investigations revealed that fill materials contained metals and PAH. The Environmental Auditor requested that validation testing be undertaken once the fill was placed in the Reuse Area.

2.2 Proposed land use

The Adelaide City Council advised that after remediation the site would need to be suitable for commercial and industrial land uses, or open space land use.

2.3 Target criteria

The Environmental Auditor provided Clean Up Goals, which are listed in summary results tables in Appendix C. In addition the results were compared with the National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM) Health Investigation Levels (HIL) A and D and Ecological Investigation Level (EIL) criteria, and Southern Waste Depot disposal criteria.

2.4 General sampling standards

Sampling was required to be performed generally in accordance with Australian Standards AS4482.1-1997 "Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 1: Non-volatile and semi-volatile compounds" and AS4482.2-1999 "Guide to the sampling and investigation of potentially contaminated soil, Part 2: Volatile substances".

2.5 Sampling density

The sampling density from areas where fill materials were removed, i.e. the base of excavations, was stipulated to be as suggested in Table 2 of AS4482.1. Areas which contained elevated levels of metals and PAH required to be sampled at a frequency of 1 sample per 25m^2.

2.6 Sampling strategy

A systematic sampling pattern was used, consisting of a rectangular grid pattern and collection of samples from the surface of areas where fill materials were removed. Sampling locations were positioned with the use of a grid system marked on the perimeter fencing of the site. As the site was not a uniform shape the grid layout was not perfectly rectangular.

2.7 Sampling parameters

Validation testing was undertaken for metals and PAH, in addition to pH determination and PID screens for volatile constituents.

In addition 10% of all samples were analysed for VIC EPA screen.

2.8 Compliance requirements

The validation results were required to comply with the target criteria listed on summary results sheets in Appendix C.

The assessment using the Environmental Auditor's Clean Up Goals was undertaken using the statistical analyses stipulated in the National Environment Protection (Assessment of Site Contamination) Measure 1999 – Schedule B (7A), Notes to Table 11-A, and using the 95%UCL of the arithmetic mean of the results.

The assessment using NEPM criteria and waste disposal criteria was undertaken using the 95%UCL of the arithmetic mean of the results.

3 SCOPE OF WORK

3.1 Soil sampling

Soil sampling from the base of excavations was undertaken between 22 May 2006 and 3 July 2006 and involved the following activities:

- **Sampling set out.** An approximate rectangular sampling grid was used for base of excavation sampling. A plan showing sampling locations is presented in Appendix A. To minimise bias and generate data representative of the material as a whole all sampling locations were predetermined prior to sighting surface materials. This approach was based on the fact that only natural soils remained after the fill removal activities.
- **Sampling location establishment.** Each sampling location was allocated a unique number (1 to 20), which was recorded in the sampling book along with the corresponding sample number.
- **Soil logging.** Materials collected in sample jars for submission to the laboratory were logged. Specific characteristics of the materials, such as moisture content, colour and particle size were observed and noted on the sample register, which is provided in Appendix B.
- **Sampling preparation**. Sample jars were labelled prior to commencing site works. Sample jars were labelled as follows:
  - 1SB##-&
  - '1' is a common number for all samples collected during the works and represents the first stage of the bus station redevelopment.
  - 'SB' stands for shallow base.
  - '##' denotes the sampling number
  - '&' is the sample designation and is either A, X or Y where A is used for the primary sample, X is used for the intra laboratory duplicate and Y is used for the inter laboratory duplicate.
- **Sampling.** Samples were collected by hand from the surface of the base of excavations. Disposable gloves were used for each sample to avoid cross-contamination. Sample jars were kept in an esky with ice until transportation to the laboratory.
- **Quality sampling**. Quality sampling was undertaken at approximately the rates indicated below:

Quality Sampling	Rate
Intra Laboratory Duplicate	1 per 20 regular samples
Inter Laboratory Duplicate	1 per 20 regular samples

  The procedure for collecting quality samples was the same as for normal samples, but portions of the material were sequentially added to each jar to ensure the samples were as analogous as possible.
- **On-site screening**. When a sample was collected from a sampling location some of the same material was collected separately from any laboratory samples and screened for volatile organic carbon using a MiniRae 2000 Photo-Ionisation Detector (PID) which was calibrated prior to use. Samples were placed in sealed plastic bags and stored in the shade prior to screening. After approximately three to five minutes of equilibration or at the completion of a sampling event, the bagged materials were tested using the PID. The readings are presented in the sample register provided in Appendix B.
- **Tracking of samples**. Tracking of samples was undertaken using Chain of Custody (COC) documentation. COCs were sent to the laboratory with instructions of required analyses. The laboratory checked the condition and number of samples, and signed and returned by fax a copy of the COC to confirm receipt of samples.

As discussed above the area around sampling location 1SB… originally required to be samples at a sampling frequency of one sample per 25m2 due to the previously observed elevated levels of metals and PAH A sample recovered from this area and tested did not reveal elevated levels of metals or PAHs. After the sample was removed the Contractor undertook further excavations in this area. This was discussed with the Auditor and it was agreed that the originally proposed higher sampling density was not required

3.2 Analytical testing

The following scope of analytical testing was undertaken:

- Analysis of all samples for pH, metals and PAH
- Analysis of 10% of samples for Vic EPA Screen
- PID field analysis of material for volatile organic carbon
- Collection and analysis of intra laboratory and inter laboratory duplicate samples.

Analyses of soil samples were conducted by MGT Environmental Consulting Pty Ltd. The laboratory holds National Association of Testing Authorities (NATA) registration for the parameters listed below:

Parameter	Analytical Method	Limits of Reporting (mg/kg)	Number of Samples Tested
pH (unitless)	APHA Standard Methods 19th Edition 1995	0.1	20+ (1 + 1) quality
% Moisture	ANZECC Method 102	0.1	20 + (1 + 0) quality
Metals Screen	US EPA 6010B (ICP), USEPA 6020, 7470/1 (CVAA)	Various	20+ (1 + 1) quality
MAH	US EPA SW846 Methods 8260B & MGT Method 350A	0.05	4 + (1 + 1) quality
PAH	US EPA SW846 Method 8270C(GC/MS)	0.1	20+ (1 + 1) quality
TRH	MGT Method 100A-GC	Various (20-100)	4 + (1 + 1) quality
Phenols & Cresols	USEPA SW846 8270C	0.1, 0.2 or 0.5	4 + (1 + 1) quality
Cyanide	US EPA SW846 Method 9010B	5	4 + (1 + 1) quality
Chlorinated Hydrocarbons	US EPA SW846 Method 8121B	0.05 or 0.2	4 + (1 + 0) quality
Organochlorine Pesticides	US EPA SW846 Method 8081A	0.05 or 0.1	4 + (1 + 1) quality
Organophosphorus Pesticides	US EPA SW846 Method 8141A	0.2	4 + (1 + 1) quality
Polychlorinated Biphenyls	US EPA SW846 Method 8082	0.1	4 + (1 + 1) quality

Note – Units are in mg/kg unless otherwise stated.
Quality in the table (within brackets) refers to intra and inter laboratory duplicates respectively. Inter laboratory duplicates were undertaken by WSL Ecowise (NATA registered).

4 QUALITY

4.1 General

Tierra Environment conducts investigations in accordance with the principles of quality assurance and quality control (QA/QC). The 'National Environment Protection (Assessment of Site Contamination) Measure, 1999', states that a quality assurance system is 'actions, procedures, checks and decisions to ensure representativeness and integrity of samples and accuracy and reliability of analysis results'. It goes on to say that the system involves 'selection of appropriate sampling and presentation methods, documentation and sample storage, cleaning of tools before sampling and between samples, cleaning of containers, maintenance of sample environment to minimise sample contamination and analyte losses, delivery to the laboratory in good condition and within timeframes required for the particular analytes'.

The Tierra QA/QC principles include:

- Use of established procedures and suitably qualified field personnel for environmental sampling
- Documentation of chain-of-custody and sample handling and storage
- Use of NATA registered laboratories
- Use of field duplicates samples and trip blank samples

Quality of project outputs is maintained by ensuring:

- All staff are appropriately trained
- Safety standards are defined and implemented
- Good housekeeping practices are adopted during all phases of the project
- Complete records of fieldwork, samples and data are maintained

Specific quality control procedures conducted for this project include:

- The use of appropriate sample collection and handling procedures
- The use of appropriately skilled and experienced personnel
- The application of decontamination procedures where appropriate to minimise cross contamination
- The extraction and analysis within appropriate handling times
- The use of an independent, NATA accredited laboratory for analysis
- The collection and analysis of blind duplicates, split duplicates, and internal laboratory duplicates and matrix spike/matrix spike duplicates

4.2 Field QA/QC procedures

The laboratory supplied clean jars for soil samples. The jars were labelled prior to field work based on the predetermined sampling program. On site the jars were filled with soil and stored in an esky with ice. At the end of each day samples were stored in a refrigerator if not sent to the laboratory. During transportation to the laboratory the samples were packed in an esky with ice and packaging to avoid damage.

Blind (intra-laboratory) samples and split (inter-laboratory) duplicate sample were collected at rates specified above.

4.3 Laboratory QA/QC procedures

During the analysis of samples, the analytical laboratories conducted internal QA/QC procedures including the analysis of laboratory duplicates, laboratory spiked samples and method blank samples. All percentage recoveries for laboratory spiked sample analyses were within the acceptance criteria of 60-140%. Similary all results of method blank samples are of an acceptable quality. Spiked sample and method blank sample results are provided in Appendix E.

4.4 Duplicates

Duplicate samples were collected to provide an indication of the reliability of the sampling and analysis process. Duplicate soil samples were analysed for the full range of parameters. Duplicate soil sample results are presented in final laboratory reports in Appendix E and in the quality assessment data provided in Appendix D.

Relative Percentage Differences (RPDs) for intra-laboratory and inter-laboratory duplicate samples were calculated and are presented in Appendix D. It was noted that elevated RPDs can be observed for samples where results were relatively low and close to the limits of laboratory reporting, or where limits of reporting differed between laboratories. However this is not uncommon in heterogeneous soil matrices.

4.5 QA/QC discussion

Quality assurance and quality control was conducted based upon Tierra Environment's environmental investigation principles to ensure that data of known quality is reported.

The required scope of sample numbers, analytical testing, and quality testing was achieved

Specific aspects of the project used to maintain QA/QC were:

- Field Procedures – The investigations, including the collection of duplicates, is of a standard that provides confidence in the quality of the samples collected.
- Analytical Procedures – The laboratory's internal QA/QC results indicate that analytical information provided by the laboratory is reliable.
- Intra Laboratory Duplicate Samples – The obtained laboratory results are considered representative of the materials subjected to testing. In addition the primary laboratory results proved to be reliable.
- Inter Laboratory Duplicate Samples – The results indicate that there was no bias in the analysis as a consequence of the selection of the laboratory

Based on the QA/QC information available for this project, the results are of an appropriate standard and can be used as part of a basis of interpretation of site conditions.

5 RESULTS

5.1 Assessment criteria

The laboratory results for soil were assessed against the Auditor's Clean Up Goals as presented in Appendix C with the summary results. In addition the results were compared with NEPM A, D and EIL criteria and Southern Waste Depot disposal criteria.

5.1.1 Statistics

Statistical calculations such as the mean, standard deviation and 95% upper confidence level of the arithmetic mean (95%UCL) were undertaken for each analyte detected at concentrations above the limit of reporting. The confidence statistic provides a measure of the uncertainty of the estimate of the population proportion, i.e. there is a 95% confidence that the true unknown mean of the population portion is in the computed interval. The standard deviation and 95%UCL were only calculated where there were three or more samples in the data set.

The 95%UCLs were calculated based on the assumption of normal data distribution, which was considered sufficient given that the 95%UCL results were not close to the Auditor's Clean Up Goals. The mean and 95%UCL of sample sets was assessed against the criteria described above.

For statistical purposes, all values below the laboratories' limits of reporting (LOR) were substituted with a value equal to 50% of the LOR.

5.2 Results and discussion

5.2.1 Soil description and PID survey

Soil descriptions are provided on the sample register (refer Appendix B). Soil samples were screened for volatile organic carbon with a PID calibrated prior to commencing works. All PID readings were less than 3.9ppm.

5.2.2 pH

There was no Auditor's Clean Up Goal for pH. All sample results were between 8.9 and 11.0. This is considered consistent with natural clays and calcretes in the area.

5.2.3 Metals

The Auditor's Clean Up Goals for metals are presented in the summary results in Appendix C. All individual sample results and means and 95% UCLs for each metal data set meet the Auditor's criteria.

The results were also compared with the NEPM A, D and EIL criteria and Southern Waste disposal criteria presented in Appendix C.

5.2.4 Total PAH

The most stringent Auditor's Clean Up Goal for total PAH was used for the assessment of results, i.e. those applying to beneath pavements. All sample results were below the limits of reporting and therefore comply with the criteria.

5.2.5 B(a)P

The most stringent Auditor's Clean Up Goal for benzo(a)pyrene was used for the assessment of results, i.e. those applying to beneath pavements. All sample results were below the limits of reporting and therefore comply with the criteria.

5.2.6 Other analytes

The results of all other analytes are less than the limits of reporting. As all limits of reporting are below the Auditor's, NEPM and Southern Waste depot disposal criteria, the results of all other analytes comply with the relevant criteria.

6 CONCLUSIONS

In summary, the following conclusions are provided:

Base of excavation material appearance	Base of excavation materials were generally clays with varying amounts of sands and gravels (calcrete)
Sampling density	The sampling density was agreed with the Environmental Auditor and was complied with. The investigations provided sufficient grid based sampling to provide reasonable confidence in the average quality of material across the base of excavations.
Data quality	QA/QC standards were agreed with the Environmental Auditor and were considered acceptable.
Results of metals and PAH in natural soils	The tested materials meet the Auditor's criteria, NEPM HIL A and D and Southern Waste Depot's waste fill, intermediate landfill cover and low level contaminated waste criteria
Concentration of other chemicals within the natural soils	All individual samples analysed for other chemicals and their statistics meet the Auditor's criteria, NEPM HIL A and D and Southern Waste Depot's waste fill intermediate landfill cover and low level contaminated waste criteria

Based on the results presented in this report it appears that natural materials from the base of excavations meet the Auditor's Clean Up Goals.

7 LIMITATIONS OF USE

Site contamination is generally a product of man-made processes and therefore exhibits characteristics and properties that vary from place to place and can change with time. Contamination assessments involve gathering and assimilating limited facts about these characteristics and properties in order to better understand or predict the status of contamination on a particular site under certain conditions.

The facts reported and utilised in this document may have been obtained by inspection, excavation, probing, sampling, testing, and other means of investigation or from the client. They are directly relevant only to the ground at the place where and time when an investigation was carried out.

Any interpretation or recommendation given in this report is based on judgment and experience and not on greater knowledge of the facts than the sources of information indicate. The interpretations and recommendations are opinions provided for the sole use by the Client identified on the cover sheet and in accordance with a specific brief.

Tierra does not represent that the information or interpretation contained in this document addresses completely existing features such as surface and subsurface contamination, groundwater and geotechnical conditions or ground or contamination behavior on the subject site.

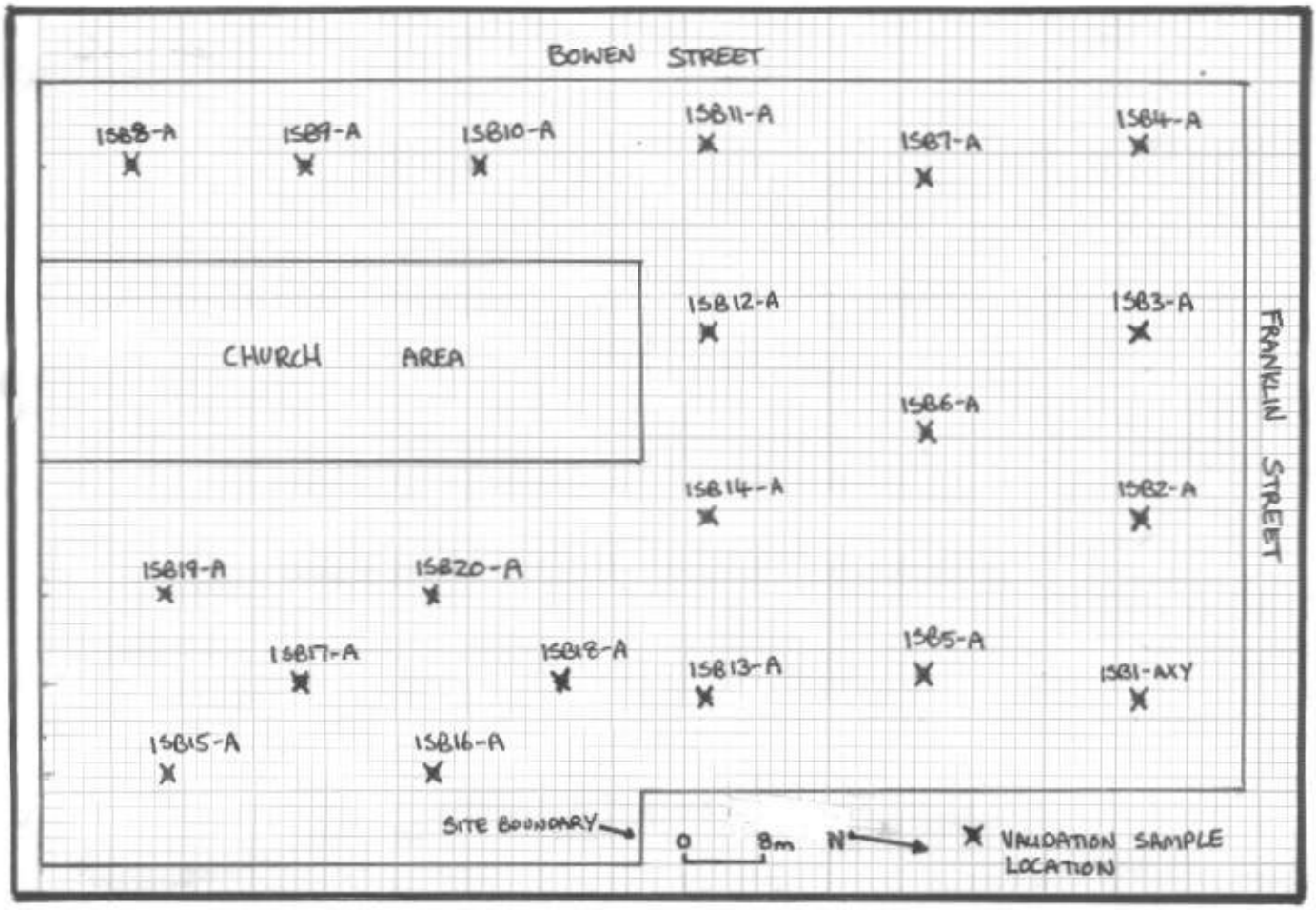
The responsibility of Tierra Environment Pty Ltd is solely to its Client. It is not intended that this document be relied upon by any third party, other than the Environment Protection Authority or an Environmental Auditor (engaged by the Client) for the purpose of a contaminated land audit. Tierra does not undertake any duty or accept any responsibility to any other parties who may rely upon this document

APPENDIX A – SITE PLANS

Project:	Bus Station Redevelopment	Project No:	AAA 05 002 02
Principal:	Adelaide City Council	Date:	3/07/2006
Contractor:	P.D Excavations	Plan No.	**BS0002**
Description:	Base of Excavations Validation Sample Locations		

Tierra Environment Pty Ltd
ABN: 84 111 615 680

71 Belair Road,
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515
general@tierra.com.au



APPENDIX B – ENVIRONMENTAL SAMPLE REGISTER

Central West Precinct

Base of Excavation Sample Register

Date	Sample Number	Duplicate Samples	Stage	Plan #:	Location	COC#	PID	Primary Laboratory	Secondary Laboratory	Analyses	Description of Material	Comments	Lab Reports	Complies
22/05/2006	1SB1-A	X & Y	1	BS0002	11mS 9.5mW (zero point @ NE corner)	S0082 and S0083	2.2	MGT	WSL	VIC EPA Screen and pH	Sandy Clayey GRAVEL, orange tan, very dry, gravel angular to sub angular to 80mm	very calcerous material	194320 & 945674	Yes
22/05/2006	1SB2-A	Nil	1	BS0002	11mS 28.5mW (zero point @ NE corner)	S0082	1	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	Sandy Clayey GRAVEL, cream tan, very dry, gravel angular to sub angular to 80mm	very calcerous material	194320	Yes
22/05/2006	1SB3-A	Nil	1	BS0002	11mS 47.5mW (zero point @ NE corner)	S0082	2.2	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	Sandy Clayey GRAVEL, tan, very dry, gravel angular to sub angular to 80mm	very calcerous material	194320	Yes
22/05/2006	1SB4-A	Nil	1	BS0002	11mS 66.5mW (zero point @ NE corner)	S0082	1.5	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	Silty Sandy CLAY, tan cream, very dry, minor gravel, sand fine grain		194320	Yes
22/05/2006	1SB5-A	Nil	1	BS0002	33mS 12.6mW (zero point @ NE corner)	S0082	1.5	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	Silty Sandy CLAY, tan cream, very dry, minor gravel, sand fine grain		194320	Yes
22/05/2006	1SB6-A	Nil	1	BS0002	33mS 37.6mW (zero point @ NE corner)	S0082	1.4	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	CLAY, olive tan, slightly moist, minor sand and gravel		194320	Yes
22/05/2006	1SB7-A	Nil	1	BS0002	33mS 63.6mW (zero point @ NE corner)	S0082	1.6	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	CLAY, olive with orange and red spots, moist, soft		194320	Yes
24/05/2006	1SB8-A	Nil	1	BS0002	9.5mE 9mN (zero point @ SW corner)	S0098	0	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	CLAY, tan, dry minor gravel (limestone)	very calcerous material	194320	Yes
24/05/2006	1SB9-A	Nil	1	BS0002	9.5mE 27mN (zero point @ SW corner)	S0098	0	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	CLAY, cream tan, slightly moist, soft		194406	Yes
24/05/2006	1SB10-A	Nil	1	BS0002	9.5mE 45mN (zero point @ SW corner)	S0098	1.6	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	Sandy CLAY, orange tan, slightly moist, sand fine grained, minor gravel to 20mm		194406	Yes
16/06/2006	1SB11-A	Nil	1	BS0002	55mS 66.5mW (zero point @ NE corner)	S0132	0.9	MGT	NA	VIC EPA Screen and pH	Sandy CLAY, orange tan, slightly moist, sand fine grained		195305	Yes
23/06/2006	1SB12-A	Nil	1	BS0002	55mS 47.5mW (zero point @ NE corner)	S0148		MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	Sandy CLAY, orange tan, slightly moist, sand fine grained	PID sample exceeded holding time	195573	Yes
27/06/2006	1SB13-A	Nil	1	BS0002	55mS 9.5mW (zero point @ NE corner)	S0149	0	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	Sandy CLAY, tan, dry, sand fine grain, lots of concrete		195609	Yes
26/06/2006	1SB14-A	Nil	1	BS0002	55mS 28.5mW (zero point @ NE corner)	S0149	0	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	Sandy CLAY, orange tan, slightly moist, sand fine grained, minor concrete		195609	Yes
3/07/2006	1SB15-A	Nil	1	BS0002	9.25mW 13.3mN (zero point @ SE corner)	S0160	1.2	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	Sandy CLAY, red brown, slightly moist, sand variable fine to medium grain.		195817	Yes
3/07/2006	1SB16-A	Nil	1	BS0002	9.25mW 39.9mN (zero point @ SE corner)	S0160	3	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	CLAY, light tan, dry, minor calcrete gravel		195817	Yes
3/07/2006	1SB17-A	Nil	1	BS0002	18.5mW 26.6mN (zero point @ SE corner)	S0160	3.9	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	Sandy CLAY, tan brown, slightly moist, sand fine grain, minor gravel		195817	Yes
3/07/2006	1SB18-A	Nil	1	BS0002	18.5mW 53.2mN (zero point @ SE corner)	S0160	3.8	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	Sandy CLAY, tan brown, dry, sand fine grain, minor gravel		195817	Yes
3/07/2006	1SB19-A	Nil	1	BS0002	27.75mW13.3mN(zero point @ SE corner)	S0160	3.7	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH	CLAY, olive with red and yellow spots, very moist		195817	Yes
3/07/2006	1SB20-A	Nil	1	BS0002	27.75mW 39.9mN (zero point @ SE corner)	S0160	2.9	MGT	NA	VIC EPA Screen and pH	Gravelly Sandy CLAY, orange, dry, sand fine grain, calcrete gravel to 20mm		195817	Yes

APPENDIX C – SUMMARY RESULTS

Central West Precinct

Base of Excavation Validation Sample Summary

Sample Number	ISB1-A	ISB2-A	ISB3-A	ISB4-A	ISB5-A	ISB6-A	ISB7-A	ISB8-A	ISB9-A	ISB10-A	1SB11-A	1SB12-A	1SB13-A
Fill/Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural
Laboratory Number	06-MY04426	06-MY04428	06-MY04429	06-MY04430	06-MY04431	06-MY04432	06-MY04433	06-MY04934	06-MY04935	06-MY04936	06-JN04258	06-JN05696	06-JN05824
MISCELLANEOUS ANALYSES													
% Moisture	6.8	7.2	6.5	13	7	16	26	18	17	18	14	16	13
Cyanide (total)	<5									< 5	<5		
pH (units) (1:5 aqueous extract)*	9.5	9.3	9.3	9.6	9.6	9.1	9.3	11	9	9.7	9.3	9.1	9.3
CHLORINATED HYDROCARBONS	<LOR									<LOR	<LOR		
HEAVY METALS													
Antimony	< 10									< 10	< 10		
Arsenic	***1***	***1***	***1***	***1***	***1***	7.6	***1***	5	6	3.9	2.3	***1***	3.2
Beryllium	<2									< 2	< 2		
Cadmium	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	11	8.4	8.7	11	9.4	24	23	12	13	13	9.4	10	13
Cobalt	<5									< 5	< 5		
Copper	9.8	6.9	7.9	8	6.8	11	8.9	8.3	8.2	10	9.1		
Lead	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	5.6	12	***2.5***	5.8	5.7	***2.5***	***2.5***	***2.5***
Mercury	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	<10									< 10	< 10		
Nickel	5.9	***2.5***	5.7	9	5.8	9.5	7.3	6	7.6	9.8	5.8	5.6	7.6
Selenium	<2									< 2	< 2		
Tin	<10									<10	< 10		
Vanadium										22	11		
Zinc	8.7	6.9	7.5	8.6	7.8	23	19	10	12	10	9	8	9.4
MAH's AROMATIC VOLATILE ORGANICS	<LOR									<LOR	<LOR		
ORGANOCHLORINE PESTICIDES	<LOR									<LOR	<LOR		
POLYNUCLEAR AROMATIC HYDROCARBONS													
Naphthalene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthylene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluorene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Phenanthrene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluoranthrene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Pyrene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(a)anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Chrysene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(b)fluoranthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(k)fluoranthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(a)pyrene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Dibenzo(a,h)anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(g,h,i)perylene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Indeno(1,2,3-cd)pyrene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Total PAH	**<0.8**	**<0.8**	**<0.8**	**<0.8**	**<0.8**	**<0.8**	**<0.8**	**<0.8**	**<0.8**	**<0.8**	**<0.8**	**<0.8**	**<0.8**
POLYCHLORINATED BIPHENYLS (PCB's)	<LOR									<LOR	<LOR		
PHENOLS & CRESOLS	<LOR									<LOR	<LOR		
TOTAL RECOVERABLE HYDROCARBONS	<LOR									<LOR	<LOR		

All results in mg/kg unless stated otherwise

<LOR - All results less than the limits of reporting

<LOR - All results except those listed less than the limits of reporting

* Statistics calculated are of numerical pH not absolute hydrogen ion concentration

** Consult NEPM tables for form of analyte

*** The most stringent auditors crieteria has been adopted for comparison purposes.

NEPM Health Based A Criteria exceeded

Waste Fill Criteria exceeded

Numbers in bold blue and Italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Sample Number	1SB14-A	1SB15-A	1SB16-A	1SB17-A	1SB18-A	1SB19-A	1SB20-A
Fill/Natural	Natural	Natural	Natural	Natural	Natural	Natural	Natural
Laboratory Number	06-JN05825	06-JL00321	06-JL00322	06-JL00323	06-JL00324	06-JL00325	06-JL00326
MISCELLANEOUS ANALYSES							
% Moisture	16	18	9.9	17	13	21	14
Cyanide (total)							< 5
pH (units) (1:5 aqueous extract)*	9	9.9	9.3	9.6	8.9	9.7	9.9
CHLORINATED HYDROCARBONS							<LOR
HEAVY METALS							
Antimony							< 10
Arsenic	6.7	4.3	2.4	3.4	3.1	13	2.1
Beryllium							< 2
Cadmium	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	24	24	13	16	17	24	12
Cobalt							< 5
Copper							7.8
Lead	8.7	10	***2.5***	***2.5***	5.6	7.5	***2.5***
Mercury	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum							< 10
Nickel	11	11	8.3	8	9.8	9.6	6
Selenium							< 2
Tin							< 10
Vanadium							19
Zinc	17	16	8.5	12	11	20	8.1
MAH's AROMATIC VOLATILE ORGANICS							<LOR
ORGANOCHLORINE PESTICIDES							<LOR
POLYNUCLEAR AROMATIC HYDROCARBONS							
Naphthalene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthylene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluorene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Phenanthrene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluoranthrene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Pyrene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(a)anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Chrysene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(b)fluoranthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(k)fluoranthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(a)pyrene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Dibenzo(a,h)anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(g,h,i)perylene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Indeno(1,2,3-cd)pyrene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Total PAH	**<0.8**	**<0.8**	**<0.8**	**<0.8**	**<0.8**	**<0.8**	**<0.8**
POLYCHLORINATED BIPHENYLS (PCB's)							<LOR
PHENOLS & CRESOLS							<LOR
TOTAL RECOVERABLE HYDROCARBONS							<LOR
All results in mg/kg unless stated otherwise							
<LOR - All results less than the limits of reporting							
<LOR - All results except those listed less than the							
* Statistics calculated are of numerical pH not abso							
** Consult NEPM tables for form of analyte							
*** The most stringent auditors crieteria has been a							
NEPM Health Based A Criteria exceeded							
Waste Fill Criteria exceeded							
Numbers in bold blue and Italics represent valu							

Sample Number	STATISTICS					CRITERIA						
Fill/Natural						NEPM			Auditor	Southern Waste Depot		
Laboratory Number						HIL A	HIL D	EIL	Site Specific	WF	ILC	LLCW
MISCELLANEOUS ANALYSES	Count	Max	Mean	Std Dev	95% UCL							
% Moisture												
Cyanide (total)						250**	1000**			500	1,000	3,500
pH (units) (1:5 aqueous extract)*	20	11	9.5	0.5	9.7							
CHLORINATED HYDROCARBONS												
HEAVY METALS												
Antimony												
Arsenic	20	13	3.5	3.0	4.8	100	400	20		20	200	750
Beryllium						20	80			20	40	150
Cadmium						20	80	3		3	30	60
Chromium	20	24	14.8	5.8	17.3	100**	400**	1**		400	12%	30%
Cobalt						100	400			170	170	1,000
Copper	12	11	8.6	1.3	9.3	1,000	4,000	100		60	2,000	7,500
Lead	20	12	4.5	3.0	5.8	300	1,200	600	600***	300	1,200	5,000
Mercury						15**	60**	1**		1	30	110
Molybdenum												
Nickel	20	11	7.6	2.2	8.6	600	2,400	60		60	600	3,000
Selenium												
Tin												
Vanadium	3	22	17.3	5.7	23.8			50				
Zinc	20	23	11.6	4.7	13.7	7,000	28,000	200		200	14,000	50,000
MAH's AROMATIC VOLATILE ORGANICS												
ORGANOCHLORINE PESTICIDES												
POLYNUCLEAR AROMATIC HYDROCARBONS												
Naphthalene	20	0.05	0.1	0.0	0.1							
Acenaphthylene	20	0.05	0.1	0.0	0.1							
Acenaphthene	20	0.05	0.1	0.0	0.1							
Fluorene	20	0.05	0.1	0.0	0.1							
Phenanthrene	20	0.05	0.1	0.0	0.1							
Anthracene	20	0.05	0.1	0.0	0.1							
Fluoranthrene	20	0.05	0.1	0.0	0.1							
Pyrene	20	0.05	0.1	0.0	0.1							
Benzo(a)anthracene	20	0.05	0.1	0.0	0.1							
Chrysene	20	0.05	0.1	0.0	0.1							
Benzo(b)fluoranthene	20	0.05	0.1	0.0	0.1							
Benzo(k)fluoranthene	20	0.05	0.1	0.0	0.1							
Benzo(a)pyrene	20	0.05	0.1	0.0	0.1	1	4		8***	1	2	5
Dibenzo(a,h)anthracene	20	0.05	0.1	0.0	0.1							
Benzo(g,h,i)perylene	20	0.05	0.1	0.0	0.1							
Indeno(1,2,3-cd)pyrene	20	0.05	0.1	0.0	0.1							
Total PAH						**20**	**80**		**164*** **	**5**	**40**	**200**
POLYCHLORINATED BIPHENYLS (PCB's)												
PHENOLS & CRESOLS												
TOTAL RECOVERABLE HYDROCARBONS												
All results in mg/kg unless stated otherwise												
<LOR - All results less than the limits of reporting												
<LOR - All results except those listed less than the												
* Statistics calculated are of numerical pH not abso												
** Consult NEPM tables for form of analyte												
*** The most stringent auditors crieteria has been a												
NEPM Health Based A Criteria exceeded												
Waste Fill Criteria exceeded												
Numbers in bold blue and Italics represent valu												

APPENDIX D – QUALITY

Sample Number	ISB1-A	ISB1-A	**RPD**	1SB1-Y	**RPD**
Fill/Natural	Sample	Intra -		Inter -	
		Duplicate		Duplicate	
Laboratory Number	06-MY04426	06-MY04427		945674	
MISCELLANEOUS ANALYSES					
% Moisture	6.8	7.9	**15.0%**	-	-
Cyanide (total)	<5	<5	-	<5	-
pH (units) (1:5 aqueous extract)*	9.5	9.6	**1.0%**	9.1	**4.3%**
CHLORINATED HYDROCARBONS					
1.2-Dichlorobenzene	<0.1	<0.1	-	-	-
1.2.3-Trichlorobenzene	<0.1	<0.1	-	-	-
1.2.3.4-Tetrachlorobenzene	<0.1	<0.1	-	-	-
1.2.3.5-Tetrachlorobenzene	<0.1	<0.1	-	-	-
1.2.4-Trichlorobenzene	<0.1	<0.1	-	-	-
1.2.4.5-Tetrachlorobenzene	<0.1	<0.1	-	-	-
1.3-Dichlorobenzene	<0.1	<0.1	-	-	-
1.3.5-Trichlorobenzene	<0.1	<0.1	-	-	-
1.4-Dichlorobenzene	<0.1	<0.1	-	-	-
Benzal chloride	<0.1	<0.1	-	-	-
Benzotrichloride	<0.1	<0.1	-	-	-
Benzyl chloride	<0.1	<0.1	-	-	-
Hexachlorobenzene	<0.1	<0.1	-	-	-
Hexachlorobutadiene	<0.1	<0.1	-	-	-
Hexachlorocyclopentadiene	<0.1	<0.1	-	-	-
Hexachloroethane	<0.1	<0.1	-	-	-
Pentachlorobenzene	<0.1	<0.1	-	-	-
HEAVY METALS					
Antimony	<10	<10	-	-	-
Arsenic	<2	3.4	**NCD**	<5	-
Beryllium	<2	<2	-	-	-
Cadmium	< 0.5	< 0.5	-	<0.2	-
Chromium	11	11	**0.0%**	13	**16.7%**
Cobalt	<5	<5	-	<5	-
Copper	9.8	8.8	**10.8%**	13	**28.1%**
Lead	< 5	< 5	-	6	**NCD**
Mercury	<0.1	<0.1	-	<0.05	-
Molybdenum	<10	<10	-	<5	-
Nickel	5.9	5.2	**12.6%**	13	**75.1%**
Selenium	<2	<2	-	<5	-
Tin	<10	<10	-	<5	-
Vanadium	-	-	-	-	-
Zinc	8.7	7.6	**13.5%**	13	**39.6%**
MAH's					
Benzene	<0.05	<0.05	-	<0.5	-
Toluene	<0.05	<0.05	-	<0.5	-
Ethyl Benzene	<0.05	<0.05	-	<0.5	-
Xylenes	<0.05	<0.05	-	<0.5	-
ORGANOCHLORINE PESTICIDES					
Aldrin	<0.1	<0.1	-	<0.05	-
Dieldrin	<0.1	<0.1	-	<0.05	-
alpha-BHC	<0.1	<0.1	-	<0.05	-
beta-BHC	<0.1	<0.1	-	<0.05	-
delta-BHC	<0.1	<0.1	-	<0.05	-
Lindane	<0.1	<0.1	-	<0.05	-
Chlordane	<0.1	<0.1	-	<0.05	-
4,4'-DDD	<0.1	<0.1	-	<0.05	-
4,4'-DDE	<0.1	<0.1	-	<0.05	-
4,4'-DDT	<0.1	<0.1	-	<0.05	-
Endosulfan I	<0.1	<0.1	-	<0.05	-
Endosulfan II	<0.1	<0.1	-	<0.05	-
Endosulfan Sulphate	<0.1	<0.1	-	<0.05	-
Endrin	<0.1	<0.1	-	<0.05	-
Endrin Aldehyde	<0.1	<0.1	-	<0.05	-
Endrin Ketone	<0.1	<0.1	-	<0.05	-
Heptachlor	<0.1	<0.1	-	<0.05	-
Heptachlor epoxide	<0.1	<0.1	-	<0.05	-
Hexachlorobenzene	<0.1	<0.1	-	<0.05	-
Methoxychlor	<0.1	<0.1	-	<0.05	-
Toxaphene	<0.1	<0.1	-	<0.05	-
POLYNUCLEAR AROMATIC HYDROCARBONS					
Naphthalene	< 0.1	< 0.1	-	< 0.1	-
Acenaphthylene	< 0.1	< 0.1	-	< 0.1	-
Acenaphthene	< 0.1	< 0.1	-	< 0.1	-
Fluorene	< 0.1	< 0.1	-	< 0.1	-
Phenanthrene	< 0.1	< 0.1	-	< 0.1	-
Anthracene	< 0.1	< 0.1	-	< 0.1	-

Sample Number	ISB1-A	ISB1-A	**RPD**	1SB1-Y	**RPD**
Fill/Natural	Sample	Intra -		Inter -	
		Duplicate		Duplicate	
Laboratory Number	06-MY04426	06-MY04427		945674	
Fluoranthrene	< 0.1	< 0.1	-	< 0.1	-
Pyrene	< 0.1	< 0.1	-	< 0.1	-
Benzo(a)anthracene	< 0.1	< 0.1	-	< 0.1	-
Chrysene	< 0.1	< 0.1	-	< 0.1	-
Benzo(b)fluoranthene	< 0.1	< 0.1	-	< 0.1	-
Benzo(k)fluoranthene	< 0.1	< 0.1	-	< 0.1	-
Benzo(a)pyrene	< 0.1	< 0.1	-	< 0.1	-
Dibenzo(a,h)anthracene	< 0.1	< 0.1	-	< 0.1	-
Benzo(g,h,i)perylene	< 0.1	< 0.1	-	< 0.1	-
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1	-	< 0.1	-
Total PAH	**<0.8**	**<0.8**	-	**<0.8**	-
POLYCHLORINATED BIPHENYLS (PCB's)					
Arochlor-1016	<0.1	<0.1	-	<0.1	-
Arochlor-1221	<0.1	<0.1	-	<0.1	-
Arochlor-1232	<0.1	<0.1	-	<0.1	-
Arochlor-1242	<0.1	<0.1	-	<0.1	-
Arochlor-1248	<0.1	<0.1	-	<0.1	-
Arochlor-1254	<0.1	<0.1	-	<0.1	-
Arochlor-1260	<0.1	<0.1	-	<0.1	-
PHENOLS & CRESOLS					
2-Chlorophenol	<0.1	<0.1	-	-	-
2-Methylphenol (o-Cresol)	<0.1	<0.1	-	-	-
2-Nitrophenol	<0.1	<0.1	-	-	-
2.4-Dichlorophenol	<0.1	<0.1	-	-	-
2.4-Dimethylphenol	<0.1	<0.1	-	-	-
2.4.6-Trichlorophenol	<0.1	<0.1	-	-	-
2.6-Dichlorophenol	<0.1	<0.1	-	-	-
3&4-Methylphenol (m&p-Cresol)	<0.1	<0.1	-	-	-
4-Chloro-3-methylphenol	<0.1	<0.1	-	-	-
Pentachlorophenol	<0.1	<0.1	-	-	-
Phenol	<0.1	<0.1	-	<0.1	-
TOTAL RECOVERABLE HYDROCARBONS					
T.R.H. C6-C9 Fraction by GC	<50	<50	-	<20	-
T.R.H. C10-C14 Fraction by GC	<100	<100	-	<20	-
T.R.H. C15-C28 Fraction by GC	<100	<100	-	<50	-
T.R.H. C29-C36 Fraction by GC	<20	<20	-	<50	-

All concentrations are mg/L unless otherwise stated
NCD - Non Calculable Data
* Relative percentage difference of numerical pH not absolute hydrogen ion concentration

APPENDIX E – LABORATORY REPORTS

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION REDEVELOPMENT AAA 05 002.02

Report Number: 194320 Page 1 of 13
Order Number:
Date Received: May 23, 2006
Date Sampled: May 22, 2006
Date Reported: May 24, 2006
Contact: Scott Slater

Methods

- USEPA 8270C Phenols
- USEPA 6010B Heavy Metals & USEPA7470/71 Mercury
- USEPA 8082 Polychlorinated Biphenyls
- USEPA 8121 Chlorinated Hydrocarbons
- USEPA 8081A Organochlorine Pesticides
- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- USEPA 8260B - MGT 350A Monocyclic Aromatic Hydrocarbons
- MGT100A-GC Total Recoverable Hydrocarbons
- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- USEPA 9010B Cyanide
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**ISB1-A**	**ISB1-X**	**ISB2-A**	**ISB3-A**
71 Belair Rd	**Lab Number**		**06-MY04426**	**06-MY04427**	**06-MY04428**	**06-MY04429**
Kingswood	**Matrix**		**Soil**	**Soil**	**Soil**	**Soil**
South Australia 5062	**Sample Date**		**May 22, 2006**	**May 22, 2006**	**May 22, 2006**	**May 22, 2006**
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	<20	<20	-	-
TRH C10-C14 Fraction by GC	50	mg/kg	<50	<50	-	-
TRH C15-C28 Fraction by GC	100	mg/kg	<100	<100	-	-
TRH C29-C36 Fraction by GC	100	mg/kg	<100	<100	-	-
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	<0.05	<0.05	-	-
Toluene	0.05	mg/kg	<0.05	<0.05	-	-
Ethylbenzene	0.05	mg/kg	<0.05	<0.05	-	-
Xylenes(ortho.meta and para)	0.05	mg/kg	<0.05	<0.05	-	-
Fluorobenzene (surr.)	1	%	98	94	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PAH	1.6	mg/kg	< 1.6	< 1.6	< 1.6	< 1.6
Chrysene-d12 (surr.)	1	%	97	94	93	110
2-Fluorobiphenyl (surr.)	1	%	97	77	70	100

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		ISB1-A	ISB1-X	ISB2-A	ISB3-A
	Lab Number		06-MY04426	06-MY04427	06-MY04428	06-MY04429
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		May 22, 2006	May 22, 2006	May 22, 2006	May 22, 2006
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	<0.1	<0.1	-	-
4,4'-DDE	0.05	mg/kg	<0.1	<0.1	-	-
4,4'-DDT	0.05	mg/kg	<0.1	<0.1	-	-
a-BHC	0.05	mg/kg	<0.1	<0.1	-	-
Aldrin	0.05	mg/kg	<0.1	<0.1	-	-
b-BHC	0.05	mg/kg	<0.1	<0.1	-	-
Chlordane	0.1	mg/kg	<0.1	<0.1	-	-
d-BHC	0.05	mg/kg	<0.1	<0.1	-	-
Dieldrin	0.05	mg/kg	<0.1	<0.1	-	-
Endosulfan I	0.05	mg/kg	<0.1	<0.1	-	-
Endosulfan II	0.05	mg/kg	<0.1	<0.1	-	-
Endosulfan sulphate	0.05	mg/kg	<0.1	<0.1	-	-
Endrin	0.05	mg/kg	<0.1	<0.1	-	-
Endrin aldehyde	0.05	mg/kg	<0.1	<0.1	-	-
Endrin ketone	0.05	mg/kg	<0.1	<0.1	-	-
g-BHC (Lindane)	0.05	mg/kg	<0.1	<0.1	-	-
Heptachlor	0.05	mg/kg	<0.1	<0.1	-	-
Heptachlor epoxide	0.05	mg/kg	<0.1	<0.1	-	-
Hexachlorobenzene	0.05	mg/kg	<0.1	<0.1	-	-
Methoxychlor	0.05	mg/kg	<0.1	<0.1	-	-
Toxophene	0.1	mg/kg	<0.1	<0.1	-	-
Dibutylchlorendate (surr.)	1	%	84	85	-	-
Tetrachloro-m-xylene (surr.)	1	%	76	74	-	-
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.2	mg/kg	<0.1	<0.1	-	-
1.2.3-Trichlorobenzene	0.05	mg/kg	<0.1	<0.1	-	-
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	<0.1	<0.1	-	-
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	<0.1	<0.1	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		ISB1-A	ISB1-X	ISB2-A	ISB3-A
	Lab Number		06-MY04426	06-MY04427	06-MY04428	06-MY04429
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		May 22, 2006	May 22, 2006	May 22, 2006	May 22, 2006
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	<0.1	<0.1	-	-
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	<0.1	<0.1	-	-
1.3-Dichlorobenzene	0.2	mg/kg	<0.1	<0.1	-	-
1.3.5-Trichlorobenzene	0.05	mg/kg	<0.1	<0.1	-	-
1.4-Dichlorobenzene	0.2	mg/kg	<0.1	<0.1	-	-
Benzal chloride	0.05	mg/kg	<0.1	<0.1	-	-
Benzotrichloride	0.05	mg/kg	<0.1	<0.1	-	-
Benzyl chloride	0.2	mg/kg	<0.1	<0.1	-	-
Hexachlorobenzene	0.05	mg/kg	<0.1	<0.1	-	-
Hexachlorobutadiene	0.05	mg/kg	<0.1	<0.1	-	-
Hexachlorocyclopentadiene	0.05	mg/kg	<0.1	<0.1	-	-
Hexachloroethane	0.05	mg/kg	<0.1	<0.1	-	-
Pentachlorobenzene	0.05	mg/kg	<0.1	<0.1	-	-
Dibutylchlorendate (surr.)	1	%	81	85	-	-
Tetrachloro-m-xylene (surr.)	1	%	75	78	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	<0.1	<0.1	-	-
Aroclor-1221	0.1	mg/kg	<0.1	<0.1	-	-
Aroclor-1232	0.1	mg/kg	<0.1	<0.1	-	-
Aroclor-1242	0.1	mg/kg	<0.1	<0.1	-	-
Aroclor-1248	0.1	mg/kg	<0.1	<0.1	-	-
Aroclor-1254	0.1	mg/kg	<0.1	<0.1	-	-
Aroclor-1260	0.1	mg/kg	<0.1	<0.1	-	-
Total PCB	1	mg/kg	<1	<1	-	-
Dibutylchlorendate (surr.)	1	%	84	78	-	-
Tetrachloro-m-xylene (surr.)	1	%	75	75	-	-
Phenols						
2-Chlorophenol	0.1	mg/kg	<0.1	<0.1	-	-
2-Methylphenol (o-Cresol)	0.1	mg/kg	<0.1	<0.1	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		ISB1-A	ISB1-X	ISB2-A	ISB3-A
	Lab Number		06-MY04426	06-MY04427	06-MY04428	06-MY04429
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		May 22, 2006	May 22, 2006	May 22, 2006	May 22, 2006
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	<0.1	<0.1	-	-
2.4-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	-	-
2.4-Dimethylphenol	0.1	mg/kg	<0.1	<0.1	-	-
2.4.6-Trichlorophenol	0.1	mg/kg	<0.1	<0.1	-	-
2.6-Dichlorophenol	0.1	mg/kg	<0.1	<0.1	-	-
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	<0.1	<0.1	-	-
4-Chloro-3-methylphenol	0.1	mg/kg	<0.1	<0.1	-	-
Pentachlorophenol	0.5	mg/kg	<0.1	<0.1	-	-
Phenol	0.1	mg/kg	<0.1	<0.1	-	-
Phenol-d6 (surr.)	1	%	81	80	-	-
% Moisture	0.1	%	6.8	7.9	7.2	6.5
Cyanide (total)	5	mg/kg	<5	<5	-	-
pH (1:5 Aqueous extract)	0.1	units	9.5	9.6	9.3	9.3
Heavy Metals (7)						
Arsenic	2	mg/kg	<2	3.4	<2	<2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	11	11	8.4	8.7
Copper	5	mg/kg	9.8	8.8	6.9	7.9
Lead	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	5.9	5.2	< 5	5.7
Zinc	5	mg/kg	8.7	7.6	6.9	7.5
Heavy Metals						
Antimony	10	mg/kg	<10	<10	-	-
Beryllium	2	mg/kg	<2	<2	-	-
Cobalt	5	mg/kg	<5	<5	-	-
Mercury	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Molybdenum	10	mg/kg	<10	<10	-	-
Selenium	2	mg/kg	<2	<2	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**ISB1-A**	**ISB1-X**	**ISB2-A**	**ISB3-A**
	Lab Number		**06-MY04426**	**06-MY04427**	**06-MY04428**	**06-MY04429**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**May 22, 2006**	**May 22, 2006**	**May 22, 2006**	**May 22, 2006**
Analysis Type	**LOR**	**Units**				
Tin	10	mg/kg	<10	<10		

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		ISB4-A	ISB5-A	ISB6-A	ISB7-A
71 Belair Rd	Lab Number		06-MY04430	06-MY04431	06-MY04432	06-MY04433
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 22, 2006	May 22, 2006	May 22, 2006	May 22, 2006
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PAH	1.6	mg/kg	< 1.6	< 1.6	< 1.6	< 1.6
Chrysene-d12 (surr.)	1	%	97	110	98	100
2-Fluorobiphenyl (surr.)	1	%	87	110	92	84
% Moisture	0.1	%	13	7.0	16	26
pH (1:5 Aqueous extract)	0.1	units	9.6	9.6	9.1	9.3
Heavy Metals (7)						
Arsenic	2	mg/kg	<2	<2	7.6	<2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	11	9.4	24	23
Copper	5	mg/kg	8.0	6.8	11	8.9
Lead	5	mg/kg	< 5	< 5	5.6	12
Nickel	5	mg/kg	9.0	5.8	9.5	7.3
Zinc	5	mg/kg	8.6	7.8	23	19

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		ISB4-A	ISB5-A	ISB6-A	ISB7-A
	Lab Number		06-MY04430	06-MY04431	06-MY04432	06-MY04433
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		May 22, 2006	May 22, 2006	May 22, 2006	May 22, 2006
Analysis Type	**LOR**	**Units**				
Heavy Metals						
Mercury	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	ISB1-A	ISB1-A	ISB1-A	ISB1-A	Method blank
	Lab Number	06-MY04426	06-MY04426	06-MY04426	06-MY04426	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	May 22, 2006	May 22, 2006	May 22, 2006	May 22, 2006	May 22, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
pH (1:5 Aqueous extract)		9.5	9.5	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene		-	-	-	-	< 0.001
Acenaphthylene		-	-	-	-	< 0.001
Anthracene		-	-	-	-	< 0.001
Benz(a)anthracene		-	-	-	-	< 0.001
Benzo(a)pyrene		-	-	-	-	< 0.001
Benzo(b)fluoranthene		-	-	-	-	< 0.001
Benzo(g.h.i)perylene		-	-	-	-	< 0.001
Benzo(k)fluoranthene		-	-	-	-	< 0.001
Chrysene		-	-	-	-	< 0.001
Dibenz(a.h)anthracene		-	-	-	-	< 0.001
Fluoranthene		-	-	-	-	< 0.001
Fluorene		-	-	-	-	< 0.001
Indeno(1.2.3-cd)pyrene		-	-	-	-	< 0.001
Naphthalene		-	-	-	-	< 0.001
Phenanthrene		-	-	-	-	< 0.001
Pyrene		-	-	-	-	< 0.001
Total PAH		-	-	-	-	< 0.016
Chrysene-d12 (surr.)		-	-	-	-	80
2-Fluorobiphenyl (surr.)		-	-	-	-	100
Heavy Metals (7)						
Arsenic		-	-	-	-	< 0.02
Cadmium		-	-	-	-	< 0.02
Chromium		-	-	-	-	< 0.05
Copper		-	-	-	-	< 0.05
Lead		-	-	-	-	< 0.05
Nickel		-	-	-	-	< 0.05
Zinc		-	-	-	-	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	ISB1-A	Method blank
Lab Number	BATCH	06-MY04426	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	May 22, 2006	May 22, 2006	May 22, 2006
Analysis Type	Units	% Recovery	mg/L
Heavy Metals			
Antimony	-	-	< 0.5
Beryllium	-	-	< 0.02
Cobalt	-	-	< 0.05
Molybdenum	-	-	< 0.5
Selenium	-	-	< 0.02
Tin	-	-	< 0.5

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	ISB2-A	ISB2-A	ISB2-A	ISB2-A
	Lab Number	06-MY04428	06-MY04428	06-MY04428	06-MY04428
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 22, 2006	May 22, 2006	May 22, 2006	May 22, 2006
Analysis Type	Units			% RPD	% Recovery
Heavy Metals (7)					
Arsenic		<2	<2	<1	76
Cadmium		< 0.5	< 0.5	<1	80
Chromium		8.4	7.9	6.2	110
Copper		6.9	6.6	5.3	-
Lead		< 5	< 5	<1	91
Nickel		< 5	< 5	<1	88
Heavy Metals					
Antimony		-	-	<1	83
Beryllium		-	-	6.4	78
Cobalt		-	-	12	77
Molybdenum		-	-	0.80	92
Selenium		-	-	<1	88
Tin		-	-	<1	94
Zinc		6.9	6.5	6.7	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	ISB6-A	ISB6-A	ISB6-A	ISB6-A
	Lab Number	06-MY04432	06-MY04432	06-MY04432	06-MY04432
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 22, 2006	May 22, 2006	May 22, 2006	May 22, 2006
Analysis Type	Units			% RPD	% Recovery
Polycyclic Aromatic Hydrocarbons					
Acenaphthene		< 0.1	< 0.1	<1	123
Acenaphthylene		< 0.1	< 0.1	<1	122
Anthracene		< 0.1	< 0.1	<1	117
Benz(a)anthracene		< 0.1	< 0.1	<1	122
Benzo(a)pyrene		< 0.1	< 0.1	<1	97
Benzo(b)fluoranthene		< 0.1	< 0.1	<1	97
Benzo(g.h.i)perylene		< 0.1	< 0.1	<1	101
Benzo(k)fluoranthene		< 0.1	< 0.1	<1	111
Chrysene		< 0.1	< 0.1	<1	120
Dibenz(a.h)anthracene		< 0.1	< 0.1	<1	94
Fluoranthene		< 0.1	< 0.1	<1	113
Fluorene		< 0.1	< 0.1	<1	122
Indeno(1.2.3-cd)pyrene		< 0.1	< 0.1	<1	97
Naphthalene		< 0.1	< 0.1	<1	107
Phenanthrene		< 0.1	< 0.1	<1	98
Pyrene		< 0.1	< 0.1	<1	118
Total PAH		< 1.6	< 1.6	-	-
Chrysene-d12 (surr.)		98	110	-	98
2-Fluorobiphenyl (surr.)		92	120	-	82
Phenols					
2-Chlorophenol		-	-	<1	122
2-Methylphenol (o-Cresol)		-	-	<1	106
2-Nitrophenol		-	-	<1	-
2.4-Dichlorophenol		-	-	<1	100
2.4-Dimethylphenol		-	-	<1	87
2.4.6-Trichlorophenol		-	-	<1	97
2.6-Dichlorophenol		-	-	<1	113
3&4-Methylphenol (m&p-Cresol)		-	-	<1	99

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	ISB6-A	ISB6-A	ISB6-A	ISB6-A
Lab Number	06-MY04432	06-MY04432	06-MY04432	06-MY04432
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
Matrix	Soil	Soil	Soil	Soil
Sample Date	May 22, 2006	May 22, 2006	May 22, 2006	May 22, 2006
Analysis Type	Units		% RPD	% Recovery
Phenols				
4-Chloro-3-methylphenol	-	-	<1	113
Pentachlorophenol	-	-	<1	-
Phenol	-	-	<1	104
Phenol-d6 (surr.)	-	-	-	68

COMMENTS:

Chain of Custody

COC No: S0092
Page 1 of 1

82PROJECT NAME: Bus Station Redevelopment			PROJECT NO: AAA 05 002.02		CONTACT PERSON: Scott Slater								CONTACT NO: 08 8340 9513																			
LABORATORY: MGT			LAB. CONTACT: Rhonda Chouman						LAB QUOTE NO.:								LAB PROJECT NO:															
						ANALYSIS REQUIRED																											
SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	Metals*	PAH	pH					VIC EPA SCREEN																			
1SB1-A			22-5-06	Soil	1 Jar			X					X																			
1SB1-X			22-5-06	Soil	1 Jar			X					X																			
1SB2-A			22-5-06	Soil	1 Jar	X	X	X																								
1SB3-A			22-5-06	Soil	1 Jar	X	X	X																								
1SB4-A			22-5-06	Soil	1 Jar	X	X	X																								
1SB5-A			22-5-06	Soil	1 Jar	X	X	X																								
1SB6-A			22-5-06	Soil	1 Jar	X	X	X																								
1SB7-A			22-5-06	Soil	1 Jar	X	X	X																								
COMMENTS:	* As, Cd, Cr, Cu, Hg, Ni, Pb, Zn																															
	24 HOUR TURNAROUND REQUIRED FOR ALL SAMPLES																															
DESPATCH METHOD: MGT Courier			DATE/TIME: 22-5-06 5:00pm			PREPARED BY (signature)																										
RECEIVED BY: (signature) C Mills.			DATE/TIME: 23/5/06 12-30			CHECKED BY: (signature) 19320.																										

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA_05_002\02\Samples\COCS0092.doc

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: AAA05002.02

Order Number:
Date Received: May 25, 2006
Date Sampled: May 25, 2006
Date Reported: May 26, 2006
Contact: Scott Slater

Methods

- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- USEPA 6020 Heavy Metals
- USEPA 8270C Phenols
- USEPA 6010B Heavy Metals & USEPA7470/71 Mercury
- USEPA 8082 Polychlorinated Biphenyls
- USEPA 8121 Chlorinated Hydrocarbons
- USEPA 8081A Organochlorine Pesticides
- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- USEPA 8260B - MGT 350A Monocyclic Aromatic Hydrocarbons
- MGT100A-GC Total Recoverable Hydrocarbons
- USEPA 9010B Cyanide
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		ISB8-A	ISB9-A	ISB10-A	ISTF11-A
	Lab Number		06-MY04934	06-MY04935	06-MY04936	06-MY04937
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	-	-	< 20	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	-	-	< 50	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	-	-	< 100	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	-	-	< 100	< 100
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Toluene	0.05	mg/kg	-	-	< 0.05	< 0.05
Ethylbenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	-	-	< 0.05	< 0.05
Fluorobenzene (surr.)	1	%	-	-	100	140
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PAH	1.6	mg/kg	< 1.6	< 1.6	< 1.6	< 1.6
Chrysene-d12 (surr.)	1	%	110	91	93	73
2-Fluorobiphenyl (surr.)	1	%	100	92	91	86

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		ISB8-A	ISB9-A	ISB10-A	ISTF11-A
	Lab Number		06-MY04934	06-MY04935	06-MY04936	06-MY04937
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	-	-	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Chlordane	0.1	mg/kg	-	-	< 0.1	< 0.1
d-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	-	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Toxophene	0.1	mg/kg	-	-	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	85	110
Tetrachloro-m-xylene (surr.)	1	%	-	-	100	89
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.2	mg/kg	-	-	< 0.2	< 0.2
1.2.3-Trichlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		ISB8-A	ISB9-A	ISB10-A	ISTF11-A
	Lab Number		06-MY04934	06-MY04935	06-MY04936	06-MY04937
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
1.3-Dichlorobenzene	0.2	mg/kg	-	-	< 0.2	< 0.2
1.3.5-Trichlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
1.4-Dichlorobenzene	0.2	mg/kg	-	-	< 0.2	< 0.2
Benzal chloride	0.05	mg/kg	-	-	< 0.05	< 0.05
Benzotrichloride	0.05	mg/kg	-	-	< 0.05	< 0.05
Benzyl chloride	0.2	mg/kg	-	-	< 0.2	< 0.2
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Hexachlorobutadiene	0.05	mg/kg	-	-	< 0.05	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	-	-	< 0.05	< 0.05
Hexachloroethane	0.05	mg/kg	-	-	< 0.05	< 0.05
Pentachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Dibutylchlorendate (surr.)	1	%	-	-	85	110
Tetrachloro-m-xylene (surr.)	1	%	-	-	100	89
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	< 0.1	< 0.1
Total PCB	1	mg/kg	-	-	< 1	< 1
Dibutylchlorendate (surr.)	1	%	-	-	85	110
Tetrachloro-m-xylene (surr.)	1	%	-	-	100	89
Phenols						
2-Chlorophenol	0.1	mg/kg	-	-	< 0.1	< 0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	-	-	< 0.1	< 0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		ISB8-A	ISB9-A	ISB10-A	ISTF11-A
	Lab Number		06-MY04934	06-MY04935	06-MY04936	06-MY04937
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4-Dichlorophenol	0.1	mg/kg	-	-	< 0.1	< 0.1
2.4-Dimethylphenol	0.1	mg/kg	-	-	< 0.1	< 0.1
2.4.6-Trichlorophenol	0.1	mg/kg	-	-	< 0.1	< 0.1
2.6-Dichlorophenol	0.1	mg/kg	-	-	< 0.1	< 0.1
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	-	-	< 0.2	< 0.2
4-Chloro-3-methylphenol	0.1	mg/kg	-	-	< 0.1	< 0.1
Pentachlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
Phenol	0.1	mg/kg	-	-	< 0.1	< 0.1
Phenol-d6 (surr.)	1	%	-	-	90	83
% Moisture	0.1	%	18	17	18	4.9
Cyanide (total)	5	mg/kg	-	-	< 5	< 5
pH (1:5 Aqueous extract)	0.1	units	11	9.0	9.7	9.4
Heavy Metals (7)						
Arsenic	2	mg/kg	5.0	6.0	-	-
Cadmium	0.5	mg/kg	< 0.5	< 0.5	-	-
Chromium	5	mg/kg	12	13	-	-
Copper	5	mg/kg	8.3	8.2	-	-
Lead	5	mg/kg	< 5	5.8	-	-
Nickel	5	mg/kg	6.0	7.6	-	-
Zinc	5	mg/kg	10	12	-	-
Heavy Metals						
Antimony	10	mg/kg	-	-	< 10	< 10
Arsenic	2	mg/kg	-	-	3.9	2.8
Beryllium	2	mg/kg	-	-	< 2	< 2
Cadmium	0.5	mg/kg	-	-	< 0.5	< 0.5
Chromium	5	mg/kg	-	-	13	5.6
Cobalt	5	mg/kg	-	-	< 5	< 5

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**ISB8-A**	**ISB9-A**	**ISB10-A**	**ISTF11-A**
	Lab Number		**06-MY04934**	**06-MY04935**	**06-MY04936**	**06-MY04937**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**May 25, 2006**	**May 25, 2006**	**May 25, 2006**	**May 25, 2006**
Analysis Type	**LOR**	**Units**				
Copper	5	mg/kg	-	-	10	< 5
Lead	5	mg/kg	-	-	5.7	7.8
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	-	-	< 10	< 10
Nickel	5	mg/kg	-	-	9.8	< 5
Selenium	2	mg/kg	-	-	< 2	< 2
Tin	10	mg/kg	-	-	<10	<10
Vanadium	10	mg/kg	-	-	22	< 10
Zinc	5	mg/kg	-	-	10	11

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		ISTF12-A	ISTF13-A	ISTF14-A	ISTF15-A
71 Belair Rd	Lab Number		06-MY04938	06-MY04939	06-MY04940	06-MY04941
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	-	< 20	-	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	-	< 50	-	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	-	< 100	-	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	-	< 100	-	< 100
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	-	< 0.05	-	< 0.05
Toluene	0.05	mg/kg	-	< 0.05	-	< 0.05
Ethylbenzene	0.05	mg/kg	-	< 0.05	-	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	-	< 0.05	-	< 0.05
Fluorobenzene (surr.)	1	%	-	140	-	140
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	0.2	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	0.3	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	0.6	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	1.6	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	1.4	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	0.8	< 0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	0.7	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	0.7	< 0.1	< 0.1
Chrysene	0.1	mg/kg	< 0.1	1.1	< 0.1	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	3.5	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	0.2	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	0.6	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	3.9	< 0.1	< 0.1
Pyrene	0.1	mg/kg	< 0.1	3.4	< 0.1	< 0.1
Total PAH	1.6	mg/kg	< 1.6	19	< 1.6	< 1.6
Chrysene-d12 (surr.)	1	%	94	98	90	83
2-Fluorobiphenyl (surr.)	1	%	100	79	77	74

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		ISTF12-A	ISTF13-A	ISTF14-A	ISTF15-A
	Lab Number		06-MY04938	06-MY04939	06-MY04940	06-MY04941
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	-	< 0.05	-	< 0.05
4,4'-DDE	0.05	mg/kg	-	< 0.05	-	< 0.05
4,4'-DDT	0.05	mg/kg	-	< 0.05	-	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	-	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05	-	< 0.05
Chlordane	0.1	mg/kg	-	< 0.1	-	< 0.1
d-BHC	0.05	mg/kg	-	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	< 0.05
Methoxychlor	0.05	mg/kg	-	< 0.05	-	< 0.05
Toxophene	0.1	mg/kg	-	< 0.1	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	98	-	120
Tetrachloro-m-xylene (surr.)	1	%	-	84	-	88
% Moisture	0.1	%	6.4	5.0	3.9	3.1
pH (1:5 Aqueous extract)	0.1	units	9.1	9.4	9.3	8.8
Heavy Metals (7)						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**ISTF12-A**	**ISTF13-A**	**ISTF14-A**	**ISTF15-A**
	Lab Number		**06-MY04938**	**06-MY04939**	**06-MY04940**	**06-MY04941**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**May 25, 2006**	**May 25, 2006**	**May 25, 2006**	**May 25, 2006**
Analysis Type	**LOR**	**Units**				
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	5.9	7.1	< 5	10
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	6.7	8.5	7.8	8.2
Heavy Metals						
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		ISTF16A	ISTF17A	ISTF18A	ISTF19A
71 Belair Rd	Lab Number		06-MY04942	06-MY04943	06-MY04944	06-MY04945
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	< 20	-	< 20	-
TRH C10-C14 Fraction by GC	50	mg/kg	< 50	-	< 50	-
TRH C15-C28 Fraction by GC	100	mg/kg	< 100	-	< 100	-
TRH C29-C36 Fraction by GC	100	mg/kg	< 100	-	< 100	-
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Toluene	0.05	mg/kg	< 0.05	-	< 0.05	-
Ethylbenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Xylenes(ortho.meta and para)	0.05	mg/kg	< 0.05	-	< 0.05	-
Fluorobenzene (surr.)	1	%	130	-	120	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	0.4	0.2
Benzo(a)pyrene	0.1	mg/kg	< 0.1	0.2	0.6	0.3
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	0.4	0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	0.4	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	0.3	0.2
Chrysene	0.1	mg/kg	< 0.1	0.1	0.4	0.2
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	0.2	0.8	0.4
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	0.4	0.2
Pyrene	0.1	mg/kg	< 0.1	0.2	0.8	0.4
Total PAH	1.6	mg/kg	< 1.6	1.9	5.3	2.8
Chrysene-d12 (surr.)	1	%	88	78	84	98
2-Fluorobiphenyl (surr.)	1	%	100	82	98	100

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		ISTF16A	ISTF17A	ISTF18A	ISTF19A
	Lab Number		06-MY04942	06-MY04943	06-MY04944	06-MY04945
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Chlordane	0.1	mg/kg	< 0.1	-	< 0.1	-
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Toxophene	0.1	mg/kg	< 0.1	-	< 0.1	-
Dibutylchlorendate (surr.)	1	%	110	-	83	-
Tetrachloro-m-xylene (surr.)	1	%	85	-	65	-
% Moisture	0.1	%	3.6	6.9	4.1	5.3
pH (1:5 Aqueous extract)	0.1	units	9.4	8.7	9.0	9.0
Heavy Metals (7)						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**ISTF16A**	**ISTF17A**	**ISTF18A**	**ISTF19A**
	Lab Number		**06-MY04942**	**06-MY04943**	**06-MY04944**	**06-MY04945**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**May 25, 2006**	**May 25, 2006**	**May 25, 2006**	**May 25, 2006**
Analysis Type	**LOR**	**Units**				
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	6.4	6.0	7.2	11
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	8.0	12	15	20
Heavy Metals						
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		ISTF20A	ISTF21A	ISTF22A	1R1
71 Belair Rd	Lab Number		06-MY04946	06-MY04947	06-MY04948	06-MY04949
Kingswood	Matrix		Soil	Soil	Soil	Water
South Australia 5062	Sample Date		May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	< 20	< 20	< 20	< 0.02
TRH C10-C14 Fraction by GC	50	mg/kg	< 50	< 50	< 50	< 0.05
TRH C15-C28 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 0.1
TRH C29-C36 Fraction by GC	100	mg/kg	< 100	< 100	< 100	< 0.1
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.001
Toluene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.001
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.001
Xylenes(ortho.meta and para)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.001
Fluorobenzene (surr.)	1	%	130	110	100	88
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.001
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.001
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.001
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.001
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.001
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.001
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.001
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.001
Chrysene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.001
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.001
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.001
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.001
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.001
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.001
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.001
Pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.001
Total PAH	1.6	mg/kg	< 1.6	< 1.6	1.6	< 0.016
Chrysene-d12 (surr.)	1	%	92	100	90	120
2-Fluorobiphenyl (surr.)	1	%	91	100	100	110

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		ISTF20A	ISTF21A	ISTF22A	1R1
	Lab Number		06-MY04946	06-MY04947	06-MY04948	06-MY04949
	Matrix		Soil	Soil	Soil	Water
	Sample Date		May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
Chlordane	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.0005
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.0001
Toxophene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.0005
Dibutylchlorendate (surr.)	1	%	120	130	78	110
Tetrachloro-m-xylene (surr.)	1	%	96	91	62	60
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.2	mg/kg	-	< 0.2	-	< 0.0005
1.2.3-Trichlorobenzene	0.05	mg/kg	-	< 0.05	-	< 0.0005
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	-	< 0.05	-	< 0.0001
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	-	< 0.05	-	< 0.0001

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		ISTF20A	ISTF21A	ISTF22A	1R1
	Lab Number		06-MY04946	06-MY04947	06-MY04948	06-MY04949
	Matrix		Soil	Soil	Soil	Water
	Sample Date		May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	-	< 0.05	-	< 0.0001
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	-	< 0.05	-	< 0.0001
1.3-Dichlorobenzene	0.2	mg/kg	-	< 0.2	-	< 0.0005
1.3.5-Trichlorobenzene	0.05	mg/kg	-	< 0.05	-	< 0.0001
1.4-Dichlorobenzene	0.2	mg/kg	-	< 0.2	-	< 0.0005
Benzal chloride	0.05	mg/kg	-	< 0.05	-	< 0.0001
Benzotrichloride	0.05	mg/kg	-	< 0.05	-	< 0.0005
Benzyl chloride	0.2	mg/kg	-	< 0.2	-	< 0.0005
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	< 0.0001
Hexachlorobutadiene	0.05	mg/kg	-	< 0.05	-	< 0.0001
Hexachlorocyclopentadiene	0.05	mg/kg	-	< 0.05	-	< 0.0001
Hexachloroethane	0.05	mg/kg	-	< 0.05	-	< 0.0001
Pentachlorobenzene	0.05	mg/kg	-	< 0.05	-	< 0.0001
Dibutylchlorendate (surr.)	1	%	-	130	-	110
Tetrachloro-m-xylene (surr.)	1	%	-	91	-	60
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	-	< 0.001
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	< 0.001
Aroclor-1232	0.1	mg/kg	-	< 0.1	-	< 0.001
Aroclor-1242	0.1	mg/kg	-	< 0.1	-	< 0.001
Aroclor-1248	0.1	mg/kg	-	< 0.1	-	< 0.001
Aroclor-1254	0.1	mg/kg	-	< 0.1	-	< 0.001
Aroclor-1260	0.1	mg/kg	-	< 0.1	-	< 0.001
Total PCB	1	mg/kg	-	< 1	-	< 0.01
Dibutylchlorendate (surr.)	1	%	-	130	-	110
Tetrachloro-m-xylene (surr.)	1	%	-	91	-	60
Phenols						
2-Chlorophenol	0.1	mg/kg	-	< 0.1	-	< 0.001
2-Methylphenol (o-Cresol)	0.1	mg/kg	-	< 0.1	-	< 0.001

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		ISTF20A	ISTF21A	ISTF22A	1R1
	Lab Number		06-MY04946	06-MY04947	06-MY04948	06-MY04949
	Matrix		Soil	Soil	Soil	Water
	Sample Date		May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	-	< 0.5	-	< 0.001
2.4-Dichlorophenol	0.1	mg/kg	-	< 0.1	-	< 0.001
2.4-Dimethylphenol	0.1	mg/kg	-	< 0.1	-	< 0.001
2.4.6-Trichlorophenol	0.1	mg/kg	-	< 0.1	-	< 0.001
2.6-Dichlorophenol	0.1	mg/kg	-	< 0.1	-	< 0.001
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	-	< 0.2	-	< 0.002
4-Chloro-3-methylphenol	0.1	mg/kg	-	< 0.1	-	< 0.001
Pentachlorophenol	0.5	mg/kg	-	< 0.5	-	< 0.002
Phenol	0.1	mg/kg	-	< 0.1	-	< 0.001
Phenol-d6 (surr.)	1	%	-	110	-	55
% Moisture	0.1	%	4.6	7.3	9.1	-
Cyanide (total)	5	mg/kg	-	< 5	-	< 5
pH (1:5 Aqueous extract)	0.1	units	8.8	8.8	9.3	
Heavy Metals (7)						
Arsenic	2	mg/kg	< 2	-	< 2	-
Cadmium	0.5	mg/kg	< 0.5	-	< 0.5	-
Chromium	5	mg/kg	< 5	-	< 5	-
Copper	5	mg/kg	< 5	-	< 5	-
Lead	5	mg/kg	< 5	-	7.5	-
Nickel	5	mg/kg	< 5	-	< 5	-
Zinc	5	mg/kg	10	-	11	-
Heavy Metals						
Antimony	10	mg/kg	-	< 10	-	< 0.005
Arsenic	2	mg/kg	-	< 2	-	<0.002
Beryllium	2	mg/kg	-	< 2	-	< 0.001
Cadmium	0.5	mg/kg	-	< 0.5	-	< 0.0002
Chromium	5	mg/kg	-	< 5	-	<0.005
Cobalt	5	mg/kg	-	< 5	-	< 0.001

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**ISTF20A**	**ISTF21A**	**ISTF22A**	**1R1**
	Lab Number		**06-MY04946**	**06-MY04947**	**06-MY04948**	**06-MY04949**
	Matrix		**Soil**	**Soil**	**Soil**	**Water**
	Sample Date		**May 25, 2006**	**May 25, 2006**	**May 25, 2006**	**May 25, 2006**
Analysis Type	**LOR**	**Units**				
Copper	5	mg/kg	-	< 5	-	<0.005
Lead	5	mg/kg	-	5.8	-	< 0.001
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.0009
Molybdenum	10	mg/kg	-	< 10	-	<0.005
Nickel	5	mg/kg	-	< 5	-	<0.005
Selenium	2	mg/kg	-	< 2	-	<0.005
Tin	10	mg/kg	-	< 10	-	< 0.005
Vanadium	10	mg/kg	-	< 10	-	< 0.005
Zinc	5	mg/kg	-	7.3	-	< 0.001

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**13STF21-X**
71 Belair Rd	**Lab Number**		**06-MY04950**
Kingswood	**Matrix**		**Soil**
South Australia 5062	**Sample Date**		**May 25, 2006**
Analysis Type	**LOR**	**Units**	
Total Recoverable Hydrocarbons			
TRH C6-C9 Fraction by GC	20	mg/kg	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	< 100
Monocyclic Aromatic Hydrocarbons			
Benzene	0.05	mg/kg	< 0.05
Toluene	0.05	mg/kg	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	0.09
Fluorobenzene (surr.)	1	%	85
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.1	mg/kg	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1
Anthracene	0.1	mg/kg	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1
Chrysene	0.1	mg/kg	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1
Fluorene	0.1	mg/kg	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1
Naphthalene	0.1	mg/kg	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1
Pyrene	0.1	mg/kg	< 0.1
Total PAH	1.6	mg/kg	< 1.6
Chrysene-d12 (surr.)	1	%	91
2-Fluorobiphenyl (surr.)	1	%	96

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**13STF21-X**
	Lab Number		**06-MY04950**
	Matrix		**Soil**
	Sample Date		**May 25, 2006**
Analysis Type	**LOR**	**Units**	
Organochlorine Pesticides			
4,4'-DDD	0.05	mg/kg	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05
a-BHC	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-BHC	0.05	mg/kg	< 0.05
Chlordane	0.1	mg/kg	< 0.1
d-BHC	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxophene	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	120
Tetrachloro-m-xylene (surr.)	1	%	76
Chlorinated Hydrocarbons			
1.2-Dichlorobenzene	0.2	mg/kg	< 0.2
1.2.3-Trichlorobenzene	0.05	mg/kg	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**13STF21-X**
	Lab Number		**06-MY04950**
	Matrix		**Soil**
	Sample Date		**May 25, 2006**
Analysis Type	**LOR**	**Units**	
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05
1.3-Dichlorobenzene	0.2	mg/kg	< 0.2
1.3.5-Trichlorobenzene	0.05	mg/kg	< 0.05
1.4-Dichlorobenzene	0.2	mg/kg	< 0.2
Benzal chloride	0.05	mg/kg	< 0.05
Benzotrichloride	0.05	mg/kg	< 0.05
Benzyl chloride	0.2	mg/kg	< 0.2
Hexachlorobenzene	0.05	mg/kg	< 0.05
Hexachlorobutadiene	0.05	mg/kg	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	< 0.05
Hexachloroethane	0.05	mg/kg	< 0.05
Pentachlorobenzene	0.05	mg/kg	< 0.05
Dibutylchlorendate (surr.)	1	%	120
Tetrachloro-m-xylene (surr.)	1	%	76
Polychlorinated Biphenyls			
Aroclor-1016	0.1	mg/kg	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1
Total PCB	1	mg/kg	< 1
Dibutylchlorendate (surr.)	1	%	120
Tetrachloro-m-xylene (surr.)	1	%	76
Phenols			
2-Chlorophenol	0.1	mg/kg	< 0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	< 0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**13STF21-X**
	Lab Number		**06-MY04950**
	Matrix		**Soil**
	Sample Date		**May 25, 2006**
Analysis Type	**LOR**	**Units**	
2-Nitrophenol	0.5	mg/kg	< 0.5
2.4-Dichlorophenol	0.1	mg/kg	< 0.1
2.4-Dimethylphenol	0.1	mg/kg	< 0.1
2.4.6-Trichlorophenol	0.1	mg/kg	< 0.1
2.6-Dichlorophenol	0.1	mg/kg	< 0.1
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	< 0.2
4-Chloro-3-methylphenol	0.1	mg/kg	< 0.1
Pentachlorophenol	0.5	mg/kg	< 0.5
Phenol	0.1	mg/kg	< 0.1
Phenol-d6 (surr.)	1	%	99
% Moisture	0.1	%	7.2
Cyanide (total)	5	mg/kg	< 5
pH (1:5 Aqueous extract)	0.1	units	9.0
Heavy Metals			
Antimony	10	mg/kg	< 10
Arsenic	2	mg/kg	< 2
Beryllium	2	mg/kg	< 2
Cadmium	0.5	mg/kg	< 0.5
Chromium	5	mg/kg	< 5
Cobalt	5	mg/kg	< 5
Copper	5	mg/kg	< 5
Lead	5	mg/kg	5.1
Mercury	0.1	mg/kg	< 0.1
Molybdenum	10	mg/kg	< 10
Nickel	5	mg/kg	< 5
Selenium	2	mg/kg	< 2
Tin	10	mg/kg	< 10
Vanadium	10	mg/kg	< 10

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**13STF21-X**
71 Belair Rd	**Lab Number**		**06-MY04950**
Kingswood	**Matrix**		**Soil**
South Australia 5062	**Sample Date**		**May 25, 2006**
Analysis Type	**LOR**	**Units**	
Zinc	5	mg/kg	7.9

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	ISB8-A	ISB8-A	ISB8-A	ISB8-A	Method blank
	Lab Number	06-MY04934	06-MY04934	06-MY04934	06-MY04934	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
Polycyclic Aromatic Hydrocarbons						
Acenaphthene		< 0.1	< 0.1	<1	96	< 0.001
Acenaphthylene		< 0.1	< 0.1	<1	86	< 0.001
Anthracene		< 0.1	< 0.1	<1	110	< 0.001
Benz(a)anthracene		< 0.1	< 0.1	<1	89	< 0.001
Benzo(a)pyrene		< 0.1	< 0.1	<1	107	< 0.001
Benzo(b)fluoranthene		< 0.1	< 0.1	<1	101	< 0.001
Benzo(g.h.i)perylene		< 0.1	< 0.1	<1	92	< 0.001
Benzo(k)fluoranthene		< 0.1	< 0.1	<1	106	< 0.001
Chrysene		< 0.1	< 0.1	<1	94	< 0.001
Dibenz(a.h)anthracene		< 0.1	< 0.1	<1	104	< 0.001
Fluoranthene		< 0.1	< 0.1	<1	96	< 0.001
Fluorene		< 0.1	< 0.1	<1	104	< 0.001
Indeno(1.2.3-cd)pyrene		< 0.1	< 0.1	<1	95	< 0.001
Naphthalene		< 0.1	< 0.1	<1	98	< 0.001
Phenanthrene		< 0.1	< 0.1	<1	86	< 0.001
Pyrene		< 0.1	< 0.1	<1	91	< 0.001
Total PAH		< 1.6	< 1.6	-	-	< 0.016
Chrysene-d12 (surr.)		110	100	-	110	100
2-Fluorobiphenyl (surr.)		100	87	-	93	87
Heavy Metals (7)						
Arsenic		5.0	4.5	11	85	-
Cadmium		< 0.5	< 0.5	<1	86	-
Chromium		12	12	1.0	81	-
Copper		8.3	8.2	2.0	80	-
Lead		< 5	< 5	<1	88	-
Nickel		6.0	5.7	<1	82	-
Zinc		10	9.8	4.6	79	-
Phenols						

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	ISB8-A	ISB8-A	ISB8-A	ISB8-A	Method blank
Lab Number	06-MY04934	06-MY04934	06-MY04934	06-MY04934	Batch
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	Units		% RPD	% Recovery	mg/L
Phenols					
2-Chlorophenol	-	-	<1	108	-
2-Methylphenol (o-Cresol)	-	-	<1	106	-
2-Nitrophenol	-	-	<1	97	-
2.4-Dichlorophenol	-	-	<1	98	-
2.4-Dimethylphenol	-	-	<1	110	-
2.4.6-Trichlorophenol	-	-	<1	112	-
2.6-Dichlorophenol	-	-	<1	90	-
3&4-Methylphenol (m&p-Cresol)	-	-	<1	102	-
4-Chloro-3-methylphenol	-	-	<1	94	-
Pentachlorophenol	-	-	<1	112	-
Phenol	-	-	<1	103	-
Phenol-d6 (surr.)	-	-	-	102	-
Heavy Metals					
Antimony	-	-	<1	83	-
Beryllium	-	-	1.7	-	-
Cobalt	-	-	9.0	76	-
Mercury	< 0.1	< 0.1	<1	-	< 0.0001
Molybdenum	-	-	3.4	90	-
Selenium	-	-	<1	93	-
Tin	-	-	<1	-	-
Vanadium	-	-	2.1	80	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	ISB10-A	ISB10-A	ISB10-A	ISB10-A	Method blank
	Lab Number	06-MY04936	06-MY04936	06-MY04936	06-MY04936	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC		-	-	<1	109	< 0.02
TRH C10-C14 Fraction by GC		< 50	< 50	<1	89	< 0.05
TRH C15-C28 Fraction by GC		< 100	< 100	<1	-	< 0.1
TRH C29-C36 Fraction by GC		< 100	< 100	<1	-	< 0.1
Monocyclic Aromatic Hydrocarbons						
Benzene		< 0.05	< 0.05	<1	75	< 0.005
Toluene		< 0.05	< 0.05	<1	109	< 0.005
Ethylbenzene		< 0.05	< 0.05	<1	91	< 0.005
Xylenes(ortho.meta and para)		< 0.05	< 0.05	<1	102	< 0.005
Fluorobenzene (surr.)		100	120	-	92	93
Organochlorine Pesticides						
4,4'-DDD		< 0.05	< 0.05	<1	122	< 0.005
4,4'-DDE		< 0.05	< 0.05	<1	124	< 0.005
4,4'-DDT		< 0.05	< 0.05	<1	111	< 0.005
a-BHC		< 0.05	< 0.05	<1	125	< 0.005
Aldrin		< 0.05	< 0.05	<1	123	< 0.005
b-BHC		< 0.05	< 0.05	<1	117	< 0.005
Chlordane		< 0.1	< 0.1	<1	119	< 0.01
d-BHC		< 0.05	< 0.05	<1	124	< 0.005
Dieldrin		< 0.05	< 0.05	<1	125	< 0.005
Endosulfan I		< 0.05	< 0.05	<1	125	< 0.005
Endosulfan II		< 0.05	< 0.05	<1	125	< 0.005
Endosulfan sulphate		< 0.05	< 0.05	<1	126	< 0.005
Endrin		< 0.05	< 0.05	<1	101	< 0.005
Endrin aldehyde		< 0.05	< 0.05	<1	102	< 0.005
Endrin ketone		< 0.05	< 0.05	<1	123	< 0.005
g-BHC (Lindane)		< 0.05	< 0.05	<1	125	< 0.005
Heptachlor		< 0.05	< 0.05	<1	122	< 0.005

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	ISB10-A	ISB10-A	ISB10-A	ISB10-A	Method blank
Lab Number	06-MY04936	06-MY04936	06-MY04936	06-MY04936	Batch
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	Units		% RPD	% Recovery	mg/L
Organochlorine Pesticides					
Heptachlor epoxide	< 0.05	< 0.05	<1	126	< 0.005
Methoxychlor	< 0.05	< 0.05	<1	77	< 0.005
Toxophene	< 0.1	< 0.1	<1	-	< 0.01
Chlorinated Hydrocarbons					
1.2-Dichlorobenzene	< 0.2	< 0.2	<1	92	< 0.02
1.2.3-Trichlorobenzene	< 0.05	< 0.05	<1	111	< 0.005
1.2.3.4-Tetrachlorobenzene	< 0.05	< 0.05	<1	88	< 0.005
1.2.3.5-Tetrachlorobenzene	< 0.05	< 0.05	<1	-	< 0.005
1.2.4-Trichlorobenzene	< 0.05	< 0.05	<1	-	< 0.005
1.2.4.5-Tetrachlorobenzene	< 0.05	< 0.05	<1	113	< 0.005
1.3-Dichlorobenzene	< 0.2	< 0.2	<1	110	< 0.02
1.3.5-Trichlorobenzene	< 0.05	< 0.05	<1	94	< 0.005
1.4-Dichlorobenzene	< 0.2	< 0.2	<1	83	< 0.02
Benzal chloride	< 0.05	< 0.05	<1	100	< 0.005
Benzotrichloride	< 0.05	< 0.05	<1	106	< 0.005
Benzyl chloride	< 0.2	< 0.2	<1	-	< 0.02
Hexachlorobenzene	< 0.05	< 0.05	<1	114	< 0.005
Hexachlorobutadiene	< 0.05	< 0.05	<1	109	< 0.005
Hexachlorocyclopentadiene	< 0.05	< 0.05	<1	77	< 0.005
Hexachloroethane	< 0.05	< 0.05	<1	92	< 0.005
Pentachlorobenzene	< 0.05	< 0.05	<1	105	< 0.005
Polychlorinated Biphenyls					
Aroclor-1221	< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1232	< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1242	< 0.1	< 0.1	<1	105	< 0.01
Aroclor-1248	< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1254	< 0.1	< 0.1	<1	-	< 0.01
Total PCB	< 1	< 1	<1	105	< 0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	ISB10-A	ISB10-A	ISB10-A	ISB10-A	Method blank
Lab Number	06-MY04936	06-MY04936	06-MY04936	06-MY04936	Batch
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	Units		% RPD	% Recovery	mg/L
Polychlorinated Biphenyls					
Dibutylchlorendate (surr.)	85	80	-	115	130
Tetrachloro-m-xylene (surr.)	100	99	-	96	99
Heavy Metals					
Antimony	-	-	-	-	< 0.005
Arsenic	-	-	-	-	< 0.001
Beryllium	-	-	-	-	< 0.001
Cadmium	-	-	-	-	< 0.0002
Chromium	-	-	-	-	< 0.001
Cobalt	-	-	-	-	< 0.001
Copper	-	-	-	-	< 0.001
Lead	-	-	-	-	< 0.001
Molybdenum	-	-	-	-	< 0.005
Nickel	-	-	-	-	< 0.001
Selenium	-	-	-	-	< 0.001
Tin	-	-	-	-	< 0.005
Vanadium	-	-	-	-	< 0.005
Zinc	-	-	-	-	< 0.001
Aroclor-1016	< 0.1	< 0.1	<1	95	< 0.01
Aroclor-1260	< 0.1	< 0.1	<1	116	< 0.01

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	ISTF18A	ISTF18A	ISTF18A	ISTF18A
	Lab Number	06-MY04944	06-MY04944	06-MY04944	06-MY04944
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	Units			% RPD	% Recovery
Heavy Metals (7)					
Arsenic		< 2	< 2	<1	89
Cadmium		< 0.5	< 0.5	<1	94
Chromium		< 5	< 5	<1	91
Copper		< 5	< 5	<1	106
Lead		7.2	8.2	14	93
Nickel		< 5	< 5	<1	87
Zinc		15	18	19	79
Heavy Metals					
Antimony		-	-	<1	93
Beryllium		-	-	<1	100
Cobalt		-	-	<1	105
Mercury		< 0.1	< 0.1	<1	94
Molybdenum		-	-	17	90
Selenium		-	-	<1	88
Tin		-	-	17	95
Vanadium		-	-	-	92

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	RPD	ISTF21A	Method blank
	Lab Number	BATCH	06-MY04947	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	Units		% Recovery	mg/L
Phenols				
2-Chlorophenol		-	-	< 0.01
2-Methylphenol (o-Cresol)		-	-	< 0.01
2-Nitrophenol		-	-	< 0.05
2.4-Dichlorophenol		-	-	< 0.01
2.4-Dimethylphenol		-	-	< 0.01
2.4.6-Trichlorophenol		-	-	< 0.01
2.6-Dichlorophenol		-	-	< 0.01
3&4-Methylphenol (m&p-Cresol)		-	-	< 0.02
4-Chloro-3-methylphenol		-	-	< 0.01
Pentachlorophenol		-	-	< 0.05
Phenol		-	-	< 0.01
Phenol-d6 (surr.)		-	-	99

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1R1	1R1	1R1	1R1
	Lab Number	06-MY04949	06-MY04949	06-MY04949	06-MY04949
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Water	Water	Water	Water
	Sample Date	May 25, 2006	May 25, 2006	May 25, 2006	May 25, 2006
Analysis Type	Units			% RPD	% Recovery
Heavy Metals					
Antimony		< 0.005	< 0.005	<1	88
Arsenic		<0.002	0.007	14	95
Beryllium		< 0.001	< 0.001	<1	124
Cadmium		< 0.0002	< 0.0002	<1	108
Chromium		<0.005	0.007	1.6	96
Cobalt		< 0.001	< 0.001	<1	104
Copper		<0.005	0.004	13	100
Lead		< 0.001	< 0.001	<1	108
Mercury		0.0009	0.0009	2.8	-
Nickel		<0.005	0.002	19	102
Selenium		<0.005	0.032	15	79
Tin		< 0.005	< 0.005	<1	83
Vanadium		< 0.005	< 0.005	<1	107
Zinc		< 0.001	< 0.001	<1	108

COMMENTS:

Chain of Custody

COC No: S0098
Page 1 of 3

82PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals*	PAH	pH	OCP	MAH	TPH		VIC EPA SCREEN
1SB8-A			24-5-06	Soil	1 Jar	X	X	X					
1SB9-A			24-5-06	Soil	1 Jar	X	X	X					
1SB10-A			24-5-06	Soil	1 Jar			X					X
1STF11-A			24-5-06	Soil	1 Jar			X					X
1STF12-A			24-5-06	Soil	1 Jar	X	X	X					
1STF13-A			24-5-06	Soil	1 Jar	X	X	X	X	X	X		
1STF14-A			24-5-06	Soil	1 Jar	X	X	X					
1STF15-A			24-5-06	Soil	1 Jar	X	X	X	X	X	X		

COMMENTS: * As, Cd, Cr, Cu, Hg, Ni, Pb, Zn

24 HOUR TURNAROUND REQUIRED FOR ALL SAMPLES

DESPATCH METHOD: MGT Courier	DATE/TIME: 24-5-06 4:00pm	PREPARED BY (signature)
RECEIVED BY: (signature) C Mills.	DATE/TIME: 25/5/06.	CHECKED BY: (signature) 194407

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA_05_002\02\Samples\COCS0098.doc

Chain of Custody

COC No: S0098
Page 2 of 3

PROJECT NAME: Bus Station Redevelopment			PROJECT NO: AAA 05 002.02		CONTACT PERSON: Scott Slater									CONTACT NO: 08 8340 9513															
LABORATORY: MGT			LAB. CONTACT: Rhonda Chouman		LAB QUOTE NO.:									LAB PROJECT NO:															
						ANALYSIS REQUIRED																							
SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	Metals*	PAH	pH	OCP	MAH	TPH		VIC EPA SCREEN		HOLD														
1STF16-A			24-5-06	Soil	1 Jar	X	X	X	X	X	X																		
1STF17-A			24-5-06	Soil	1 Jar	X	X	X																					
1STF18-A			24-5-06	Soil	1 Jar	X	X	X	X	X	X																		
1STF19-A			24-5-06	Soil	1 Jar	X	X	X																					
1STF20-A			24-5-06	Soil	1 Jar	X	X	X	X	X	X																		
1STF21-A			24-5-06	Soil	1 Jar			X					X																
1STF22-A			24-5-06	Soil	1 Jar	X	X	X	X	X	X																		
1STF23-A			24-5-06	Soil	1 Jar										X														
COMMENTS:	* As, Cd, Cr, Cu, Hg, Ni, Pb, Zn																												
	24 HOUR TURNAROUND REQUIRED FOR ALL SAMPLES!!																												

DESPATCH METHOD: MGT Courier	DATE/TIME: 24-5-06 4:00pm	PREPARED BY (signature)
RECEIVED BY: (signature) C Mills	DATE/TIME: 25/5/06	CHECKED BY: (signature) 194407

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA 05 002\02\Corres\COC\S0098.doc

Chain of Custody

COC No: S0098
Page 3 of 3

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals*	PAH	pH	OCP	MAH	TPH		VIC EPA SCREEN		HOLD
1STF24-A			24-5-06	Soil	1 Jar										X
1STF25-A			24-5-06	Soil	1 Jar										X
1R1			24-5-06	Water	7 items								X		
1TB1			24-5-06	Water	7 items										X
13STF21-X			24-5-06	Soil	1 Jar			X					X		

COMMENTS: * As, Cd, Cr, Cu, Hg, Ni, Pb, Zn

24 HOUR TURNAROUND REQUIRED FOR ALL SAMPLES!!

DESPATCH METHOD: MGT Courier	DATE/TIME: 24-5-06 4:00pm	PREPARED BY (signature): Scott Slater
RECEIVED BY: (signature) C Mills	DATE/TIME: 25/5/06	CHECKED BY: (signature) 19407.

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA_05_002\02\Samples\COCS0098.doc

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION REDEVELOPMENT AAA 05 002.02

Order Number:
Date Received: Jun 20, 2006
Date Sampled: Jun 16, 2006
Date Reported: Jun 21, 2006
Contact: Scott Slater

Methods

- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- USEPA 8270C Phenols
- USEPA 8082 Polychlorinated Biphenyls
- USEPA 8121 Chlorinated Hydrocarbons
- USEPA 8081A Organochlorine Pesticides
- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- USEPA 8260B - MGT 350A Monocyclic Aromatic Hydrocarbons
- MGT100A-GC Total Recoverable Hydrocarbons
- USEPA 9010B Cyanide
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1SB11-A**
	Lab Number		**06-JN04258**
	Matrix		**Soil**
	Sample Date		**Jun 16, 2006**
Analysis Type	**LOR**	**Units**	
Total Recoverable Hydrocarbons			
TRH C6-C9 Fraction by GC	20	mg/kg	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	< 100
Monocyclic Aromatic Hydrocarbons			
Benzene	0.05	mg/kg	< 0.05
Toluene	0.05	mg/kg	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	< 0.05
Fluorobenzene (surr.)	1	%	100
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.1	mg/kg	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1
Anthracene	0.1	mg/kg	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1
Chrysene	0.1	mg/kg	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1
Fluorene	0.1	mg/kg	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1
Naphthalene	0.1	mg/kg	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1
Pyrene	0.1	mg/kg	< 0.1
Total PAH	1.6	mg/kg	< 1.6
Chrysene-d12 (surr.)	1	%	98
2-Fluorobiphenyl (surr.)	1	%	88

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1SB11-A**
	Lab Number		**06-JN04258**
	Matrix		**Soil**
	Sample Date		**Jun 16, 2006**
Analysis Type	**LOR**	**Units**	
Organochlorine Pesticides			
4.4'-DDD	0.05	mg/kg	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05
a-BHC	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-BHC	0.05	mg/kg	< 0.05
Chlordane	0.1	mg/kg	< 0.1
d-BHC	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.1
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxophene	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	77
Tetrachloro-m-xylene (surr.)	1	%	83
Chlorinated Hydrocarbons			
1.2-Dichlorobenzene	0.2	mg/kg	< 0.2
1.2.3-Trichlorobenzene	0.05	mg/kg	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1SB11-A**
	Lab Number		**06-JN04258**
	Matrix		**Soil**
	Sample Date		**Jun 16, 2006**
Analysis Type	**LOR**	**Units**	
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05
1.3-Dichlorobenzene	0.2	mg/kg	< 0.2
1.3.5-Trichlorobenzene	0.05	mg/kg	< 0.05
1.4-Dichlorobenzene	0.2	mg/kg	< 0.2
Benzal chloride	0.05	mg/kg	< 0.05
Benzotrichloride	0.05	mg/kg	< 0.05
Benzyl chloride	0.2	mg/kg	< 0.2
Hexachlorobenzene	0.05	mg/kg	< 0.05
Hexachlorobutadiene	0.05	mg/kg	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	< 0.05
Hexachloroethane	0.05	mg/kg	< 0.05
Pentachlorobenzene	0.05	mg/kg	< 0.05
Dibutylchlorendate (surr.)	1	%	77
Tetrachloro-m-xylene (surr.)	1	%	83
Polychlorinated Biphenyls			
Aroclor-1016	0.1	mg/kg	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1
Total PCB	1	mg/kg	< 1
Dibutylchlorendate (surr.)	1	%	77
Tetrachloro-m-xylene (surr.)	1	%	83
Phenols			
2-Chlorophenol	0.1	mg/kg	< 0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	< 0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1SB11-A**
	Lab Number		**06-JN04258**
	Matrix		**Soil**
	Sample Date		**Jun 16, 2006**
Analysis Type	**LOR**	**Units**	
2-Nitrophenol	0.5	mg/kg	< 0.5
2.4-Dichlorophenol	0.1	mg/kg	< 0.1
2.4-Dimethylphenol	0.1	mg/kg	< 0.1
2.4.6-Trichlorophenol	0.1	mg/kg	< 0.1
2.6-Dichlorophenol	0.1	mg/kg	< 0.1
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	< 0.2
4-Chloro-3-methylphenol	0.1	mg/kg	< 0.1
Pentachlorophenol	0.5	mg/kg	< 0.5
Phenol	0.1	mg/kg	< 0.1
Phenol-d6 (surr.)	1	%	85
% Moisture	0.1	%	14
Cyanide (total)	5	mg/kg	<5
pH (1:5 Aqueous extract)	0.1	units	9.3
Heavy Metals			
Antimony	10	mg/kg	< 10
Arsenic	2	mg/kg	2.3
Beryllium	2	mg/kg	< 2
Cadmium	0.5	mg/kg	< 0.5
Chromium	5	mg/kg	9.4
Cobalt	5	mg/kg	< 5
Copper	5	mg/kg	9.1
Lead	5	mg/kg	< 5
Mercury	0.1	mg/kg	< 0.1
Molybdenum	10	mg/kg	< 10
Nickel	5	mg/kg	5.8
Selenium	2	mg/kg	< 2
Tin	10	mg/kg	< 10
Vanadium	10	mg/kg	11

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**1SB11-A**
71 Belair Rd	**Lab Number**		**06-JN04258**
Kingswood	**Matrix**		**Soil**
South Australia 5062	**Sample Date**		**Jun 16, 2006**
Analysis Type	**LOR**	**Units**	
Zinc	5	mg/kg	9.0

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	RPD	1SB11-A	Method blank
	Lab Number	BATCH	06-JN04258	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	Jun 16, 2006	Jun 16, 2006	Jun 16, 2006
Analysis Type	Units		% Recovery	mg/L
Total Recoverable Hydrocarbons				
TRH C6-C9 Fraction by GC		<1	97	< 0.02
TRH C10-C14 Fraction by GC		<1	86	< 0.05
TRH C15-C28 Fraction by GC		<1	-	< 0.1
TRH C29-C36 Fraction by GC		<1	-	< 0.1
Monocyclic Aromatic Hydrocarbons				
Benzene		<1	123	< 0.005
Toluene		<1	102	< 0.005
Ethylbenzene		<1	86	< 0.005
Xylenes(ortho.meta and para)		<1	97	< 0.005
Fluorobenzene (surr.)		-	102	81
Polycyclic Aromatic Hydrocarbons				
Acenaphthene		<1	97	< 0.001
Acenaphthylene		<1	104	< 0.001
Anthracene		<1	100	< 0.001
Benz(a)anthracene		<1	91	< 0.001
Benzo(a)pyrene		<1	107	< 0.001
Benzo(b)fluoranthene		<1	96	< 0.001
Benzo(g.h.i)perylene		<1	100	< 0.001
Benzo(k)fluoranthene		<1	102	< 0.001
Chrysene		<1	112	< 0.001
Dibenz(a.h)anthracene		<1	86	< 0.001
Fluoranthene		<1	100	< 0.001
Fluorene		<1	106	< 0.001
Indeno(1.2.3-cd)pyrene		<1	104	< 0.001
Naphthalene		<1	108	< 0.001
Phenanthrene		<1	102	< 0.001
Pyrene		<1	102	< 0.001
Total PAH		-	-	< 0.016

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	1SB11-A	Method blank
Lab Number	BATCH	06-JN04258	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	Jun 16, 2006	Jun 16, 2006	Jun 16, 2006
Analysis Type	Units	% Recovery	mg/L
Polycyclic Aromatic Hydrocarbons			
Chrysene-d12 (surr.)	-	101	82
2-Fluorobiphenyl (surr.)	-	106	96
Organochlorine Pesticides			
4.4'-DDD	<1	79	< 0.005
4.4'-DDE	<1	85	< 0.005
4.4'-DDT	<1	112	< 0.005
a-BHC	<1	115	< 0.005
Aldrin	<1	110	< 0.005
b-BHC	<1	102	< 0.005
Chlordane	<1	119	< 0.01
d-BHC	<1	124	< 0.005
Dieldrin	<1	78	< 0.005
Endosulfan I	<1	128	< 0.005
Endosulfan II	<1	129	< 0.005
Endosulfan sulphate	<1	130	< 0.005
Endrin	<1	129	< 0.005
Endrin aldehyde	<1	120	< 0.005
Endrin ketone	<1	77	< 0.005
g-BHC (Lindane)	<1	123	< 0.005
Heptachlor	<1	128	< 0.005
Heptachlor epoxide	<1	126	< 0.005
Methoxychlor	<1	126	< 0.005
Toxophene	<1	-	< 0.01
Chlorinated Hydrocarbons			
1.2-Dichlorobenzene	<1	87	< 0.02
1.2.3-Trichlorobenzene	<1	104	< 0.005
1.2.3.4-Tetrachlorobenzene	<1	115	< 0.005
1.2.3.5-Tetrachlorobenzene	<1	-	< 0.005

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	1SB11-A	Method blank
Lab Number	BATCH	06-JN04258	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	Jun 16, 2006	Jun 16, 2006	Jun 16, 2006
Analysis Type	Units	% Recovery	mg/L
Chlorinated Hydrocarbons			
1.2.4-Trichlorobenzene	<1	-	< 0.005
1.2.4.5-Tetrachlorobenzene	<1	106	< 0.005
1.3-Dichlorobenzene	<1	97	< 0.02
1.3.5-Trichlorobenzene	<1	111	< 0.005
1.4-Dichlorobenzene	<1	98	< 0.02
Benzal chloride	<1	96	< 0.005
Benzotrichloride	<1	95	< 0.005
Benzyl chloride	<1	-	< 0.02
Hexachlorobenzene	<1	121	< 0.005
Hexachlorobutadiene	<1	103	< 0.005
Hexachlorocyclopentadiene	<1	100	< 0.005
Hexachloroethane	<1	99	< 0.005
Pentachlorobenzene	<1	105	< 0.005
Polychlorinated Biphenyls			
Aroclor-1221	<1	-	< 0.01
Aroclor-1232	<1	-	< 0.01
Aroclor-1242	<1	105	< 0.01
Aroclor-1248	<1	-	< 0.01
Aroclor-1254	<1	-	< 0.01
Total PCB	<1	105	< 0.1
Dibutylchlorendate (surr.)	-	81	71
Tetrachloro-m-xylene (surr.)	-	68	74
Phenols			
2-Chlorophenol	<1	106	< 0.01
2-Methylphenol (o-Cresol)	<1	100	< 0.01
2-Nitrophenol	<1	95	< 0.05
2.4-Dichlorophenol	<1	100	< 0.01
2.4-Dimethylphenol	<1	101	< 0.01

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	1SB11-A	Method blank
Lab Number	BATCH	06-JN04258	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	Jun 16, 2006	Jun 16, 2006	Jun 16, 2006
Analysis Type	Units	% Recovery	mg/L
Phenols			
2.4.6-Trichlorophenol	<1	100	< 0.01
2.6-Dichlorophenol	<1	105	< 0.01
3&4-Methylphenol (m&p-Cresol)	<1	102	< 0.02
4-Chloro-3-methylphenol	<1	103	< 0.01
Pentachlorophenol	<1	104	< 0.05
Phenol	<1	110	< 0.01
Phenol-d6 (surr.)	-	106	86
Heavy Metals			
Antimony	<1	76	< 0.5
Arsenic	<1	88	< 0.02
Beryllium	<1	89	< 0.02
Cadmium	<1	83	< 0.02
Chromium	23	80	< 0.05
Cobalt	<1	81	< 0.05
Copper	7.6	89	< 0.05
Lead	10	79	< 0.05
Mercury	<1	79	< 0.005
Molybdenum	<1	84	< 0.5
Nickel	22	76	< 0.05
Selenium	<1	-	< 0.02
Tin	<1	90	< 0.5
Vanadium	9.2	90	< 0.5
Zinc	24	95	< 0.05
Aroclor-1016	<1	95	< 0.01
Aroclor-1260	<1	116	< 0.01

COMMENTS:

Chain of Custody

COC No: S0132
Page 1 of 1

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Vic EPA Screen	ANALYSIS REQUIRED: pH
1SB11-A			16-6-06	Soil	1 Jar	X	X

COMMENTS:	24 HOUR TURNAROUND REQUIRED FOR ALL SAMPLES Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT Courier	DATE/TIME: 4:30pm 19/6/06	PREPARED BY (signature)
RECEIVED BY: (signature) CL 19335	DATE/TIME: 20/6/06	CHECKED BY: (signature)

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA_05_002\02\Samples\COCS0132.doc

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION REDEVELOPMENT AAA 05 002.02

Report Number: 195573 Page 1 of 3
Order Number:
Date Received: Jun 27, 2006
Date Sampled: Jun 23, 2006
Date Reported: Jun 28, 2006
Contact: Scott Slater

Methods

- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1SB12-A**
	Lab Number		**06-JN05696**
	Matrix		**Soil**
	Sample Date		**Jun 23, 2006**
Analysis Type	**LOR**	**Units**	
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.1	mg/kg	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1
Anthracene	0.1	mg/kg	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1
Chrysene	0.1	mg/kg	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1
Fluorene	0.1	mg/kg	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1
Naphthalene	0.1	mg/kg	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1
Pyrene	0.1	mg/kg	< 0.1
Total PAH	1.6	mg/kg	< 1.6
Chrysene-d12 (surr.)	1	%	59
2-Fluorobiphenyl (surr.)	1	%	72
% Moisture	0.1	%	16
pH (1:5 Aqueous extract)	0.1	units	9.1
Heavy Metals			
Arsenic	2	mg/kg	< 2
Cadmium	0.5	mg/kg	< 0.5
Chromium	5	mg/kg	10
Lead	5	mg/kg	< 5
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	5.6
Zinc	5	mg/kg	8.0

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	RPD	1SB12-A	Method blank
	Lab Number	BATCH	06-JN05696	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	Jun 23, 2006	Jun 23, 2006	Jun 23, 2006
Analysis Type	Units		% Recovery	mg/L
Polycyclic Aromatic Hydrocarbons				
Acenaphthene		<1	96	< 0.001
Acenaphthylene		<1	104	< 0.001
Anthracene		<1	92	< 0.001
Benz(a)anthracene		<1	101	< 0.001
Benzo(a)pyrene		<1	94	< 0.001
Benzo(b)fluoranthene		<1	104	< 0.001
Benzo(g.h.i)perylene		<1	102	< 0.001
Benzo(k)fluoranthene		<1	90	< 0.001
Chrysene		<1	90	< 0.001
Dibenz(a.h)anthracene		<1	109	< 0.001
Fluoranthene		<1	96	< 0.001
Fluorene		<1	101	< 0.001
Indeno(1.2.3-cd)pyrene		<1	101	< 0.001
Naphthalene		<1	90	< 0.001
Phenanthrene		<1	104	< 0.001
Pyrene		<1	96	< 0.001
Total PAH		-	-	< 0.016
Chrysene-d12 (surr.)		-	104	62
2-Fluorobiphenyl (surr.)		-	86	120
Heavy Metals				
Arsenic		<1	87	< 0.02
Cadmium		<1	95	< 0.02
Chromium		<1	94	< 0.05
Lead		4.8	80	< 0.05
Nickel		<1	95	< 0.05
Zinc		21	83	< 0.05

COMMENTS:

Chain of Custody

COC No: S0148
Page 1 of 1

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: As	Cd	Cr	Hg	Ni	Pb	Zn	PAH	pH
1SB12-A			23-6-06	Soil	1 Jar	X	X	X	X	X	X	X	X	X

COMMENTS: **24 HOUR TURNAROUND REQUIRED FOR ALL SAMPLES**
Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT Courier	DATE/TIME: 4:30pm 26/6/06	PREPARED BY (signature)
RECEIVED BY: (signature) 195578	DATE/TIME: 27/6/06	CHECKED BY: (signature)

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
195578A_0_30626Sample COC.xls

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION REDEVELOPMENT AAA 05 002.02

Report Number: 195609 Page 1 of 3
Order Number:
Date Received: Jun 28, 2006
Date Sampled: Jun 27, 2006
Date Reported: Jun 29, 2006
Contact: Scott Slater

Methods

- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1SB13-A**	**1SB14-A**
	Lab Number		**06-JN05824**	**06-JN05825**
	Matrix		**Soil**	**Soil**
	Sample Date		**Jun 27, 2006**	**Jun 27, 2006**
Analysis Type	**LOR**	**Units**		
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1
Chrysene	0.1	mg/kg	< 0.1	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1
Pyrene	0.1	mg/kg	< 0.1	< 0.1
Total PAH	1.6	mg/kg	< 1.6	< 1.6
Chrysene-d12 (surr.)	1	%	120	102
2-Fluorobiphenyl (surr.)	1	%	85	110
% Moisture	0.1	%	13	16
pH (1:5 Aqueous extract)	0.1	units	9.3	9.0
Heavy Metals				
Arsenic	2	mg/kg	3.2	6.7
Cadmium	0.5	mg/kg	< 0.5	< 0.5
Chromium	5	mg/kg	13	24
Lead	5	mg/kg	< 5	8.7
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	7.6	11
Zinc	5	mg/kg	9.4	17

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	RPD	1SB13-A	Method blank
	Lab Number	BATCH	06-JN05824	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type	Units		% Recovery	mg/L
Heavy Metals				
Arsenic		<1	91	< 0.02
Cadmium		13	95	< 0.02
Chromium		11	92	< 0.05
Lead		21	88	< 0.05
Mercury		<1	94	< 0.005
Nickel		1.1	91	< 0.05
Zinc		8.5	87	< 0.05

COMMENTS:

Chain of Custody

COC No: S0149
Page 1 of 1

PROJECT NAME: Bus Station Redevelopment		PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater		CONTACT NO: 08 8340 9513
LABORATORY: MGT		LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:		LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED								
						As	Cd	Cr	Hg	Ni	Pb	Zn	PAH	pH
1SB13-A			27-6-06	Soil	1 Jar	X	X	X	X	X	X	X	X	X
1SB14-A			27-6-06	Soil	1 Jar	X	X	X	X	X	X	X	X	X

COMMENTS: **24 HOUR TURNAROUND REQUIRED FOR ALL SAMPLES**
Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT Courier	DATE/TIME: 4:30pm 27/6/06	PREPARED BY (signature)
RECEIVED BY: (signature) 19 5623	DATE/TIME: 28/6/06	CHECKED BY: (signature)

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA_05_002\02\Samples\COC\S0149.doc

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION REDEVELOPMENT AAA 05 002.02

Order Number:
Date Received: Jul 4, 2006
Date Sampled: Jul 3, 2006
Date Reported: Jul 6, 2006
Contact: Scott Slater

Methods

- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- USEPA 8270C Phenols
- USEPA 8082 Polychlorinated Biphenyls
- USEPA 8121 Chlorinated Hydrocarbons
- USEPA 8081A Organochlorine Pesticides
- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- USEPA 8260B - MGT 350A Monocyclic Aromatic Hydrocarbons
- MGT100A-GC Total Recoverable Hydrocarbons
- USEPA 9010B Cyanide
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**1SB15-A**	**1SB16-A**	**1SB17-A**	**1SB18-A**
71 Belair Rd	**Lab Number**		**06-JL00321**	**06-JL00322**	**06-JL00323**	**06-JL00324**
Kingswood	**Matrix**		**Soil**	**Soil**	**Soil**	**Soil**
South Australia 5062	**Sample Date**		**Jul 3, 2006**	**Jul 3, 2006**	**Jul 3, 2006**	**Jul 3, 2006**
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PAH	1.6	mg/kg	< 1.6	< 1.6	< 1.6	< 1.6
Chrysene-d12 (surr.)	1	%	81	90	110	82
2-Fluorobiphenyl (surr.)	1	%	84	100	100	99
% Moisture	0.1	%	18	9.9	17	13
pH (1:5 Aqueous extract)	0.1	units	9.9	9.3	9.6	8.9
Heavy Metals						
Arsenic	1	mg/kg	4.3	2.4	3.4	3.1
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	24	13	16	17
Lead	5	mg/kg	10	< 5	< 5	5.6
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	11	8.3	8.0	9.8
Zinc	5	mg/kg	16	8.5	12	11

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1SB19-A	1SB20-A
71 Belair Rd	Lab Number		06-JL00325	06-JL00326
Kingswood	Matrix		Soil	Soil
South Australia 5062	Sample Date		Jul 3, 2006	Jul 3, 2006
Analysis Type	**LOR**	**Units**		
Total Recoverable Hydrocarbons				
TRH C6-C9 Fraction by GC	20	mg/kg	-	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	-	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	-	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	-	< 100
Monocyclic Aromatic Hydrocarbons				
Benzene	0.05	mg/kg	-	< 0.05
Toluene	0.05	mg/kg	-	< 0.05
Ethylbenzene	0.05	mg/kg	-	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	-	< 0.05
Fluorobenzene (surr.)	1	%	-	89
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1
Chrysene	0.1	mg/kg	< 0.1	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1
Pyrene	0.1	mg/kg	< 0.1	< 0.1
Total PAH	1.6	mg/kg	< 1.6	< 1.6
Chrysene-d12 (surr.)	1	%	88	80
2-Fluorobiphenyl (surr.)	1	%	110	87

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1SB19-A**	**1SB20-A**
	Lab Number		**06-JL00325**	**06-JL00326**
	Matrix		**Soil**	**Soil**
	Sample Date		**Jul 3, 2006**	**Jul 3, 2006**
Analysis Type	**LOR**	**Units**		
Organochlorine Pesticides				
4.4'-DDD	0.05	mg/kg	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05
Chlordane	0.1	mg/kg	-	< 0.1
d-BHC	0.05	mg/kg	-	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05
Endrin	0.05	mg/kg	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05
Methoxychlor	0.05	mg/kg	-	< 0.05
Toxophene	0.1	mg/kg	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	82
Tetrachloro-m-xylene (surr.)	1	%	-	66
Chlorinated Hydrocarbons				
1.2-Dichlorobenzene	0.2	mg/kg	-	< 0.2
1.2.3-Trichlorobenzene	0.05	mg/kg	-	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	-	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	-	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1SB19-A**	**1SB20-A**
	Lab Number		**06-JL00325**	**06-JL00326**
	Matrix		**Soil**	**Soil**
	Sample Date		**Jul 3, 2006**	**Jul 3, 2006**
Analysis Type	**LOR**	**Units**		
1.2.4-Trichlorobenzene	0.05	mg/kg	-	< 0.05
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	-	< 0.05
1.3-Dichlorobenzene	0.2	mg/kg	-	< 0.2
1.3.5-Trichlorobenzene	0.05	mg/kg	-	< 0.05
1.4-Dichlorobenzene	0.2	mg/kg	-	< 0.2
Benzal chloride	0.05	mg/kg	-	< 0.05
Benzotrichloride	0.05	mg/kg	-	< 0.05
Benzyl chloride	0.2	mg/kg	-	< 0.2
Hexachlorobenzene	0.05	mg/kg	-	< 0.05
Hexachlorobutadiene	0.05	mg/kg	-	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	-	< 0.05
Hexachloroethane	0.05	mg/kg	-	< 0.05
Pentachlorobenzene	0.05	mg/kg	-	< 0.05
Dibutylchlorendate (surr.)	1	%	-	82
Tetrachloro-m-xylene (surr.)	1	%	-	66
Polychlorinated Biphenyls				
Aroclor-1016	0.1	mg/kg	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	< 0.1
Total PCB	1	mg/kg	-	< 1
Dibutylchlorendate (surr.)	1	%	-	82
Tetrachloro-m-xylene (surr.)	1	%	-	66
Phenols				
2-Chlorophenol	0.1	mg/kg	-	< 0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	-	< 0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1SB19-A**	**1SB20-A**
	Lab Number		**06-JL00325**	**06-JL00326**
	Matrix		**Soil**	**Soil**
	Sample Date		**Jul 3, 2006**	**Jul 3, 2006**
Analysis Type	**LOR**	**Units**		
2-Nitrophenol	0.5	mg/kg	-	< 0.5
2.4-Dichlorophenol	0.1	mg/kg	-	< 0.1
2.4-Dimethylphenol	0.1	mg/kg	-	< 0.1
2.4.6-Trichlorophenol	0.1	mg/kg	-	< 0.1
2.6-Dichlorophenol	0.1	mg/kg	-	< 0.1
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	-	< 0.2
4-Chloro-3-methylphenol	0.1	mg/kg	-	< 0.1
Pentachlorophenol	0.5	mg/kg	-	< 0.5
Phenol	0.1	mg/kg	-	< 0.1
Phenol-d6 (surr.)	1	%	-	90
% Moisture	0.1	%	21	14
Cyanide (total)	5	mg/kg	-	< 5
pH (1:5 Aqueous extract)	0.1	units	9.7	9.9
Heavy Metals				
Antimony	10	mg/kg	-	< 10
Arsenic	1	mg/kg	13	2.1
Beryllium	2	mg/kg	-	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5
Chromium	5	mg/kg	24	12
Cobalt	5	mg/kg	-	< 5
Copper	5	mg/kg	-	7.8
Lead	5	mg/kg	7.5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1
Molybdenum	10	mg/kg	-	< 10
Nickel	5	mg/kg	9.6	6.0
Selenium	2	mg/kg	-	< 2
Tin	10	mg/kg	-	< 10
Vanadium	10	mg/kg	-	19

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**1SB19-A**	**1SB20-A**
71 Belair Rd	**Lab Number**		**06-JL00325**	**06-JL00326**
Kingswood	**Matrix**		**Soil**	**Soil**
South Australia 5062	**Sample Date**		**Jul 3, 2006**	**Jul 3, 2006**
Analysis Type	**LOR**	**Units**		
Zinc	5	mg/kg	20	8.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1SB15-A	1SB15-A	1SB15-A	1SB15-A	Method blank
	Lab Number	06-JL00321	06-JL00321	06-JL00321	06-JL00321	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	Jul 3, 2006	Jul 3, 2006	Jul 3, 2006	Jul 3, 2006	Jul 3, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
pH (1:5 Aqueous extract)		9.9	9.9	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene		-	-	<1	96	< 0.001
Acenaphthylene		-	-	<1	92	< 0.001
Anthracene		-	-	<1	100	< 0.001
Benz(a)anthracene		-	-	<1	104	< 0.001
Benzo(a)pyrene		-	-	<1	98	< 0.001
Benzo(b)fluoranthene		-	-	<1	95	< 0.001
Benzo(g.h.i)perylene		-	-	<1	94	< 0.001
Benzo(k)fluoranthene		-	-	<1	107	< 0.001
Chrysene		-	-	<1	96	< 0.001
Dibenz(a.h)anthracene		-	-	<1	94	< 0.001
Fluoranthene		-	-	<1	93	< 0.001
Fluorene		-	-	<1	96	< 0.001
Indeno(1.2.3-cd)pyrene		-	-	<1	99	< 0.001
Naphthalene		-	-	<1	89	< 0.001
Phenanthrene		-	-	<1	104	< 0.001
Pyrene		-	-	<1	98	< 0.001
Total PAH		-	-	-	-	< 0.016
Chrysene-d12 (surr.)		-	-	-	82	83
2-Fluorobiphenyl (surr.)		-	-	-	87	120
Phenols						
2-Chlorophenol		-	-	<1	91	-
2-Methylphenol (o-Cresol)		-	-	<1	87	-
2-Nitrophenol		-	-	<1	-	-
2.4-Dichlorophenol		-	-	<1	87	-
2.4-Dimethylphenol		-	-	<1	79	-
2.4.6-Trichlorophenol		-	-	<1	92	-
2.6-Dichlorophenol		-	-	<1	94	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

	Client Sample	RPD	1SB15-A	Method blank
	Lab Number	BATCH	06-JL00321	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	Jul 3, 2006	Jul 3, 2006	Jul 3, 2006
Analysis Type	Units		% Recovery	mg/L
Phenols				
3&4-Methylphenol (m&p-Cresol)		<1	84	-
4-Chloro-3-methylphenol		<1	87	-
Pentachlorophenol		<1	-	-
Phenol		<1	88	-
Phenol-d6 (surr.)		-	88	-
Heavy Metals				
Arsenic		-	-	< 0.02
Cadmium		-	-	< 0.02
Chromium		-	-	< 0.05
Lead		-	-	< 0.05
Nickel		-	-	< 0.05
Zinc		-	-	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	RPD	1SB17-A
	Lab Number	BATCH	06-JL00323
	QA Description		Spike % Recovery
	Matrix	Soil	Soil
	Sample Date	Jul 3, 2006	Jul 3, 2006
Analysis Type	Units		% Recovery
Heavy Metals			
Antimony		<1	92
Arsenic		5.4	88
Beryllium		7.6	89
Cadmium		<1	89
Chromium		<1	89
Cobalt		6.5	93
Copper		<1	94
Lead		<1	85
Molybdenum		19	87
Nickel		<1	88
Selenium		<1	83
Tin		15	98
Vanadium		3.3	93
Zinc		15	85

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	RPD	1SB20-A	Method blank
	Lab Number	BATCH	06-JL00326	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	Jul 3, 2006	Jul 3, 2006	Jul 3, 2006
Analysis Type	Units		% Recovery	mg/L
Total Recoverable Hydrocarbons				
TRH C6-C9 Fraction by GC		10	92	< 0.02
TRH C10-C14 Fraction by GC		<1	108	< 0.05
TRH C15-C28 Fraction by GC		<1	-	< 0.1
TRH C29-C36 Fraction by GC		<1	-	< 0.1
Monocyclic Aromatic Hydrocarbons				
Benzene		<1	112	< 0.005
Toluene		3.4	93	< 0.005
Ethylbenzene		15	85	< 0.005
Xylenes(ortho.meta and para)		15	95	< 0.005
Fluorobenzene (surr.)		-	109	97
Organochlorine Pesticides				
4.4'-DDD		<1	79	< 0.005
4.4'-DDE		<1	85	< 0.005
4.4'-DDT		<1	112	< 0.005
a-BHC		<1	115	< 0.005
Aldrin		<1	110	< 0.005
b-BHC		<1	102	< 0.005
Chlordane		<1	119	< 0.01
d-BHC		<1	124	< 0.005
Dieldrin		<1	78	< 0.005
Endosulfan I		<1	128	< 0.005
Endosulfan II		<1	129	< 0.005
Endosulfan sulphate		<1	130	< 0.005
Endrin		<1	129	< 0.005
Endrin aldehyde		<1	120	< 0.005
Endrin ketone		<1	77	< 0.005
g-BHC (Lindane)		<1	123	< 0.005
Heptachlor		<1	128	< 0.005

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	1SB20-A	Method blank
Lab Number	BATCH	06-JL00326	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	Jul 3, 2006	Jul 3, 2006	Jul 3, 2006
Analysis Type	Units	% Recovery	mg/L
Organochlorine Pesticides			
Heptachlor epoxide	<1	126	< 0.005
Methoxychlor	<1	126	< 0.005
Toxophene	<1	-	< 0.01
Chlorinated Hydrocarbons			
1.2-Dichlorobenzene	<1	87	< 0.02
1.2.3-Trichlorobenzene	<1	104	< 0.005
1.2.3.4-Tetrachlorobenzene	<1	77	< 0.005
1.2.3.5-Tetrachlorobenzene	<1	-	< 0.005
1.2.4-Trichlorobenzene	<1	-	< 0.005
1.2.4.5-Tetrachlorobenzene	<1	106	< 0.005
1.3-Dichlorobenzene	<1	97	< 0.02
1.3.5-Trichlorobenzene	<1	111	< 0.005
1.4-Dichlorobenzene	<1	98	< 0.02
Benzal chloride	<1	96	< 0.005
Benzotrichloride	<1	89	< 0.005
Benzyl chloride	<1	-	< 0.02
Hexachlorobenzene	<1	121	< 0.005
Hexachlorobutadiene	<1	78	< 0.005
Hexachlorocyclopentadiene	<1	100	< 0.005
Hexachloroethane	<1	77	< 0.005
Pentachlorobenzene	<1	106	< 0.005
Polychlorinated Biphenyls			
Aroclor-1221	<1	-	< 0.01
Aroclor-1232	<1	-	< 0.01
Aroclor-1242	<1	105	< 0.01
Aroclor-1248	<1	-	< 0.01
Aroclor-1254	<1	-	< 0.01
Total PCB	<1	105	< 0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	1SB20-A	Method blank
Lab Number	BATCH	06-JL00326	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	Jul 3, 2006	Jul 3, 2006	Jul 3, 2006
Analysis Type	Units	% Recovery	mg/L
Polychlorinated Biphenyls			
Dibutylchlorendate (surr.)	-	62	150
Tetrachloro-m-xylene (surr.)	-	85	120
Phenols			
2-Chlorophenol	-	-	< 0.01
2-Methylphenol (o-Cresol)	-	-	< 0.01
2-Nitrophenol	-	-	< 0.05
2.4-Dichlorophenol	-	-	< 0.01
2.4-Dimethylphenol	-	-	< 0.01
2.4.6-Trichlorophenol	-	-	< 0.01
2.6-Dichlorophenol	-	-	< 0.01
3&4-Methylphenol (m&p-Cresol)	-	-	< 0.02
4-Chloro-3-methylphenol	-	-	< 0.01
Pentachlorophenol	-	-	< 0.05
Phenol	-	-	< 0.01
Phenol-d6 (surr.)	-	-	91
Aroclor-1016	<1	95	< 0.01
Aroclor-1260	<1	116	< 0.01

COMMENTS:

Chain of Custody

COC No: S0160
Page 1 of 1

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: As	Cd	Cr	Hg	Ni	Pb	Zn	PAH	pH		VIC EPA SCREEN
1SB15-A			3-7-06	Soil	1 Jar	X	X	X	X	X	X	X	X	X		
1SB16-A			3-7-06	Soil	1 Jar	X	X	X	X	X	X	X	X	X		
1SB17-A			3-7-06	Soil	1 Jar	X	X	X	X	X	X	X	X	X		
1SB18-A			3-7-06	Soil	1 Jar	X	X	X	X	X	X	X	X	X		
1SB19-A			3-7-06	Soil	1 Jar	X	X	X	X	X	X	X	X	X		
1SB20-A			3-7-06	Soil	1 Jar									X		X

COMMENTS:	**24 HOUR TURNAROUND REQUIRED FOR ALL SAMPLES** Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT Courier	DATE/TIME: 4:30pm 3/7/06	PREPARED BY (signature)
RECEIVED BY: (signature) C Mills.	DATE/TIME: 4/7/06	CHECKED BY: (signature) 195817

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA_05 [illegible]\Templates\COCS0160.doc

XI:21653

Your Ref: **Bus Station Redevelopment**

30 May 2006

Tierra Environment Pty Ltd
71 Belair Road
KINGSWOOD SA 5062

Date Received: 23/05/2006

Date Sampled: 22/05/2006

Attention: **Mr. Daryl Burrows**

Certificate of Analysis

WSL Report Number: **945674**

The sample(s) referred to in this report were analysed by the following method(s):

Analyte(s)	Method
Cyanide	APHA 4120 B
Fluoride	WSL 077
Metals	WSL-032
OCs	WSL8000
PAHs	WSL8000
PCBs	WSL8000
pH	APHA 4500 H B
Total Phenolics	APHA 4120 B
TPH	WSL030
Volatiles	WSL3810A

Results pertain to samples as received

Details of this report were e-mailed on: 30/05/2006

Yours faithfully
WSL Consultants Pty Ltd

Victor Willms
Manager Chemistry Services

This laboratory is accredited by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its scope of accreditation. This document shall not be reproduced except in full. Accreditation No 1205

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au Web Page: www.ecowise.com.au

A NATA Accredited Laboratory
An Approved EPA Auditor & Analyst

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 30-May-2006
Ecowise Report No: 945674
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	pH (pH Units)	As	Cd	Co	Cr	Cu	Hg	Mo	Ni	Pb	Se	Sn	Zn
945674	23-May-2006	1SB1-Y	9.1	<5	<0.2	<5	13	8	<0.05	<5	8	6	<5	<5	8

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 30-May-2006
Ecowise Report No: 945674
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	TPH C6-C9	TPH C10-C14	TPH C15-C28	TPH C29-C36	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES	STYRENE	CUMENE	1 2 4-TRI-METHYL BENZENE	TOTAL PHENOLS	SOLUBLE FLUORIDE	CYANIDE
945674	23-May-2006	1SB1-Y	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<5	<5

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 30-May-2006
Ecowise Report No: 945674
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	NAP	ACY	ACE	FLU	PHE	ANT	FLA	PYR	BAA	CHR	BBF	BKF	BAP	DBA	BGP	IPY	TOTAL* PAH
945674	23-May-2006	1SB1-Y	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ND

ND = None detected at a concentration greater than the reporting limits specified above.

**** Total PAH's refers only to the sum of the positive individual PAH's tested above.***

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 30-May-2006
Ecowise Report No: 945674
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	HCB	a-BHC	LINDANE	HEPTACHLOR	ALDRIN	b-BHC	d-BHC	HEPTACHLOR-EPOXIDE	DDE	DIELDRIN
945674	23-May-2006	1SB1-Y	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 30-May-2006
Ecowise Report No: 945674
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	DDD	DDT	ENDRIN	METHOXYCHLOR	CHLORDANE	a-ENDO-SULPHAN	b-ENDO-SULPHAN	ENDOSULPHAN SULPHATE	ENDRIN ALDEHYDE
945674	23-May-2006	1SB1-Y	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 30-May-2006
Ecowise Report No: 945674
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	AROCLOR® 1016	AROCLOR® 1221	AROCLOR® 1232	AROCLOR® 1242	AROCLOR® 1248	AROCLOR® 1254	AROCLOR® 1260	TOTAL* PCBs
945674	23-May-2006	1SB1-Y	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ND

ND = None detected at a concentration greater than the reporting limit specified above.

**** Total PCB's refers only to the sum of the positive individual Aroclors® tested above.***

A blank space indicates no test performed

Results expressed as mg/kg dry weight

APPENDIX 6 – VALIDATION OF GRAVEL FILL

Central West Precinct
Stockpile Validation
Bus Station Site - Stage 1

Prepared for
Hansen Yuncken Pty Ltd

20 September 2006

Consulting Engineers and Scientists

Tierra Environment Pty. Ltd.
ABN: 84 111 615 680

71 Belair Road,
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515
general@tierra.com.au

Central West Precinct
Stockpile Validation
Bus Station Site - Stage 1

Prepared for
Hansen Yuncken Pty Ltd

20 September 2006

Document Status	Name	Signature	Date
Approved for Issue ☐	Prepared by Daryl Burrows		20/09/2006
Revision A	Reviewed by Elmar Schaffeler		20/09/2006

1 INTRODUCTION

1.1 General

This Stockpile Validation Report has been prepared by Tierra Environment for Hansen Yuncken Pty Ltd (HY) as part of the Central West Precinct Bus Station Remediation – Stage 1. It contains validation results for four stockpiles of material removed from the site during remediation works. In addition it contains validation results for a stockpile of natural material which was tested by Tierra Environment for PD Excavations Pty Ltd for off site disposal. Remediation and validation measures for the site are based on the following documents:

- Remediation Action Plan (Tierra Environment, 30 September 2005)
- Validation Plan (Tierra Environment, 7 December 2005)
- Materials Tracking Plan ((Tierra Environment, 7 December 2005)

The remediation works were based on the excavation and on site reuse or off site disposal of selected materials.

Stockpile testing was undertaken on materials once a stockpile was completed (no more material was to be added to it), the stockpile was clearly identified with a number and Tierra was provided with an approximate stockpile volume.

1.2 Summary of remediation activities

The following activities were undertaken to achieve the remediation goals for the areas requiring the removal of all fill materials:

- Excavation of fill materials in fill reuse areas (this included the removal of at least 100mm of natural materials at the base of the fill layer) and stockpiling elsewhere on site on top of fill materials
- Inspection of the base of excavated areas by an environmental engineer/scientist to ensure all fill was removed
- Excavation of natural soils in fill reuse areas to a sufficient depth to contain all reused materials and the 1m capping material
- Survey of the base and horizontal extent of the Reuse Area by a licensed surveyor engaged by the contractor
- Filling of Reuse Area by the progressive placement of fill materials in layers followed by compaction to a specified dry density suitable for geotechnical purposes to support future structures
- Survey of the surface of the reuse materials by a licensed surveyor
- Placement of a synthetic identification/marking layer over top of reused material
- Placement of clay materials over the marker layer and compaction to a specified dry density suitable for geotechnical purposes to support future structures
- Completion of filling in the Reuse Area by placement of approximately 200mm of subgrade (imported quarry rubble)
- Testing of stockpiled materials for off site disposal or reuse on site
- Removal of surplus materials to off site locations

2 GENERAL VALIDATION TESTING REQUIREMENTS

2.1 Need for validation testing

Previous investigations revealed that fill materials contained metals and PAH. The Environmental Auditor requested that validation testing be undertaken on material reused on site or transported off site.

2.2 Proposed land use

The Adelaide City Council advised that after remediation the site would need to be suitable for commercial and industrial land uses, or open space land use.

2.3 Target criteria

The Environmental Auditor provided Clean Up Goals, which are listed in summary results tables in Appendix C. In addition the stockpile results were compared with the National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM) Health Investigation Levels (HIL) A and D and Ecological Investigation Level (EIL) criteria, and Southern Waste Depot disposal criteria.

2.4 General sampling standards

Sampling was required to be performed generally in accordance with Australian Standards AS4482.1-1997 "Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 1: Non-volatile and semi-volatile compounds" and AS4482.2-1999 "Guide to the sampling and investigation of potentially contaminated soil, Part 2: Volatile substances".

2.5 Sampling density

The sampling density for stockpiles was determined to be one sample per 100m^3, in consultation with the Environmental Auditor.

2.6 Sampling strategy

A systematic sampling pattern was used, consisting of evenly distributed sampling locations around the stockpile. All material collected from sampling locations was collected from a minimum of 500mm beneath the surface. Sub surface samples were collected to minimise the effect of degradation due to exposure.

2.7 Sampling parameters

Validation testing was undertaken for analytes of concern at the site based on previous investigations (metals, pH, PAH, TPH, MAH, OCP).

In addition approximately 20% of all samples were analysed for VIC EPA screen or SA EPA Disposal screen.

2.8 Compliance requirements

The validation results were required to comply with the target criteria listed on summary results sheets in Appendix C.

The assessment using the Environmental Auditor's Clean Up Goals was undertaken using the statistical analyses stipulated in the National Environment Protection (Assessment of Site Contamination) Measure 1999 – Schedule B (7A), Notes to Table 11-A, and using the 95%UCL of the arithmetic mean of the results.

The assessment using NEPM criteria and waste disposal criteria was undertaken using the 95%UCL of the arithmetic mean of the results.

3 SCOPE OF WORK

3.1 Soil sampling

Soil sampling from stockpiles was undertaken between 17 May 2006 and 27 July 2006 and involved the following activities:

- **Stockpile monitoring.** Upon receipt of the volume of the stockpile to be tested Tierra checked the stockpile volume, sketched its shape and took photographs from all angles to assess on an ongoing basis (until placement or removal from site) if material was added to a sampled stockpile.
- **Sampling set out.** Sampling locations were evenly distributed around the stockpile and included locations on top of the stockpile for larger ones. A plan showing sampling locations is presented in Appendix A. To minimise bias and generate data representative of the material as a whole all sampling locations were predetermined prior to inspecting the material.
- **Sampling location establishment.** Each stockpile was allocated a unique number (1 to 5), which was recorded in the sampling book along with the corresponding samples collected from that stockpile. Each sampling location was allocated a unique number, i.e. 1 to 55 for fill stockpile samples and 1 to 3 for natural stockpile samples, which was recorded in the sampling book.
- **Soil logging.** Materials collected in sample jars for submission to the laboratory were logged. Specific characteristics of the materials, such as moisture content, colour and particle size were observed and noted on the sample register, which is provided in Appendix B.
- **Sampling preparation**. Sample jars were labelled prior to commencing site works. Sample jars were labelled as follows:
  - 1STF##-& or 1STN##-&
  - '1' is a common number for all samples collected during the works and represents the first stage of the bus station redevelopment.
  - 'STF' stands for stockpile testing - fill.
  - 'STN' stands for stockpile testing - natural.
  - '##' denotes the sampling number
  - '&' is the sample designation and is either A, X or Y where A is used for the primary sample, X is used for the intra laboratory duplicate and Y is used for the inter laboratory duplicate.
- **Sampling.** Approximately 500mm of material from each sampling location was removed by hand to provide access to fresh material. Samples were collected by hand from the surface of shallow excavations into the sides of the stockpiles. Disposable gloves were used for each sample to avoid cross-contamination. A sampling bowl and a trowel were used for stockpile 1 only and this equipment was washed with water and Decon 90 between sampling locations. Sample jars were kept in an esky with ice until transportation to the laboratory.
- **Quality sampling**. Quality sampling was undertaken at approximately the rates indicated below:

Quality Sampling	Rate
Intra Laboratory Duplicate	1 per 20 regular samples
Inter Laboratory Duplicate	1 per 20 regular samples
Rinsate Sample	1*

Note to table
* A rinsate sample collected from distilled water washed over a sampling bowl and trowel was collected for stockpile 1 as this equipment was used for sampling. Sampling equipment was not used for other stockpiles.

The procedure for collecting quality samples was the same as for normal samples, but portions of the material were sequentially added to each jar to ensure the samples were as analogous as possible.

- **On-site screening**. When a sample was collected from a sampling location some of the same material was collected separately from any laboratory samples and screened for volatile organic carbon using a MiniRae 2000 Photo-Ionisation Detector (PID) which was calibrated prior to use. Samples were placed in sealed plastic bags and stored in the shade prior to screening. After approximately three to five minutes of equilibration or at the completion of a sampling event, the bagged materials were tested using the PID. The readings are presented in the sample register provided in Appendix B.
- **Tracking of samples**. Tracking of samples was undertaken using Chain of Custody (COC) documentation. COCs were sent to the laboratory with instructions of required analyses. The laboratory checked the condition and number of samples, and signed and returned by fax a copy of the COC to confirm receipt of samples.

3.2 Analytical testing

The following scope of analytical testing was undertaken:

- Analysis of all samples for pH, metals and PAH
- Analysis of 20% of samples for Vic EPA Screen
- PID field analysis of material for volatile organic carbon
- Collection and analysis of intra laboratory and inter laboratory duplicate samples.

Analyses of soil samples were conducted by MGT Environmental Consulting Pty Ltd. The laboratory holds National Association of Testing Authorities (NATA) registration for the parameters listed below:

Parameter	Analytical Method	Limits of Reporting (mg/kg)	Number of Samples Tested
pH (unitless)	APHA Standard Methods 19th Edition 1995	0.1	34+ (2 + 4) quality
% Moisture	ANZECC Method 102	0.1	54 + (3 + 0) quality
Metals Screen	US EPA 6010B (ICP), USEPA 6020, 7470/1 (CVAA)	Various	39+ (3 + 4) quality
MAH	US EPA SW846 Methods 8260B & MGT Method 350A	0.05	24 + (3 + 4) quality
PAH	US EPA SW846 Method 8270C(GC/MS)	0.1	54+ (3 + 4) quality
TRH	MGT Method 100A-GC	Various (20-100)	24 + (3 + 4) quality
Phenols & Cresols	USEPA SW846 8270C	0.1, 0.2 or 0.5	10 + (3 + 4) quality
Cyanide	US EPA SW846 Method 9010B	5	10 + (3 + 4) quality
Chlorinated Hydrocarbons	US EPA SW846 Method 8121B	0.05 or 0.2	10 + (3 + 0) quality
Organochlorine Pesticides	US EPA SW846 Method 8081A	0.05 or 0.1	35 + (3 + 4) quality
Organophosphorus Pesticides	US EPA SW846 Method 8141A	0.2	10 + (3 + 4) quality
Polychlorinated Biphenyls	US EPA SW846 Method 8082	0.1	10 + (3 + 4) quality

Note – Units are in mg/kg unless otherwise stated.
Quality in the table (within brackets) refers to intra and inter laboratory duplicates respectively. Inter laboratory duplicates were undertaken by WSL Ecowise (NATA registered). A rinsate sample was also collected as part of the quality assessment and the sample was analysed for the Vic EPA Screen. Rinsate results are presented with other quality in Appendix D.

4 QUALITY

4.1 General

Tierra Environment conducts investigations in accordance with the principles of quality assurance and quality control (QA/QC). The 'National Environment Protection (Assessment of Site Contamination) Measure, 1999', states that a quality assurance system is 'actions, procedures, checks and decisions to ensure representativeness and integrity of samples and accuracy and reliability of analysis results'. It goes on to say that the system involves 'selection of appropriate sampling and presentation methods, documentation and sample storage, cleaning of tools before sampling and between samples, cleaning of containers, maintenance of sample environment to minimise sample contamination and analyte losses, delivery to the laboratory in good condition and within timeframes required for the particular analytes'.

The Tierra QA/QC principles include:

- Use of established procedures and suitably qualified field personnel for environmental sampling
- Documentation of chain-of-custody and sample handling and storage
- Use of NATA registered laboratories
- Use of field duplicates samples and trip blank samples

Quality of project outputs is maintained by ensuring:

- All staff are appropriately trained
- Safety standards are defined and implemented
- Good housekeeping practices are adopted during all phases of the project
- Complete records of fieldwork, samples and data are maintained

Specific quality control procedures conducted for this project include:

- The use of appropriate sample collection and handling procedures
- The use of appropriately skilled and experienced personnel
- The application of decontamination procedures where appropriate to minimise cross contamination
- The extraction and analysis within appropriate handling times
- The use of an independent, NATA accredited laboratory for analysis
- The collection and analysis of blind duplicates, split duplicates, and internal laboratory duplicates and matrix spike/matrix spike duplicates

4.2 Field QA/QC procedures

The laboratory supplied clean jars for soil samples. The jars were labelled prior to field work based on the predetermined sampling program. On site the jars were filled with soil and stored in an esky with ice. At the end of each day samples were stored in a refrigerator if not sent to the laboratory. During transportation to the laboratory the samples were packed in an esky with ice and packaging to avoid damage.

Blind (intra-laboratory) samples, split (inter-laboratory) duplicate samples and rinsate samples were collected at rates specified above.

4.3 Laboratory QA/QC procedures

During the analysis of samples, the analytical laboratories conducted internal QA/QC procedures including the analysis of laboratory duplicates, laboratory spiked samples and method blank samples. All percentage recoveries for laboratory spiked sample analyses were within the acceptance criteria of 60-140%. Similarly all results of method blank samples are of an acceptable quality. Spiked sample and method blank sample results are provided in Appendix E.

4.4 Duplicates

Duplicate samples were collected to provide an indication of the reliability of the sampling and analysis process. Duplicate soil samples were analysed for the full range of parameters. Duplicate soil sample results are presented in final laboratory reports in Appendix E and in the quality assessment data provided in Appendix D.

Relative Percentage Differences (RPDs) for intra-laboratory and inter-laboratory duplicate samples were calculated and are presented in Appendix D. It was noted that several elevated RPDs were observed for samples where results were relatively low and close to the limits of laboratory reporting, or where limits of reporting differed between laboratories. It was also noted that some RPDs were high for sample results not near the limits of reporting. However this is not uncommon in heterogeneous soil matrices.

4.5 QA/QC discussion

Quality assurance and quality control was conducted based upon Tierra Environment's environmental investigation principles to ensure that data of known quality is reported.

The required scope of sample numbers, analytical testing, and quality testing was achieved

Specific aspects of the project used to maintain QA/QC were:

- Field Procedures – The investigations, including the collection of duplicates, is of a standard that provides confidence in the quality of the samples collected.
- Analytical Procedures – The laboratory's internal QA/QC results indicate that analytical information provided by the laboratory is reliable.
- Intra Laboratory Duplicate Samples – The obtained laboratory results are considered representative of the materials subjected to testing. In addition the primary laboratory results proved to be reliable.
- Inter Laboratory Duplicate Samples – The results indicate that there was no bias in the analysis as a consequence of the selection of the laboratory

Based on the QA/QC information available for this project, the results are of an appropriate standard and can be used as part of a basis of interpretation of site conditions.

5 RESULTS

5.1 Assessment criteria

The laboratory results for soil were assessed against the Auditor's Clean Up Goals as presented in Appendix C with the summary results. In addition the results were compared with NEPM A, D and EIL criteria and Southern Waste Depot disposal criteria.

5.1.1 Statistics

Statistical calculations such as the mean, standard deviation and 95% upper confidence level of the arithmetic mean (95%UCL) were undertaken for each analyte detected at concentrations above the limit of reporting. The confidence statistic provides a measure of the uncertainty of the estimate of the population proportion, i.e. there is a 95% confidence that the true unknown mean of the population portion is in the computed interval. The standard deviation and 95%UCL were only calculated where there were three or more samples in the data set.

The 95%UCLs were calculated based on the assumption of normal data distribution, which was considered sufficient given that the 95%UCL results were not close to the Auditor's Clean Up Goals. The mean and 95%UCL of sample sets was assessed against the criteria described above.

For statistical purposes, all values below the laboratories' limits of reporting (LOR) were substituted with a value equal to 50% of the LOR.

5.2 Results and discussion

5.2.1 Soil description and PID survey

Soil descriptions are provided on the sample register (refer Appendix B). Soil samples were screened for volatile organic carbon with a PID calibrated prior to commencing works. All PID readings were less than 4.4ppm.

5.2.2 Material volumes

The following volumes were estimated for each stockpile:

Stockpile no	Approx. volume (m^3)	Samples	Density	Utilisation
1	700	10	1 per $70m^3$	On site / Off site
2	1200	12	1 per $100m^3$	On site / Off site
3	1250	12	1 per $104m^3$	On site / Off site
4	50	2	1 per $25m^3$	Off site
5	3600	3	1 per $1,200m^3$	Off site

5.2.3 pH

There was no Auditor's Clean Up Goal for pH. All sample results were between 7.3 and 9.5. This is considered consistent with natural clays and calcretes in the area.

5.2.4 Metals

The Auditor's Clean Up Goals for metals are presented in the summary results in Appendix C. All individual sample results and means and 95% UCLs for each metal data set meet the Auditor's criteria.

The results were also compared with the NEPM A, D and EIL criteria and Southern Waste Depot disposal criteria presented in Appendix C and the results comply with these criteria. It is noted that results for vanadium were observed to be close to the NEPM EIL level of 50mg/kg in natural soils excavated from the Reuse Area, however these concentrations are considered to be representative of levels occurring in some natural soils in Adelaide.

5.2.5 Total PAH

The most stringent Auditor's Clean Up Goal for total PAH was used for the assessment of results, i.e. those applying to beneath pavements. All sample results comply with the criteria.

The results were also compared with the NEPM A, D and EIL criteria and Southern Waste Depot disposal criteria presented in Appendix C and the results for stockpiles 1, 3, 4 and 5 comply with these criteria. Two individual samples from stockpile 2 exceeded (19.15 and 5.05 mg/kg total PAH) the Southern Waste Depot waste fill disposal criteria (5mg/kg total PAH). Based on these findings an additional 15 samples were collected and analysed for PAH to further assess the material quality. The highest total PAH results of these samples was 3.25 and 1.1 mg/kg. The statistical analysis of the total PAH results comply with the Southern Waste Depot waste fill disposal criteria. Ultimately the material was utilised on site and all samples complied with the Auditor's most stringent Clean Up Goal for total PAH (164mg/kg).

5.2.6 B(a)P

The most stringent Auditor's Clean Up Goal for benzo(a)pyrene was used for the assessment of results, i.e. those applying to beneath pavements. All sample results comply with the criteria.

The results were also compared with the NEPM A, D and EIL criteria and Southern Waste Depot disposal criteria presented in Appendix C. The results for stockpiles 1, 3, 4 and 5 comply with these criteria. One individual samples from stockpile 2 exceeded (1.4 mg/kg B(a)P) the Southern Waste Depot waste fill disposal criteria (1mg/kg B(a)P). Based on these findings an additional 15 samples were collected and analysed for B(a)P to further assess the material quality. From these samples only one sample was found to be higher than the limits of reporting and had a B(a)P concentration of 0.2mg/kg. The statistical analysis of the total B(a)P results comply with the Southern Waste Depot waste fill disposal criteria. Ultimately the material was utilised on site and all samples complied with the Auditor's most stringent Clean Up Goal for B(a)P (8mg/kg).

5.2.7 OCP

OCPs (Aldrin and Chlordane) were identified in stockpile 3 at concentrations below NEPM A, D criteria and Southern Waste Depot disposal criteria. There were no Auditor's Clean Up Goals for OCPs. All other OCP results from other stockpiles were less than the limits of reporting.

5.2.8 Other analytes

The results of all other analytes are less than the limits of reporting. As all limits of reporting are below the Auditor's, NEPM and Southern Waste Depot disposal criteria, the results of all other analytes comply with the relevant criteria.

6 CONCLUSIONS

In summary, the following conclusions are provided:

Stockpile material appearance	Stockpile materials were generally quarry products or natural clays.
Sampling density	The sampling density was agreed with the Environmental Auditor and was complied with. The investigations provided sufficient sampling to provide reasonable confidence in the average quality of material from stockpiles.
Data quality	QA/QC standards were agreed with the Environmental Auditor and were considered acceptable.
Results of metals and PAH in stockpiles	The tested materials meet the Auditor's criteria, NEPM HIL A and D and Southern Waste Depot's waste fill, intermediate landfill cover and low level contaminated waste criteria. Vanadium levels in natural materials were observed to be close to the NEPM EIL criterion.
Concentration of other chemicals within stockpiles	All individual samples analysed for other chemicals and their statistics meet the Auditor's criteria, NEPM HIL A and D, NEPM EIL and Southern Waste Depot's waste fill, intermediate landfill cover and low level contaminated waste criteria

Based on the results presented in this report it appears that stockpile materials meet the Auditor's criteria and NEPM A and D and EIL criteria and are suitable for reuse on site, and meet Southern Waste disposal criteria and are suitable for off site disposal.

7 LIMITATIONS OF USE

Site contamination is generally a product of man-made processes and therefore exhibits characteristics and properties that vary from place to place and can change with time. Contamination assessments involve gathering and assimilating limited facts about these characteristics and properties in order to better understand or predict the status of contamination on a particular site under certain conditions.

The facts reported and utilised in this document may have been obtained by inspection, excavation, probing, sampling, testing, and other means of investigation or from the client. They are directly relevant only to the ground at the place where and time when an investigation was carried out.

Any interpretation or recommendation given in this report is based on judgment and experience and not on greater knowledge of the facts than the sources of information indicate. The interpretations and recommendations are opinions provided for the sole use by the Client identified on the cover sheet and in accordance with a specific brief.

Tierra does not represent that the information or interpretation contained in this document addresses completely existing features such as surface and subsurface contamination, groundwater and geotechnical conditions or ground or contamination behavior on the subject site.

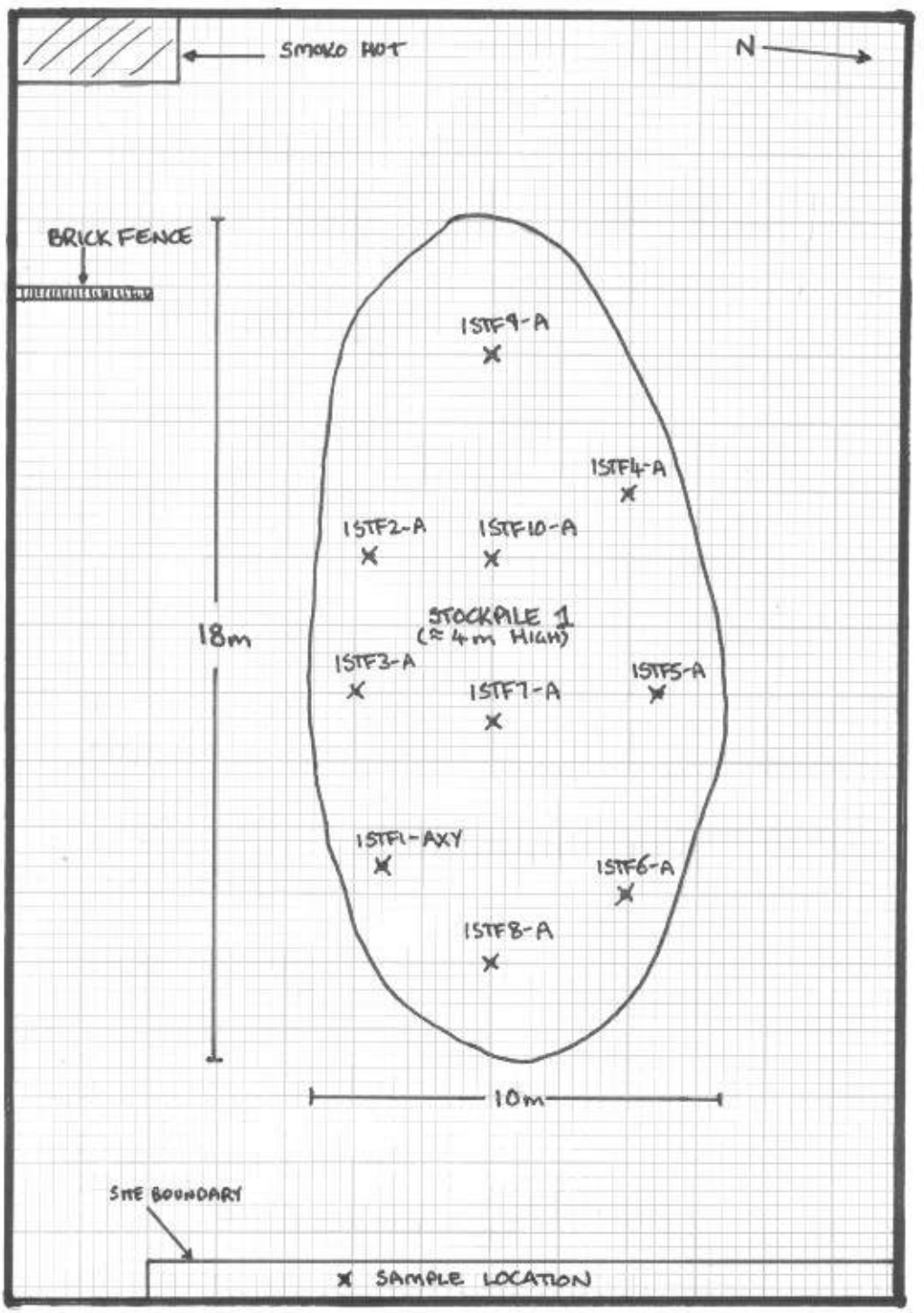
The responsibility of Tierra Environment Pty Ltd is solely to its Client. It is not intended that this document be relied upon by any third party, other than the Environment Protection Authority or an Environmental Auditor (engaged by the Client) for the purpose of a contaminated land audit. Tierra does not undertake any duty or accept any responsibility to any other parties who may rely upon this document

APPENDIX A – SITE PLANS

Project:	Bus Station Redevelopment	Project No:	AAA 05 002 02
Principal:	Adelaide City Council	Date:	17/05/2006
Contractor:	P.D Excavations	Plan No.	**BS0003**
Description:	Stockpile 1 Sample locations		

Tierra Environment Pty Ltd
ABN: 84 111 615 680

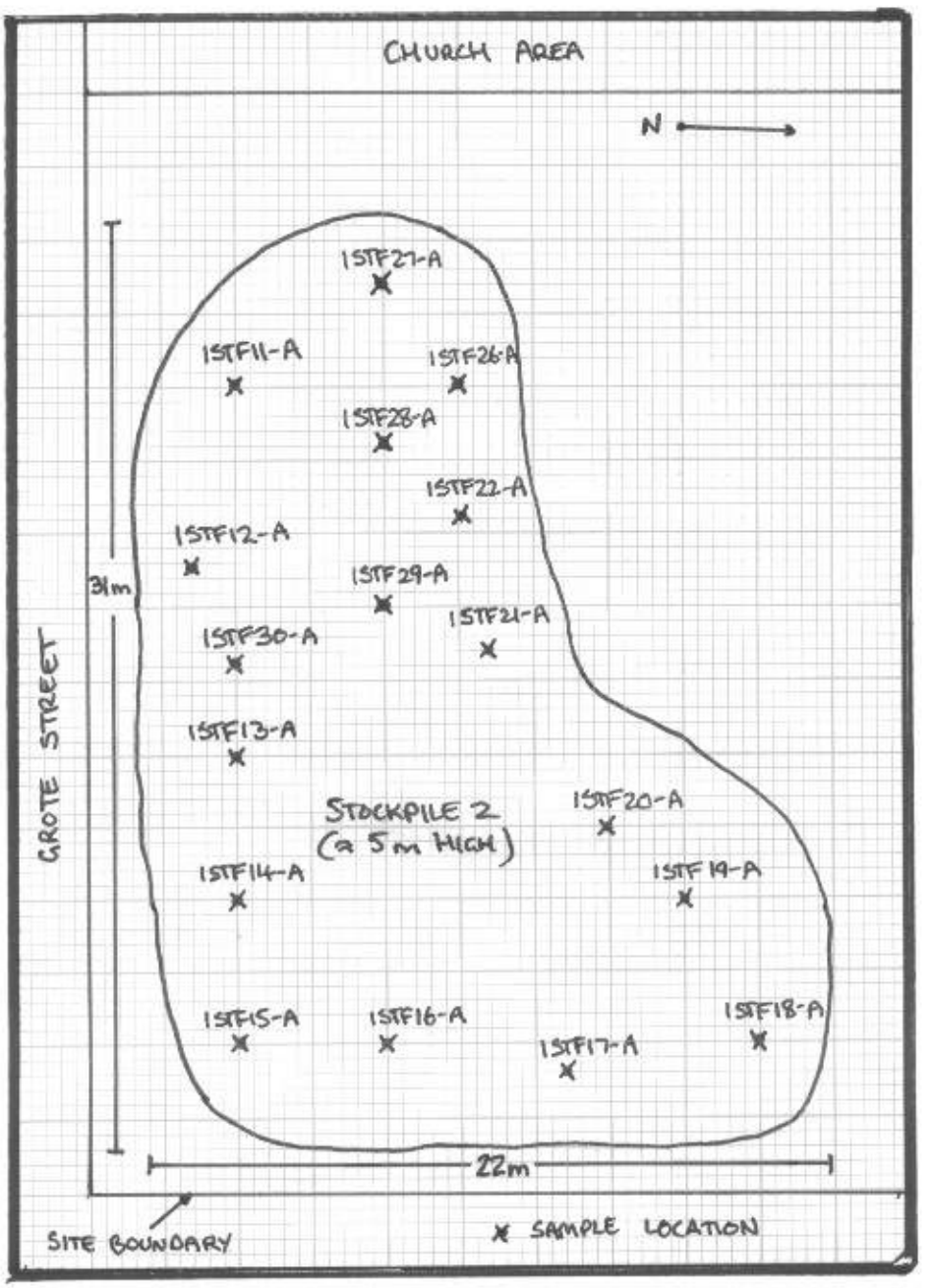
71 Belair Road,
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515
general@tierra.com.au



Project:	Bus Station Redevelopment	Project No:	AAA 05 002 02
Principal:	Adelaide City Council	Date:	13/06/2006
Contractor:	P.D Excavations	Plan No.	**BS0004**
Description:	Stockpile 2 Sample locations		

Tierra Environment Pty Ltd
ABN: 84 111 615 680

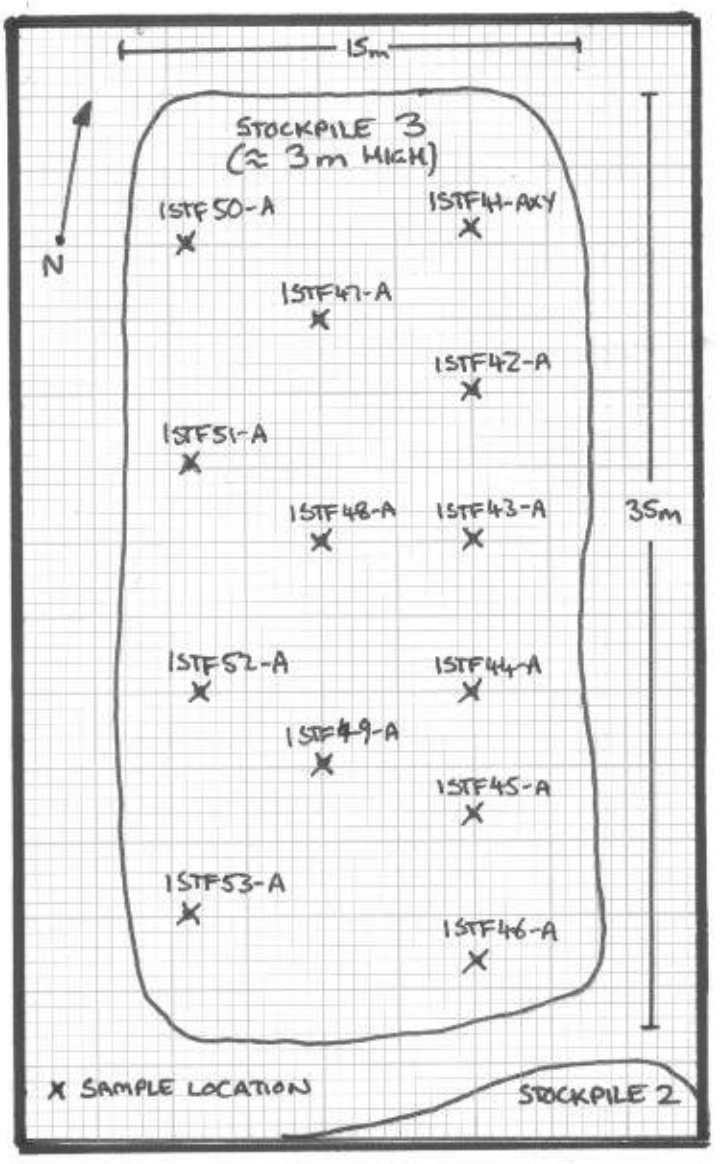
71 Belair Road,
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515
general@tierra.com.au



Project:	Bus Station Redevelopment	Project No:	AAA 05 002 02
Principal:	Adelaide City Council	Date:	19/06/2006
Contractor:	P.D Excavations	Plan No.	**BS0005**
Description:	Stockpile 3 Sample locations		

Tierra Environment Pty Ltd
ABN: 84 111 615 680

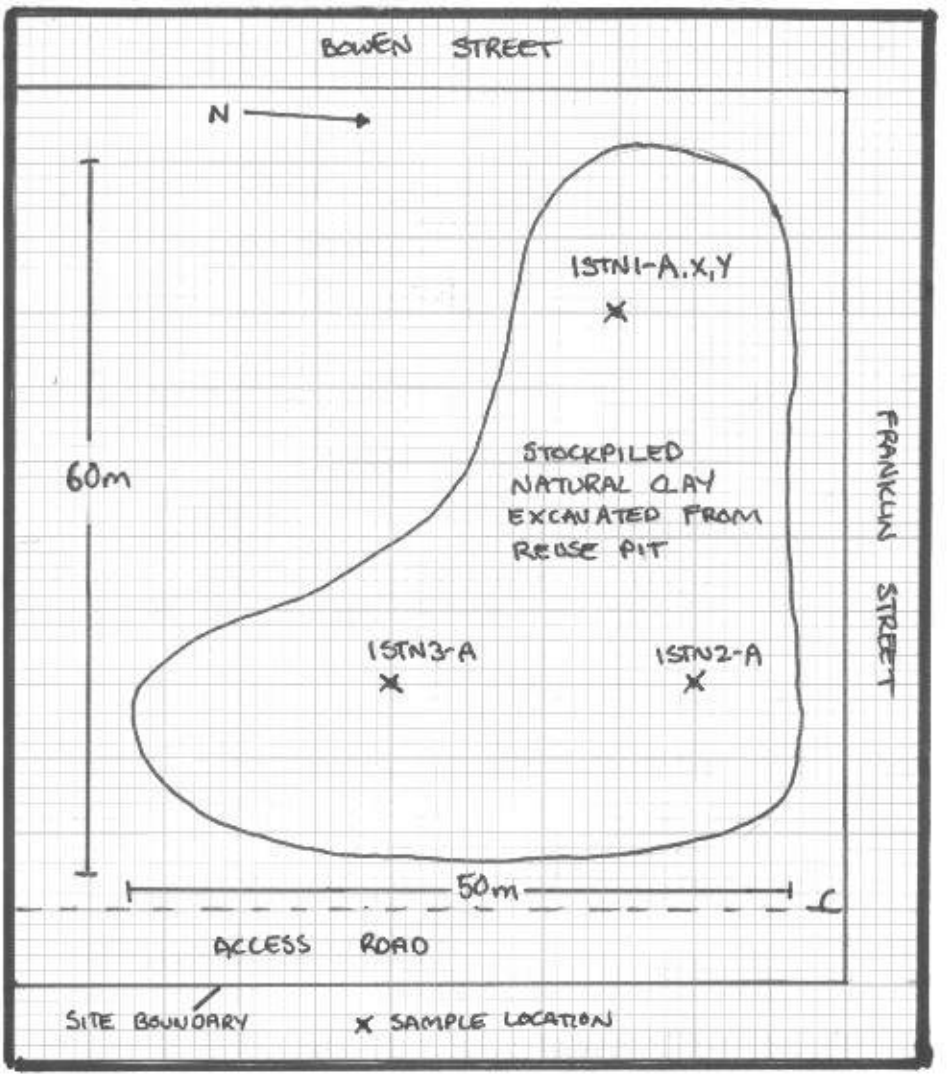
71 Belair Road,
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515
general@tierra.com.au



Project:	Bus Station Redevelopment	Project No:	AAA 05 002 02
Principal:	Adelaide City Council	Date:	3/07/2006
Contractor:	P.D Excavations	Plan No.	**BS0006**
Description:	Stockpiled natural materials sample locations		

Tierra Environment Pty Ltd
ABN: 84 111 615 680

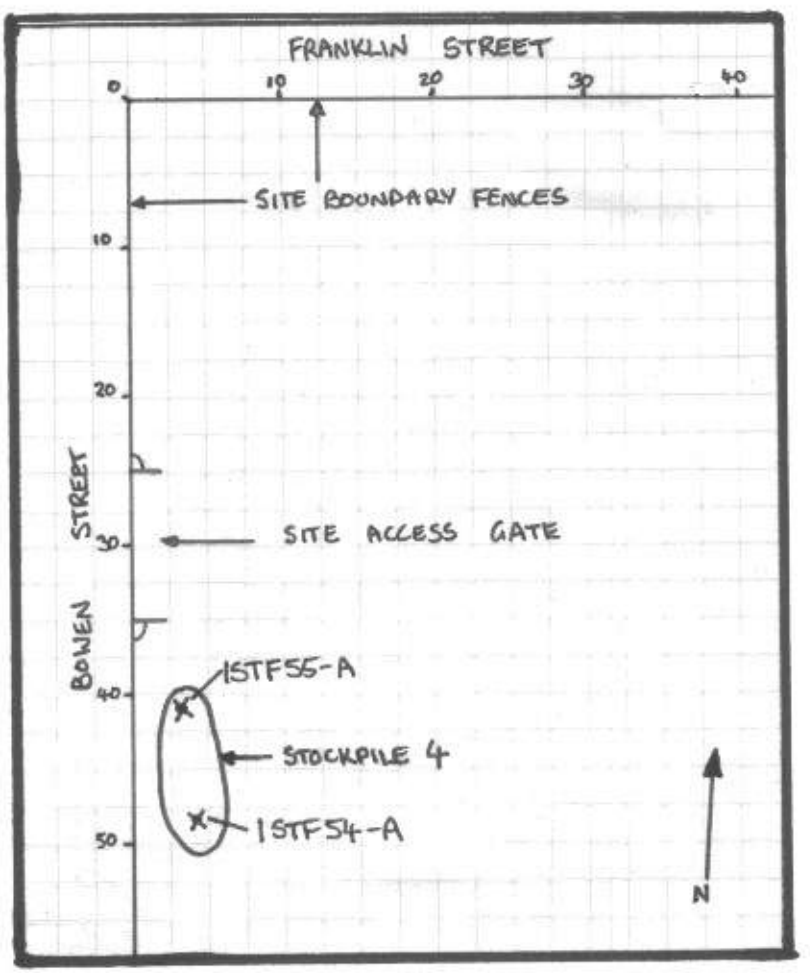
71 Belair Road,
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515
general@tierra.com.au



Project:	Bus Station Redevelopment	Project No:	AAA 05 002 02
Principal:	Adelaide City Council	Date:	27/07/2006
Contractor:	P.D Excavations	Plan No.	**BS0007**
Description:	Stockpile 4 sample locations		

Tierra Environment Pty Ltd
ABN: 84 111 615 680

71 Belair Road,
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515
general@tierra.com.au



APPENDIX B – ENVIRONMENTAL SAMPLE REGISTER

Date	Sample Number	Duplicate Samples	Stage	Stockpile	Plan #:	Location	COC#	PID	Primary Laboratory	Secondary Laboratory	Analyses	Description of Material	Comments	Lab Reports	Complies
17/05/2005	1STF1-A	X & Y	1	1	BS0003	refer to plan	S0082 & S0083	1.2	MGT	WSL	VIC EPA SCREEN and pH (24hr turnaround)	Sandy GRAVEL, yellow tan, slightly moist, sub angular gravel to 80mm, sand medium grain	Quarry material	194179 & 944081	Yes
17/05/2005	1STF2-A	Nil	1	1	BS0003	refer to plan	S0082	1.8	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH, TPH, MAH, OCP (24hr turnaround)	Sandy GRAVEL, yellow tan, slightly moist, sub angular gravel to 80mm, sand medium grain	Quarry material	194179	Yes
17/05/2005	1STF3-A	Nil	1	1	BS0003	refer to plan	S0082	1.6	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH, TPH, MAH, OCP (24hr turnaround)	Sandy GRAVEL, yellow tan, slightly moist, sub angular gravel to 80mm, sand medium grain	Quarry material	194179	Yes
17/05/2005	1STF4-A	Nil	1	1	BS0003	refer to plan	S0082	1.8	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH, TPH, MAH, OCP (24hr turnaround)	Sandy GRAVEL, yellow tan, slightly moist, sub angular gravel to 80mm, sand medium grain	Quarry material	194179	Yes
17/05/2005	1STF5-A	Nil	1	1	BS0003	refer to plan	S0082	1.2	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH, TPH, MAH, OCP (24hr turnaround)	Sandy GRAVEL, yellow tan, slightly moist, sub angular gravel to 80mm, sand medium grain	Quarry material	194179	Yes
17/05/2005	1STF6-A	Nil	1	1	BS0003	refer to plan	S0082	1.7	MGT	NA	VIC EPA SCREEN and pH (24hr turnaround)	Sandy GRAVEL, yellow tan, slightly moist, sub angular gravel to 80mm, sand medium grain	Quarry material	194179	Yes
17/05/2005	1STF7-A	Nil	1	1	BS0003	refer to plan	S0082	2.3	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH, TPH, MAH, OCP (24hr turnaround)	Sandy GRAVEL, yellow tan, slightly moist, sub angular gravel to 80mm, sand medium grain	Quarry material	194179	Yes
17/05/2005	1STF8-A	Nil	1	1	BS0003	refer to plan	S0082	2	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH, TPH, MAH, OCP (24hr turnaround)	Sandy GRAVEL, yellow tan, slightly moist, sub angular gravel to 80mm, sand medium grain	Quarry material	194179	Yes
17/05/2005	1STF9-A	Nil	1	1	BS0003	refer to plan	S0082	2	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH, TPH, MAH, OCP (24hr turnaround)	Sandy GRAVEL, yellow tan, slightly moist, sub angular gravel to 80mm, sand medium grain	Quarry material	194179	Yes
17/05/2005	1STF10-A	Nil	1	1	BS0003	refer to plan	S0082	1.2	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH, TPH, MAH, OCP (24hr turnaround)	Sandy GRAVEL, yellow tan, slightly moist, sub angular gravel to 80mm, sand medium grain	Quarry material	194179	Yes
24/05/2006	1STF11-A	Nil	1	2	BS0004	refer to plan	S0098	1.7	MGT	NA	VIC EPA SCREEN and pH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	194406	Yes
24/05/2006	1STF12-A	Nil	1	2	BS0004	refer to plan	S0098	1.6	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	194406	Yes
24/05/2006	1STF13-A	Nil	1	2	BS0004	refer to plan	S0098	1.6	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH, TPH, MAH, OCP (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	194406	No
24/05/2006	1STF14-A	Nil	1	2	BS0004	refer to plan	S0098	1.5	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	194406	Yes
24/05/2006	1STF15-A	Nil	1	2	BS0004	refer to plan	S0098	1.5	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH, TPH, MAH, OCP (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	194406	Yes
24/05/2006	1STF16-A	Nil	1	2	BS0004	refer to plan	S0098	1.8	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH, TPH, MAH, OCP (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	194406	Yes
24/05/2006	1STF17-A	Nil	1	2	BS0004	refer to plan	S0098	1.3	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, grey tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	194406	Yes
24/05/2006	1STF18-A	Nil	1	2	BS0004	refer to plan	S0098	1.5	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH, TPH, MAH, OCP (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, grey tan, moist, gravel sub angular to 20mm, sand variable fine to very	Quarry material	194406	No
24/05/2006	1STF19-A	Nil	1	2	BS0004	refer to plan	S0098	0.7	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, grey tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	194406	Yes
24/05/2006	1STF20-A	Nil	1	2	BS0004	refer to plan	S0098	1.6	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH, TPH, MAH, OCP (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, grey tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	194406	Yes
24/05/2006	1STF21-A	X & Y	1	2	BS0004	refer to plan	S0098 & S0097	1	MGT	WSL	VIC EPA SCREEN and pH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	194406 & 946655	Yes
24/05/2006	1STF22-A	Nil	1	2	BS0004	refer to plan	S0098	1.3	MGT	NA	As, Cd, Cr, Hg, Ni, Pb, Zn, PAH, pH, TPH, MAH, OCP (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	194406	Yes
24/05/2006	1STF23-A	Nil	1	2	NA	NA	S0098	2	MGT	NA	HELD	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Sample not analysed and locations not recorded	NA	NA
24/05/2006	1STF24-A	Nil	1	2	NA	NA	S0098	1.7	MGT	NA	HELD	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Sample not analysed and locations not recorded	NA	NA

Date	Sample Number	Duplicate Samples	Stage	Stockpile	Plan #:	Location	COC#	PID	Primary Laboratory	Secondary Laboratory	Analyses	Description of Material	Comments	Lab Reports	Complies
24/05/2006	1STF25-A	Nil	1	2	NA	NA	S0098	1.3	MGT	NA	HELD	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Sample not analysed and locations not recorded	NA	NA
13/06/2006	1STF26-A	Nil	1	2	BS0004	refer to plan	S0121	2.1	MGT	NA	PAH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195098	Yes
13/06/2006	1STF27-A	Nil	1	2	BS0004	refer to plan	S0121	1.9	MGT	NA	PAH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195098	Yes
13/06/2006	1STF28-A	Nil	1	2	BS0004	refer to plan	S0121	1.6	MGT	NA	PAH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195098	Yes
13/06/2006	1STF29-A	Nil	1	2	BS0004	refer to plan	S0121	1.7	MGT	NA	PAH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195098	Yes
13/06/2006	1STF30-A	Nil	1	2	BS0004	refer to plan	S0121	1.9	MGT	NA	PAH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195098	Yes
14/06/2006	1STF31-A	Nil	1	2	BS0004	refer to plan	S0123	2	MGT	NA	PAH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195143	Yes
14/06/2006	1STF32-A	Nil	1	2	BS0004	refer to plan	S0123	3.6	MGT	NA	PAH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195143	Yes
14/06/2006	1STF33-A	Nil	1	2	BS0004	refer to plan	S0123	4	MGT	NA	PAH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195143	Yes
14/06/2006	1STF34-A	Nil	1	2	BS0004	refer to plan	S0123	3.9	MGT	NA	PAH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195143	Yes
14/06/2006	1STF35-A	Nil	1	2	BS0004	refer to plan	S0123	3.3	MGT	NA	PAH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195143	Yes
14/06/2006	1STF36-A	Nil	1	2	BS0004	refer to plan	S0123	3.3	MGT	NA	PAH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195143	Yes
14/06/2006	1STF37-A	Nil	1	2	BS0004	refer to plan	S0123	4.2	MGT	NA	PAH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195143	Yes
14/06/2006	1STF38-A	Nil	1	2	BS0004	refer to plan	S0123	3.4	MGT	NA	PAH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195143	Yes
14/06/2006	1STF39-A	Nil	1	2	BS0004	refer to plan	S0123	4	MGT	NA	PAH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195143	Yes
14/06/2006	1STF40-A	Nil	1	2	BS0004	refer to plan	S0123	4.4	MGT	NA	PAH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195143	Yes
19/06/2006	1STF41-A	X & Y	1	3	BS0005	refer to plan	S0128 & S0134	2.1	MGT	WSL	VIC EPA SCREEN and pH (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195315 & 954449	Yes
19/06/2006	1STF42-A	Nil	1	3	BS0005	refer to plan	S0128, & S0140	0.3	MGT	NA	As, Cd, Cr, Cu, Hg, Ni, Pb, Zn , PAH , pH & OCP's (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195315 & 195465	Yes
19/06/2006	1STF43-A	Nil	1	3	BS0005	refer to plan	S0128	1.8	MGT	NA	As, Cd, Cr, Cu, Hg, Ni, Pb, Zn , PAH , pH & OCP's (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195315 & 195504	Yes
19/06/2006	1STF44-A	Nil	1	3	BS0005	refer to plan	S0128	2	MGT	NA	As, Cd, Cr, Cu, Hg, Ni, Pb, Zn , PAH , pH & OCP's (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195315 & 195504	Yes
19/06/2006	1STF45-A	Nil	1	3	BS0005	refer to plan	S0128	1.3	MGT	NA	As, Cd, Cr, Cu, Hg, Ni, Pb, Zn , PAH , pH & OCP's (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195315 & 195504	Yes

Date	Sample Number	Duplicate Samples	Stage	Stockpile	Plan #:	Location	COC#	PID	Primary Laboratory	Secondary Laboratory	Analyses	Description of Material	Comments	Lab Reports	Complies
19/06/2006	1STF46-A	Nil	1	3	BS0005	refer to plan	S0128	1.9	MGT	NA	As, Cd, Cr, Cu, Hg, Ni, Pb, Zn , PAH , pH & OCP's (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195315 & 195504	Yes
19/06/2006	1STF47-A	Nil	1	3	BS0005	refer to plan	S0128	1.6	MGT	NA	As, Cd, Cr, Cu, Hg, Ni, Pb, Zn , PAH , pH & OCP's (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195315 & 195504	Yes
19/06/2006	1STF48-A	Nil	1	3	BS0005	refer to plan	S0128	2.6	MGT	NA	As, Cd, Cr, Cu, Hg, Ni, Pb, Zn , PAH , pH & OCP's (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195315 & 195504	Yes
19/06/2006	1STF49-A	Nil	1	3	BS0005	refer to plan	S0128	2.2	MGT	NA	As, Cd, Cr, Cu, Hg, Ni, Pb, Zn , PAH , pH & OCP's (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195315 & 195504	Yes
19/06/2006	1STF50-A	Nil	1	3	BS0005	refer to plan	S0128	2.2	MGT	NA	As, Cd, Cr, Cu, Hg, Ni, Pb, Zn , PAH , pH & OCP's (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195315 & 195504	Yes
19/06/2006	1STF51-A	Nil	1	3	BS0005	refer to plan	S0128	1.6	MGT	NA	As, Cd, Cr, Cu, Hg, Ni, Pb, Zn , PAH , pH & OCP's (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195315 & 195504	Yes
19/06/2006	1STF52-A	Nil	1	3	BS0005	refer to plan	S0128	2.3	MGT	NA	As, Cd, Cr, Cu, Hg, Ni, Pb, Zn , PAH , pH & OCP's (24hr turnaround)	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	195315 & 195465	Yes
19/06/2006	1STF53-A	Nil	1	3	BS0005	refer to plan	S0128	2.5	MGT	NA	HELD	Silty Sandy GRAVEL/Silty Gravelly SAND, tan, moist, gravel sub angular to 20mm, sand variable fine to very coarse	Quarry material	NA	NA
27/07/2006	1STF54-A	Nil	1	4	BS0007	refer to plan	S0223	0.8	MGT	NA	SA EPA Disposal Screen	Gravely Sandy CLAY/Gravely Clayey SAND, tan orange, slightly moist, sand variable fine to coarse grain, angular	Fill from around Church boundary	196769	Yes
27/07/2006	1STF55-A	Nil	1	4	BS0007	refer to plan	S0233	0.6	MGT	NA	SA EPA Disposal Screen	Gravely Sandy CLAY, grey tan, slightly moist, sand variable fine to coarse grain, angular gravel to 40mm	Fill from around Church boundary	196769	Yes
3/07/2006	1STN1-A	Y	1	5	BS0006	refer to plan	S0161 & S0162	0.2	MGT	WSL	SA EPA DISPOSAL SCREEN	CLAY, olive with red and yellow spots, moist	Material excavated to make re-use pit	194179 & 944081	Yes
3/07/2006	1STN2-A	Nil	1	5	BS0006	refer to plan	S0161	0.1	MGT	NA	SA EPA DISPOSAL SCREEN	CLAY, olive with red and yellow spots, moist	Material excavated to make re-use pit	194179	Yes
3/07/2006	1STN3-A	Nil	1	5	BS0006	refer to plan	S0161	0.2	MGT	NA	SA EPA DISPOSAL SCREEN	CLAY, olive with red and yellow spots, moist	Material excavated to make re-use pit	194179	Yes

APPENDIX C – SUMMARY RESULTS

Central West Precinct **Stockpile 1 Results**

Sample Number	1STF1-A	1STF2-A	1STF3-A	1STF4-A	1STF5-A	1STF6-A	1STF7-A	1STF8-A	1STF9-A	1STF10-A	STATISTICS					CRITERIA						
Material Type	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile						NEPM			Auditor	outhern Waste Dep		
Laboratory Number	06-MY03519	06-MY03521	06-MY03522	06-MY03523	06-MY03524	06-MY03525	06-MY03526	06-MY03527	06-MY03528	06-MY03529	Count	Max	Mean	Std Dev	95% UCL	HIL A	HIL D	EIL	Site Specific	WF	ILC	LLCW
MISCELLANEOUS ANALYSES																						
% Moisture	3.2	3.9	4.6	1.8	5.7	4.1	4	3.6	4.8	3.2												
Cyanide (total)	< 5					< 5										250**	1000**			500	1,000	3,500
pH (units) (1:5 aqueous extract)*	9	9.3	7.3	9	8.5	8.1	8.7	7.9	9.2	8.9	10	9.3	8.6	0.6	9.0							
CHLORINATED HYDROCARBONS	<LOR					<LOR																
HEAVY METALS																						
Antimony	< 10					< 10																
Arsenic	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2						100	400	20		20	200	750
Beryllium	< 2					< 2										20	80			20	40	150
Boron	< 5					< 5												1**				
Cadmium	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5						20	80	3		3	30	60
Chromium	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5						100**	400**	1**		400	0	0
Cobalt	< 5					< 5										100	400			170	170	1,000
Copper	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5						1,000	4,000	100		60	2,000	7,500
Lead	6.3	5.1	***2.5***	5.1	***2.5***	7.4	7	7.1	***2.5***	8.2	10	8.2	5.4	2.2	6.7	300	1,200	600	600***	300	1,200	5,000
Manganese	31					100												500				
Mercury	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1						15**	60**	1**		1	30	110
Molybdenum	< 10					< 10																
Nickel	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5						600	2,400	60		60	600	3,000
Selenium	< 2					< 2																
Tin	<10					<10																
Vanadium	< 10					< 10												50				
Zinc	43	12	12	12	9.8	10	9.5	10	10	13	10	43	14.1	10.2	20.5	7,000	28,000	200		200	14,000	50,000
MAH's AROMATIC VOLATILE ORGANICS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR												
ORGANOCHLORINE PESTICIDES	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR												
POLYNUCLEAR AROMATIC HYDROCARBONS																						
Naphthalene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Acenaphthylene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Acenaphthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Fluorene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Phenanthrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Fluoranthrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Benzo(a)anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Chrysene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Benzo(b)fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Benzo(k)fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Benzo(a)pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1						1	4		8***	1	2	5
Dibenzo(a,h)anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Benzo(g,h,i)perylene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Total PAH	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**10**	**0.8**	**0.8**	**0.0**	**0.8**	**20**	**80**		**164*** **	**5**	**40**	**200**
POLYCHLORINATED BIPHENYLS (PCB's)	<LOR					<LOR																
PHENOLS & CRESOLS	<LOR					<LOR																
TOTAL RECOVERABLE HYDROCARBONS	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR												

All results in mg/kg unless stated otherwise

<LOR - All results less than the limits of reporting

<LOR - All results except those listed less than the limits of reporting

* Statistics calculated are of numerical pH not absolute hydrogen ion concentration

** Consult NEPM tables for form of analyte

*** The most stringent auditors crieteria has been adopted for comparison purposes.

NEPM Health Based A Criteria exceeded

Waste Fill Criteria exceeded

Numbers in bold blue and Italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Central West Precinct **Stockpile 2 Results**

Sample Number	ISTF11-A	ISTF12-A	ISTF13-A	ISTF14-A	ISTF15-A	ISTF16A	ISTF17A	ISTF18A	ISTF19A	ISTF20A	ISTF21A	ISTF22A	1STF26-A	1STF27-A	1STF28-A	1STF29-A	1STF30-A	1STF31-A	1STF32-A
Material Type	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile
Laboratory Number	06-MY04937	06-MY04938	06-MY04939	06-MY04940	06-MY04941	06-MY04942	06-MY04943	06-MY04944	06-MY04945	06-MY04946	06-MY04947	06-MY04948	06-JN02999	06-JN03000	06-JN03001	06-JN03002	06-JN03003	06-JN03381	06-JN03382
MISCELLANEOUS ANALYSES																			
% Moisture	4.9	6.4	5	3.9	3.1	3.6	6.9	4.1	5.3	4.6	7.3	9.1	5.8	< 0.1	< 0.1	5.9	6.5	7.7	7.1
Cyanide (total)	< 5										< 5								
pH (units) (1:5 aqueous extract)*	9.4	9.1	9.4	9.3	8.8	9.4	8.7	9	9	8.8	8.8	9.3							
CHLORINATED HYDROCARBONS	<LOR										<LOR								
HEAVY METALS																			
Antimony	< 10										< 10								
Arsenic	2.8	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***							
Beryllium	< 2										< 2								
Cadmium	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5							
Chromium	5.6	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***							
Cobalt	< 5										< 5								
Copper	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5							
Lead	7.8	5.9	7.1	***2.5***	10	6.4	6	7.2	11	***2.5***	5.8	7.5							
Mercury	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1							
Molybdenum	< 10										< 10								
Nickel	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5							
Selenium	< 2										< 2								
Tin	<10										< 10								
Vanadium	< 10										< 10								
Zinc	11	6.7	8.5	7.8	8.2	8	12	15	20	10	7.3	11							
MAH's AROMATIC VOLATILE ORGANICS	<LOR		<LOR		<LOR	<LOR		<LOR		<LOR	<LOR	<LOR							
ORGANOCHLORINE PESTICIDES	<LOR		<LOR		<LOR	<LOR		<LOR		<LOR	<LOR	<LOR							
POLYNUCLEAR AROMATIC HYDROCARBONS																			
Naphthalene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthylene	***0.05***	***0.05***	0.3	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthene	***0.05***	***0.05***	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluorene	***0.05***	***0.05***	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Phenanthrene	***0.05***	***0.05***	3.9	***0.05***	***0.05***	***0.05***	***0.05***	0.4	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Anthracene	***0.05***	***0.05***	0.6	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluoranthrene	***0.05***	***0.05***	3.5	***0.05***	***0.05***	***0.05***	0.2	0.8	0.4	***0.05***	***0.05***	0.1	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	0.1
Pyrene	***0.05***	***0.05***	3.4	***0.05***	***0.05***	***0.05***	0.2	0.8	0.4	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(a)anthracene	***0.05***	***0.05***	1.6	***0.05***	***0.05***	***0.05***	***0.05***	0.4	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Chrysene	***0.05***	***0.05***	1.1	***0.05***	***0.05***	***0.05***	0.1	0.4	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(b)fluoranthene	***0.05***	***0.05***	0.8	***0.05***	***0.05***	***0.05***	***0.05***	0.4	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(k)fluoranthene	***0.05***	***0.05***	0.7	***0.05***	***0.05***	***0.05***	***0.05***	0.3	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(a)pyrene	***0.05***	***0.05***	1.4	***0.05***	***0.05***	***0.05***	0.2	0.6	0.3	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Dibenzo(a,h)anthracene	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(g,h,i)perylene	***0.05***	***0.05***	0.7	***0.05***	***0.05***	***0.05***	***0.05***	0.4	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Indeno(1,2,3-cd)pyrene	***0.05***	***0.05***	0.6	***0.05***	***0.05***	***0.05***	***0.05***	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Total PAH	**0.8**	**0.8**	**19.15**	**0.8**	**0.8**	**0.8**	**1.3**	**5.05**	**2.4**	**0.8**	**0.8**	**0.85**	**0.8**	**0.9**	**0.8**	**0.8**	**0.8**	**0.8**	**0.85**
POLYCHLORINATED BIPHENYLS (PCB's)	<LOR										<LOR								
PHENOLS & CRESOLS	<LOR										<LOR								
TOTAL RECOVERABLE HYDROCARBONS	<LOR		<LOR		<LOR	<LOR		<LOR		<LOR	<LOR	<LOR							

All results in mg/kg unless stated otherwise

<LOR - All results less than the limits of reporting

<LOR - All results except those listed less than the limits of reporting

* Statistics calculated are of numerical pH not absolute hydrogen ion concentration

** Consult NEPM tables for form of analyte

*** The most stringent auditors crieteria has been adopted for comparison purposes.

NEPM Health Based A Criteria exceeded

Waste Fill Criteria exceeded

Numbers in bold blue and Italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Sample Number	1STF33-A	1STF34-A	1STF35-A	1STF36-A	1STF37-A	1STF38-A	1STF39-A	1STF40-A	STATISTICS					CRITERIA						
Material Type	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile						NEPM			Auditor	outhern Waste Dep		
Laboratory Number	06-JN03383	06-JN03384	06-JN03385	06-JN03386	06-JN03387	06-JN03388	06-JN03389	06-JN03390						HIL A	HIL D	EIL	Site Specific	WF	ILC	LLCW
MISCELLANEOUS ANALYSES									Count	Max	Mean	Std Dev	95% UCL							
% Moisture	4.8	4.6	4.9	5.2	6.7	7	6.6	6.3												
Cyanide (total)														250**	1000**			500	1,000	3,500
pH (units) (1:5 aqueous extract)*									12	9.4	9.1	0.3	9.2							
CHLORINATED HYDROCARBONS																				
HEAVY METALS																				
Antimony																				
Arsenic									12	2.8	1.2	0.5	1.4	100	400	20		20	200	750
Beryllium														20	80			20	40	150
Cadmium														20	80	3		3	30	60
Chromium									12	5.6	2.8	0.9	3.3	100**	400**	1**		400	0	0
Cobalt														100	400			170	170	1,000
Copper														1,000	4,000	100		60	2,000	7,500
Lead									12	11	6.6	2.5	8.1	300	1,200	600	600***	300	1,200	5,000
Mercury														15**	60**	1**		1	30	110
Molybdenum																				
Nickel														600	2,400	60		60	600	3,000
Selenium																				
Tin																				
Vanadium																50				
Zinc									12	20	10.5	3.8	12.6	7,000	28,000	200		200	14,000	50,000
MAH's AROMATIC VOLATILE ORGANICS																				
ORGANOCHLORINE PESTICIDES																				
POLYNUCLEAR AROMATIC HYDROCARBONS																				
Naphthalene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	0.05	0.1	0.0	0.1							
Acenaphthylene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	0.3	0.1	0.0	0.1							
Acenaphthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	0.2	0.1	0.0	0.1							
Fluorene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	0.2	0.1	0.0	0.1							
Phenanthrene	***0.05***	***0.05***	0.3	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	3.9	0.2	0.7	0.5							
Anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	0.6	0.1	0.1	0.1							
Fluoranthrene	***0.05***	0.2	0.7	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	3.5	0.3	0.7	0.5							
Pyrene	***0.05***	0.2	0.6	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	3.4	0.2	0.7	0.5							
Benzo(a)anthracene	***0.05***	***0.05***	0.3	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	1.6	0.1	0.3	0.3							
Chrysene	***0.05***	***0.05***	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	1.1	0.1	0.2	0.2							
Benzo(b)fluoranthene	***0.05***	***0.05***	0.3	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	0.8	0.1	0.2	0.2							
Benzo(k)fluoranthene	***0.05***	***0.05***	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	0.7	0.1	0.1	0.1							
Benzo(a)pyrene	***0.05***	***0.05***	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	1.4	0.1	0.3	0.2	1	4		8***	1	2	5
Dibenzo(a,h)anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	0.1	0.1	0.0	0.1							
Benzo(g,h,i)perylene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	0.7	0.1	0.1	0.1							
Indeno(1,2,3-cd)pyrene	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	27	0.6	0.1	0.1	0.1							
Total PAH	**0.8**	**1.1**	**3.25**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**27**	**19.15**	**1.8**	**3.6**	**3.2**	**20**	**80**		**164*** **	**5**	**40**	**200**
POLYCHLORINATED BIPHENYLS (PCB's)																				
PHENOLS & CRESOLS																				
TOTAL RECOVERABLE HYDROCARBONS																				
All results in mg/kg unless stated otherwise																				
<LOR - All results less than the limits of reporting																				
<LOR - All results except those listed less than the																				
* Statistics calculated are of numerical pH not absc																				
** Consult NEPM tables for form of analyte																				
*** The most stringent auditors crieteria has been a																				
NEPM Health Based A Criteria exceeded																				
Waste Fill Criteria exceeded																				
Numbers in bold blue and Italics represent valu																				

Central West Precinct **Stockpile 3 Results**

Sample Number	1STF41-A	1STF42-A	1STF43-A	1STF44-A	1STF45-A	1STF46-A	1STF47-A	1STF48-A	1STF49-A	1STF50-A	1STF51-A	1STF52-A	STATISTICS					CRITERIA						
Material Type	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile	Stockpile						NEPM			Auditor	outhern Waste Depo		
Laboratory Number	06-JN04305	06-JN04306	06-JN04307	06-JN04308	06-JN04309	06-JN04310	06-JN04311	06-JN04312	06-JN04313	06-JN04314	06-JN04315	06-JN04316						HIL A	HIL D	EIL	Site Specific	WF	ILC	LLCW
MISCELLANEOUS ANALYSES													Count	Max	Mean	Std Dev	95% UCL							
% Moisture	17	2.6	9.2	1	1.5	2.7	1.7	4.3	1.2	2.6	4.5	2.7												
Cyanide (total)	<5																	250**	1000**			500	1,000	3,500
pH (units) (1:5 aqueous extract)*	9.3	8.6	9.8	8.7	8.6	9.1	8.7	8.6	8.8	8.9	8.8	8.8	12	9.8	8.9	0.4	9.1							
CHLORINATED HYDROCARBONS	<LOR																							
HEAVY METALS																								
Antimony	< 10																							
Arsenic	5.5	***1***	2.2	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	12	5.5	1.5	1.3	2.2	100	400	20		20	200	750
Beryllium	< 2																	20	80			20	40	150
Cadmium	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5						20	80	3		3	30	60
Chromium	13	***2.5***	9.4	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	12	13	4.0	3.5	5.9	100**	400**	1**		400	0	0
Cobalt	< 5																	100	400			170	170	1,000
Copper	16	***2.5***	9.3	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	12	16	4.2	4.2	6.6	1,000	4,000	100		60	2,000	7,500
Lead	33	6.6	12	***2.5***	***2.5***	***2.5***	***2.5***	6.6	5.1	***2.5***	***2.5***	***2.5***	12	33	6.7	8.8	11.7	300	1,200	600	600***	300	1,200	5,000
Mercury	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1						15**	60**	1**		1	30	110
Molybdenum	< 10																							
Nickel	6	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	12	6	2.8	1.0	3.4	600	2,400	60		60	600	3,000
Selenium	< 2																							
Tin	< 10																							
Vanadium	23												1	23						50				
Zinc	52	17	24	9.3	9.7	11	10	11	8.4	9.9	7.4	8.8	12	52	14.9	12.6	22.0	7,000	28,000	200		200	14,000	50,000
MAH's AROMATIC VOLATILE ORGANICS	<LOR																							
ORGANOCHLORINE PESTICIDES	<LOR																							
Aldrin	0.12												1	0.12	0.1			10	40			2	2	50
Chlordane	1.7												1	1.7	1.7			50	200			2	2	50
POLYNUCLEAR AROMATIC HYDROCARBONS																								
Naphthalene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Acenaphthylene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Acenaphthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Fluorene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Phenanthrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Fluoranthrene	0.1	0.2	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	12	0.2	0.1	0.0	0.1							
Pyrene	0.1	0.2	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	12	0.2	0.1	0.1	0.1							
Benzo(a)anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Chrysene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Benzo(b)fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Benzo(k)fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Benzo(a)pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1						1	4		8***	1	2	5
Dibenzo(a,h)anthracene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Benzo(g,h,i)perylene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1												
Total PAH	**0.9**	**1.1**	**1**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**12**	**1.1**	**0.9**	**0.1**	**0.9**	**20**	**80**		**164*** **	**5**	**40**	**200**
POLYCHLORINATED BIPHENYLS (PCB's)	<LOR																							
PHENOLS & CRESOLS	<LOR																							
TOTAL RECOVERABLE HYDROCARBONS	<LOR																							

All results in mg/kg unless stated otherwise

<LOR - All results less than the limits of reporting

<LOR - All results except those listed less than the limits of reporting

* Statistics calculated are of numerical pH not absolute hydrogen ion concentration

** Consult NEPM tables for form of analyte

*** The most stringent auditors crieteria has been adopted for comparison purposes.

NEPM Health Based A Criteria exceeded

Waste Fill Criteria exceeded

Numbers in bold blue and Italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Central West Precinct **Stockpile 4 Results**

Sample Number	1STF54-A	1STF55-A	STATISTICS					CRITERIA						
Material Type	Stockpile	Stockpile						NEPM			Auditor	outhern Waste Dep		
Laboratory Number	06-JL06577	06-JL06578						HIL A	HIL D	EIL	Site Specific	WF	ILC	LLCW
MISCELLANEOUS ANALYSES			Count	Max	Mean	Std Dev	95% UCL							
% Moisture	9.6	6.5												
Cyanide (total)	<5	< 5						250**	1000**			500	1,000	3,500
CHLORINATED HYDROCARBONS	<LOR	<LOR												
HEAVY METALS														
Antimony	< 10	< 10												
Arsenic	***1***	5.1	2	5.1	3.1			100	400	20		20	200	750
Barium	38	82								300				
Beryllium	< 2	< 2						20	80			20	40	150
Cadmium	< 0.5	< 0.5						20	80	3		3	30	60
Chromium	7	17	2	17	12.0			100**	400**	1**		400	0	0
Chromium (hexavalent)	<1	<1						100	400					
Cobalt	***2.5***	5.3	2	5.3	3.9			100	400			170	170	1,000
Copper	12	21	2	21	16.5			1,000	4,000	100		60	2,000	7,500
Lead	30	33	2	33	31.5			300	1,200	600	600***	300	1,200	5,000
Mercury	< 0.1	< 0.1						15**	60**	1**		1	30	110
Molybdenum	< 10	< 10												
Nickel	***2.5***	8	2	8	5.3			600	2,400	60		60	600	3,000
Selenium	< 2	< 2												
Tin	< 10	< 10												
Vanadium	11	34	2	34	22.5					50				
Zinc	72	51	2	72	61.5			7,000	28,000	200		200	14,000	50,000
MAH's AROMATIC VOLATILE ORGANICS	<LOR	<LOR												
ORGANOCHLORINE PESTICIDES	<LOR	<LOR												
POLYNUCLEAR AROMATIC HYDROCARBONS														
Naphthalene	< 0.1	< 0.1												
Acenaphthylene	< 0.1	< 0.1												
Acenaphthene	< 0.1	< 0.1												
Fluorene	< 0.1	< 0.1												
Phenanthrene	< 0.1	< 0.1												
Anthracene	< 0.1	< 0.1												
Fluoranthrene	< 0.1	< 0.1												
Pyrene	< 0.1	< 0.1												
Benzo(a)anthracene	< 0.1	< 0.1												
Chrysene	< 0.1	< 0.1												
Benzo(b)fluoranthene	< 0.1	< 0.1												
Benzo(k)fluoranthene	< 0.1	< 0.1												
Benzo(a)pyrene	< 0.1	< 0.1						1	4		8***	1	2	5
Dibenzo(a,h)anthracene	< 0.1	< 0.1												
Benzo(g,h,i)perylene	< 0.1	< 0.1												
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1												
Total PAH	**0.8**	**0.8**	**2**	**0.8**	**0.8**	**0.0**		**20**	**80**		**164*** **	**5**	**40**	**200**
POLYCHLORINATED BIPHENYLS (PCB's)	<LOR	<LOR												
PHENOLS & CRESOLS	<LOR	<LOR												
TOTAL RECOVERABLE HYDROCARBONS	<LOR	<LOR												

All results in mg/kg unless stated otherwise

<LOR - All results less than the limits of reporting

<LOR - All results except those listed less than the limits of reporting

* Statistics calculated are of numerical pH not absolute hydrogen ion concentration

** Consult NEPM tables for form of analyte

*** The most stringent auditors crieteria has been adopted for comparison purposes.

NEPM Health Based A Criteria exceeded

Waste Fill Criteria exceeded

Numbers in bold blue and Italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of s

Central West Precinct **Stockpile 5 Results**

Sample Number	1STN1-A	1STN2-A	1STN3-A	STATISTICS					CRITERIA						
Material Type	Stockpile	Stockpile	Stockpile						NEPM			Auditor	outhern Waste Depo		
Laboratory Number	06-JL00327	06-JL00328	06-JL00329						HIL A	HIL D	EIL	Site Specific	WF	ILC	LLCW
MISCELLANEOUS ANALYSES				Count	Max	Mean	Std Dev	95% UCL							
% Moisture	22	33	21												
Cyanide (total)	<5		< 5						250**	1000**			500	1,000	3,500
CHLORINATED HYDROCARBONS	<LOR	<LOR	<LOR												
HEAVY METALS															
Antimony	< 10	< 10	< 10												
Arsenic	2.4	2	2.2	3	2.4	2.2	0.2	2.4	100	400	20		20	200	750
Barium	44	88	85	3	88	72.3	24.6	100.2			300				
Beryllium	< 2	< 2	< 2						20	80			20	40	150
Cadmium	< 0.5	< 0.5	< 0.5						20	80	3		3	30	60
Chromium	14	15	16	3	16	15.0	1.0	16.1	100**	400**	1**		400	0	0
Chromium (hexavalent)	<1	<1	<1						100	400					
Cobalt	< 5	< 5	< 5						100	400			170	170	1,000
Copper	< 5	< 5	< 5						1,000	4,000	100		60	2,000	7,500
Lead	5.2	5.2	5	3	5.2	5.1	0.1	5.3	300	1,200	600	600***	300	1,200	5,000
Mercury	< 0.1	< 0.1	< 0.1						15**	60**	1**		1	30	110
Molybdenum	< 10	< 10	< 10												
Nickel	< 5	< 5	< 5						600	2,400	60		60	600	3,000
Selenium	< 2	< 2	< 2												
Tin	< 10	< 10	< 10												
Vanadium	51	49	46	3	51	48.7	2.5	51.5			50				
Zinc	13	16	14	3	16	14.3	1.5	16.1	7,000	28,000	200		200	14,000	50,000
MAH's AROMATIC VOLATILE ORGANICS	<LOR	<LOR	<LOR												
ORGANOCHLORINE PESTICIDES	<LOR	<LOR	<LOR												
POLYNUCLEAR AROMATIC HYDROCARBONS															
Naphthalene	< 0.1	< 0.1	< 0.1												
Acenaphthylene	< 0.1	< 0.1	< 0.1												
Acenaphthene	< 0.1	< 0.1	< 0.1												
Fluorene	< 0.1	< 0.1	< 0.1												
Phenanthrene	< 0.1	< 0.1	< 0.1												
Anthracene	< 0.1	< 0.1	< 0.1												
Fluoranthrene	< 0.1	< 0.1	< 0.1												
Pyrene	< 0.1	< 0.1	< 0.1												
Benzo(a)anthracene	< 0.1	< 0.1	< 0.1												
Chrysene	< 0.1	< 0.1	< 0.1												
Benzo(b)fluoranthene	< 0.1	< 0.1	< 0.1												
Benzo(k)fluoranthene	< 0.1	< 0.1	< 0.1												
Benzo(a)pyrene	< 0.1	< 0.1	< 0.1						1	4		8***	1	2	5
Dibenzo(a,h)anthracene	< 0.1	< 0.1	< 0.1												
Benzo(g,h,i)perylene	< 0.1	< 0.1	< 0.1												
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1	< 0.1												
Total PAH	**0.8**	**0.8**	**0.8**	**3**	**0.8**	**0.8**	**0.0**	**0.8**	**20**	**80**		**164*** **	**5**	**40**	**200**
POLYCHLORINATED BIPHENYLS (PCB's)	<LOR	<LOR	<LOR												
PHENOLS & CRESOLS	<LOR	<LOR	<LOR												
TOTAL RECOVERABLE HYDROCARBONS	<LOR	<LOR	<LOR												

All results in mg/kg unless stated otherwise

<LOR - All results less than the limits of reporting

<LOR - All results except those listed less than the limits of reporting

* Statistics calculated are of numerical pH not absolute hydrogen ion concentration

** Consult NEPM tables for form of analyte

*** The most stringent auditors crieteria has been adopted for comparison purposes.

NEPM Health Based A Criteria exceeded

Waste Fill Criteria exceeded

Numbers in bold blue and Italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

APPENDIX D – QUALITY

Sample Number	1STF1-A	1STF1-X	**RPD**	1STF1-Y	**RPD**	ISTF21A	13STF21-X	**RPD**	1STF21-Y	**RPD**	1STF41-A	1STF41-X	**RPD**	1STF21-Y	**RPD**	1STN1-A	1STF21-Y	**RPD**	1R1
Fill/Natural	Sample	Intra -		Inter -		Sample	Intra -		Inter -		Sample	Intra -		Inter -		Sample	Inter -		06-MY04949
		Duplicate		Duplicate			Duplicate		Duplicate			Duplicate		Duplicate			Duplicate		
Laboratory Number	06-MY04426	06-MY03520		944081		06-MY04947	06-MY04950		946655		06-JN04305	06-JN04317		954449		06-JN04305	954449		
MISCELLANEOUS ANALYSES																			
% Moisture	3.2	3.3	**3.1%**	-	-	7.3	7.2	**1.4%**	-	-	17	19	**11.1%**	-	-	22	-	-	
Cyanide (total)	< 5	< 5	-	< 5	-	< 5	< 5	-	< 5	-	<5	<5	-	< 5	-	<5	< 5	-	<0.005
pH (units) (1:5 aqueous extract)*	9	8.9	**1.1%**	8.8	**2.2%**	8.8	9	**2.2%**	9.1	**3.4%**	9.3	-	**NCD**	8.4	**10.2%**	-	-	-	-
CHLORINATED HYDROCARBONS																			
1.2-Dichlorobenzene	< 0.2	< 0.2	-	-	-	< 0.2	< 0.2	-	-	-	< 0.2	< 0.2	-	-	-	< 0.2	-	-	< 0.0005
1.2.3-Trichlorobenzene	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	-	-	< 0.0005
1.2.3.4-Tetrachlorobenzene	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	-	-	< 0.0001
1.2.3.5-Tetrachlorobenzene	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	-	-	< 0.0001
1.2.4-Trichlorobenzene	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	-	-	< 0.0001
1.2.4.5-Tetrachlorobenzene	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	-	-	< 0.0001
1.3-Dichlorobenzene	< 0.2	< 0.2	-	-	-	< 0.2	< 0.2	-	-	-	< 0.2	< 0.2	-	-	-	< 0.2	-	-	< 0.0005
1.3.5-Trichlorobenzene	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	-	-	< 0.0001
1.4-Dichlorobenzene	< 0.2	< 0.2	-	-	-	< 0.2	< 0.2	-	-	-	< 0.2	< 0.2	-	-	-	< 0.2	-	-	< 0.0005
Benzal chloride	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	-	-	< 0.0001
Benzotrichloride	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	-	-	< 0.0005
Benzyl chloride	< 0.2	< 0.2	-	-	-	< 0.2	< 0.2	-	-	-	< 0.2	< 0.2	-	-	-	< 0.2	-	-	< 0.0005
Hexachlorobenzene	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	-	-	< 0.0001
Hexachlorobutadiene	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	-	-	< 0.0001
Hexachlorocyclopentadiene	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	-	-	< 0.0001
Hexachloroethane	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	-	-	< 0.0001
Pentachlorobenzene	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	< 0.05	-	-	-	< 0.05	-	-	< 0.0001
HEAVY METALS																			
Antimony	< 10	< 10	-	-	-	< 10	< 10	-	-	-	< 10	< 10	-	-	-	< 10	-	-	< 0.005
Arsenic	<2	<2	-	<5	-	< 2	< 2	-	<5	-	5.5	3	**58.8%**	<5	**NCD**	2.4	<5	**NCD**	<0.002
Beryllium	< 2	< 2	-	-	-	< 2	< 2	-	-	-	< 2	< 2	-	-	-	< 2	-	-	< 0.001
Boron	< 5	< 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cadmium	< 0.5	< 0.5	-	<2	-	< 0.5	< 0.5	-	<2	-	< 0.5	< 0.5	-	<2	-	< 0.5	<0.2	-	< 0.0002
Chromium	< 5	< 5	-	6	**NCD**	< 5	< 5	-	<5	-	13	12	**8.0%**	<5	**NCD**	14	28	**66.7%**	<0.005
Cobalt	< 5	< 5	-	<5	-	< 5	< 5	-	<5	-	< 5	< 5	-	<5	-	< 5	<5	-	< 0.001
Copper	< 5	< 5	-	8	**NCD**	< 5	< 5	-	<5	-	16	15	**6.5%**	<5	**NCD**	< 5	5	**NCD**	<0.005
Lead	6.3	< 5	**NCD**	34	**137.5%**	5.8	5.1	**12.8%**	<5	**NCD**	33	23	**35.7%**	5	**147.4%**	5.2	9	**53.5%**	< 0.001
Manganese	31	30	**3.3%**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mercury	< 0.1	< 0.1	-	<0.05	-	< 0.1	< 0.1	-	<0.05	-	< 0.1	< 0.1	-	<0.05	-	< 0.1	<0.05	-	0.0009
Molybdenum	< 10	< 10	-	<5	-	< 10	< 10	-	<5	-	< 10	< 10	-	<5	-	< 10	<5	-	<0.005
Nickel	< 5	< 5	-	<5	-	< 5	< 5	-	<5	-	6	5.6	**6.9%**	<5	**NCD**	< 5	7	-	<0.005
Selenium	< 2	< 2	-	<5	-	< 2	< 2	-	<5	-	< 2	< 2	-	<5	-	< 2	<5	-	<0.005
Tin	<10	<10	-	8	**NCD**	< 10	< 10	-	<5	-	< 10	< 10	-	<5	-	< 10	<5	-	< 0.005
Vanadium	< 10	< 10	-	-	-	< 10	< 10	-	-	-	23	20	**14.0%**	-	-	51	-	**NCD**	< 0.005
Zinc	43	20	**73.0%**	63	**37.7%**	7.3	7.9	**7.9%**	8	**9.2%**	52	46	**12.2%**	9	**141.0%**	13	15	**14.3%**	< 0.001
MAH's																			
Benzene	<0.05	<0.05	-	<0.5	-	<0.05	< 0.05	-	<0.5	-	<0.05	<0.05	-	<0.5	-	<0.05	<0.5	-	<0.001
Toluene	<0.05	<0.05	-	<0.5	-	<0.05	< 0.05	-	<0.5	-	<0.05	<0.05	-	<0.5	-	<0.05	<0.5	-	<0.001
Ethyl Benzene	<0.05	<0.05	-	<0.5	-	<0.05	< 0.05	-	<0.5	-	<0.05	<0.05	-	<0.5	-	<0.05	<0.5	-	<0.001
Xylenes	<0.05	<0.05	-	<0.5	-	<0.05	0.09	**NCD**	<0.5	-	<0.05	<0.05	-	<0.5	-	<0.05	<0.5	-	<0.001
ORGANOCHLORINE PESTICIDES																			
Aldrin	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	0.12	0.06	**66.7%**	< 0.05	**NCD**	< 0.05	< 0.05	-	< 0.0001
Dieldrin	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
alpha-BHC	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
beta-BHC	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
delta-BHC	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
Lindane	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
Chlordane	< 0.1	< 0.1	-	< 0.05	-	< 0.1	< 0.1	-	< 0.05	-	1.7	1	**51.9%**	< 0.05	**NCD**	< 0.1	< 0.05	-	< 0.0005
4,4'-DDD	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
4,4'-DDE	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
4,4'-DDT	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
Endosulfan I	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
Endosulfan II	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
Endosulfan Sulphate	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
Endrin	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
Endrin Aldehyde	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
Endrin Ketone	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
Heptachlor	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
Heptachlor epoxide	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
Hexachlorobenzene	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
Methoxychlor	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.0001
Toxaphene	< 0.1	< 0.1	-	< 0.05	-	< 0.1	< 0.1	-	< 0.05	-	< 0.1	< 0.1	-	< 0.05	-	< 0.1	< 0.05	-	< 0.0005
POLYNUCLEAR AROMATIC HYDROCARBONS																			

Sample Number	1STF1-A	1STF1-X	**RPD**	1STF1-Y	**RPD**	ISTF21A	13STF21-X	**RPD**	1STF21-Y	**RPD**	1STF41-A	1STF41-X	**RPD**	1STF21-Y	**RPD**	1STN1-A	1STF21-Y	**RPD**	1R1
Fill/Natural	Sample	Intra -		Inter -		Sample	Intra -		Inter -		Sample	Intra -		Inter -		Sample	Inter -		06-MY04949
		Duplicate		Duplicate			Duplicate		Duplicate			Duplicate		Duplicate			Duplicate		
Laboratory Number	06-MY04426	06-MY03520		944081		06-MY04947	06-MY04950		946655		06-JN04305	06-JN04317		954449		06-JN04305	954449		
Naphthalene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.001
Acenaphthylene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.001
Acenaphthene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.001
Fluorene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.001
Phenanthrene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.001
Anthracene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.001
Fluoranthrene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	0.1	< 0.1	**NCD**	< 0.1	**NCD**	< 0.1	< 0.1	-	< 0.001
Pyrene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	0.1	< 0.1	**NCD**	< 0.1	**NCD**	< 0.1	< 0.1	-	< 0.001
Benzo(a)anthracene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.001
Chrysene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.001
Benzo(b)fluoranthene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.001
Benzo(k)fluoranthene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.001
Benzo(a)pyrene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.001
Dibenzo(a,h)anthracene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.001
Benzo(g,h,i)perylene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.001
Indeno(1,2,3-cd)pyrene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.001
Total PAH	**<0.8**	**<0.8**	-	**<0.8**	-	**<0.8**	**<0.8**	-	**<0.8**	-	**0.9**	**<0.8**	-	**<0.8**	-	**<0.8**	**<0.8**	-	< 0.008
POLYCHLORINATED BIPHENYLS (PCB's)																			
Arochlor-1016	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	< 0.001
Arochlor-1221	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	< 0.001
Arochlor-1232	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	< 0.001
Arochlor-1242	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	< 0.001
Arochlor-1248	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	< 0.001
Arochlor-1254	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	< 0.001
Arochlor-1260	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	< 0.001
PHENOLS & CRESOLS																			
2-Chlorophenol	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	-	-	< 0.001
2-Methylphenol (o-Cresol)	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	-	-	< 0.001
2-Nitrophenol	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	-	-	-	< 0.5	-	-	< 0.001
2.4-Dichlorophenol	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	-	-	< 0.001
2.4-Dimethylphenol	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	-	-	< 0.001
2.4.6-Trichlorophenol	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	-	-	< 0.001
2.6-Dichlorophenol	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	-	-	< 0.001
3&4-Methylphenol (m&p-Cresol)	< 0.2	< 0.2	-	-	-	< 0.2	< 0.2	-	-	-	< 0.2	< 0.2	-	-	-	< 0.2	-	-	< 0.002
4-Chloro-3-methylphenol	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	-	-	< 0.001
Pentachlorophenol	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	-	-	-	< 0.5	-	-	< 0.002
Phenol	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.001
TOTAL RECOVERABLE HYDROCARBONS																			
T.R.H. C6-C9 Fraction by GC	<50	<50	-	<20	-	<50	<50	-	<20	-	<50	<50	-	<20	-	<50	<20	-	< 0.05
T.R.H. C10-C14 Fraction by GC	<100	<100	-	<20	-	<100	<100	-	<20	-	<100	<100	-	<20	-	<100	<20	-	< 0.1
T.R.H. C15-C28 Fraction by GC	<100	<100	-	<50	-	<100	<100	-	<50	-	<100	<100	-	<50	-	<100	<50	-	< 0.1
T.R.H. C29-C36 Fraction by GC	<20	<20	-	<50	-	<20	<20	-	<50	-	<20	<20	-	<50	-	<20	<50	-	< 0.02

All concentrations are mg/L unless otherwise stated
NCD - Non Calculable Data
* Relative percentage difference of numerical pH not absolute hydrogen ion concentration

APPENDIX E – LABORATORY REPORTS

APPENDIX 7 – VALIDATION OF FILL IN REUSE AREA

Central West Precinct
Reuse Material Validation
Bus Station Site - Stage 1

Prepared for
Adelaide City Council

30 October 2006

Consulting Engineers and Scientists

Tierra Environment Pty. Ltd.
ABN: 84 111 615 680

71 Belair Road,
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515
general@tierra.com.au

Central West Precinct
Reuse Material Validation
Bus Station Site - Stage 1

Prepared for
Adelaide City Council

30 October 2006

Document Status	Name	Signature	Date
Approved for Issue ☐	Prepared by Daryl Burrows		20/09/2006
Revision B	Reviewed by Elmar Schaffeler		30/10/2006

1 INTRODUCTION

1.1 General

This Reuse Material Validation Report has been prepared by Tierra Environment for the Adelaide City Council. It contains validation results for fill materials reused on site in the Reuse Area. Remediation and validation measures for reused materials are based on the following documents:

- Remediation Action Plan (Tierra Environment, 30 September 2005)
- Validation Plan (Tierra Environment, 7 December 2005)
- Materials Tracking Plan ((Tierra Environment, 7 December 2005)

The remediation works were based on the excavation and on site reuse or off site disposal of selected materials.

Validation testing was undertaken on reused materials once placed and compacted in the Reuse Area. This area was a purposely excavated pit established in validated natural ground (refer to the Base of Excavation Validation Report prepared by Tierra Environment). The Reuse Area will be located in a portion of the site covered with pavement and subject to public open space use.

1.2 Summary of remediation activities

The following activities were undertaken to achieve the remediation goals for the reused materials:

- Excavation of fill materials in fill reuse areas (this included the removal of at least 100mm of natural materials at the base of the fill layer) and stockpiling elsewhere on site on top of fill materials
- Inspection of the base of excavated areas by an environmental engineer/scientist to ensure all fill was removed
- Excavation of natural soils in fill reuse areas to a sufficient depth to contain all reused materials and the 1m capping material
- Survey of the base and horizontal extent of the Reuse Area by a licensed surveyor engaged by the contractor
- Filling of Reuse Area by the progressive placement of fill materials in layers followed by compaction to a specified dry density suitable for geotechnical purposes to support future structures
- Survey of the surface of the reuse materials by a licensed surveyor
- Placement of a synthetic identification/marking layer over top of reused material
- Placement of clay materials over the marker layer and compaction to a specified dry density suitable for geotechnical purposes to support future structures
- Completion of filling in the Reuse Area by placement of approximately 200mm of subgrade (imported quarry rubble)
- Testing of stockpiled materials for off site disposal
- Removal of surplus materials to off site locations

2 GENERAL VALIDATION TESTING REQUIREMENTS

2.1 Need for validation testing

Previous investigations revealed that fill materials contained metals and PAH. The Environmental Auditor requested that validation testing be undertaken once the fill was placed in the Reuse Area.

2.2 Proposed land use

The Adelaide City Council advised that after remediation the site would need to be suitable for commercial and industrial land uses, or open space land use.

2.3 Target criteria

The Environmental Auditor provided Clean Up Goals, which are listed in summary results tables in Appendix C. In addition the results were compared with the National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM) Health Investigation Levels (HIL) A and D and Ecological Investigation Level (EIL) criteria, and Southern Waste Depot disposal criteria.

2.4 General sampling standards

Sampling was required to be performed generally in accordance with Australian Standards AS4482.1-1997 "Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 1: Non-volatile and semi-volatile compounds" and AS4482.2-1999 "Guide to the sampling and investigation of potentially contaminated soil, Part 2: Volatile substances".

2.5 Sampling density

The sampling density for reused fill materials was stipulated to be one sample per 100m^3. The volume of materials placed in the reuse area was estimated to be 8,100m^3 by Hansen Yuncken during remediation works. A density of one sample per 76m^3 was achieved as survey results indicated that the volume of reused materials 6,850m^3.

2.6 Sampling strategy

A systematic sampling pattern was used, consisting of a rectangular grid pattern and collection of samples from various depth intervals at identical locations. Sampling locations were positioned with the use of a grid system marked on the perimeter fencing of the site.

2.7 Sampling parameters

Validation testing was undertaken for metals and PAH, in addition to pH determination and PID screens for volatile constituents.

In addition 10% of all samples were analysed for VIC EPA screen.

In accordance with the requirements of the Environmental Auditor 50% of all samples were tested for leachability in accordance with AS 4439.3, at two different pH values.

2.8 Compliance requirements

The validation results were required to comply with the target criteria listed on summary results sheets in Appendix C.

The assessment using the Environmental Auditor's Clean Up Goals was undertaken using the statistical analyses stipulated in the National Environment Protection (Assessment of Site Contamination) Measure 1999 – Schedule B (7A), Notes to Table 11-A, and using the 95%UCL of the arithmetic mean of the results.

The assessment using NEPM criteria and waste disposal criteria was undertaken using the 95%UCL of the arithmetic mean of the results.

3 SCOPE OF WORK

3.1 Soil sampling

Soil sampling in the Reuse Area was undertaken between 7 June 2006 and 3 July 2006 and involved the following activities:

- **Reuse Area filling.** The reuse pit consisted of two pits which were progressively refilled in approximate 300mm to 400mm layers. The first pit was approximately 30m long by 25m wide by 6m deep and the second pit which was immediately to the south and adjoining the first pit was approximately 25m long by 25m wide by 8m deep. The base, walls and top surface of the reused fill and were surveyed by a licensed surveyor.
- **Sampling set out.** A rectangular sampling grid was used for each of the reuse pits. A plan showing sampling locations is presented in Appendix A. Generally 2 to 3 sampling locations were used per layer based on each layer's thickness. To minimise bias and generate data representative of the material as a whole all sampling locations were predetermined prior to sighting the materials. This approach was based on the observation that the types of material were consistent.
- **Sampling location establishment.** Each sampling location was allocated a unique number (1 to 18), which was recorded in the sampling book along with the number of a sample and the layer/lift.
- **Soil logging.** Materials collected in sample jars for submission to the laboratory were logged. Specific characteristics of the materials, such as moisture content, colour and particle size were observed and noted on the sample register, which is provided in Appendix B.
- **Sampling preparation**. Sample jars were labelled prior to commencing site works. Sample jars were labelled as follows:
  - 1RF##-&
  - '1' is a common number for all samples collected during the works and represents the first stage of the bus station redevelopment.
  - 'RF' stands for reused fill.
  - '##' denotes the sampling number
  - '&' is the sample designation and is either A, X or Y where A is used for the primary sample, X is used for the intra laboratory duplicate and Y is used for the inter laboratory duplicate.
- **Sampling.** Samples were collected by hand from the top of each layer. Disposable gloves were used for each sample to avoid cross-contamination. Sample jars were kept in an esky with ice until transportation to the laboratory.
- **Quality sampling**. Quality sampling was undertaken at approximately the rates indicated below:

Quality Sampling	Rate
Intra Laboratory Duplicate	1 per 20 regular samples
Inter Laboratory Duplicate	1 per 20 regular samples

The procedure for collecting quality samples was the same as for normal samples, but portions of the material were sequentially added to each jar to ensure the samples were as analogous as possible.

- **On-site screening**. When a sample was collected from a sampling location some of the same material was collected separately from any laboratory samples and screened for volatile organic carbon using a MiniRae 2000 Photo-Ionisation Detector (PID) which was calibrated prior to use. Samples were placed in sealed plastic bags and stored in the shade prior to screening. After approximately three to five minutes of equilibration or at the completion of a sampling event, the bagged materials were tested using the PID. The readings are presented in the sample register provided in Appendix B.

- **Tracking of samples**. Tracking of samples was undertaken using Chain of Custody (COC) documentation. COCs were sent to the laboratory with instructions of required analyses. The laboratory checked the condition and number of samples, and signed and returned by fax a copy of the COC to confirm receipt of samples.

3.2 Analytical testing

The following scope of analytical testing was undertaken:

- Analysis of all samples for pH, metals and PAH
- Analysis of 10% of samples for Vic EPA Screen
- Analysis of every second sample for leachability (in accordance with AS 4439.3) for metals and PAH at an leaching fluid pH 7.0 (representative of stormwater) and pH 9.0 (representative of field soil pH)
- PID field analysis of material for volatile organic carbon
- Collection and analysis of intra laboratory and inter laboratory duplicate samples.

Analyses of soil samples were conducted by MGT Environmental Consulting Pty Ltd. The laboratory holds National Association of Testing Authorities (NATA) registration for the parameters listed below:.

Parameter	Analytical Method	Limits of Reporting (mg/kg)	Number of Samples Tested
pH (unitless)	APHA Standard Methods 19th Edition 1995	0.1	90+ (5 + 5) quality
% Moisture	ANZECC Method 102	0.1	90 + (5 + 0) quality
Metals Screen	US EPA 6010B (ICP), USEPA 6020, 7470/1 (CVAA)	Various	90+ (5 + 5) quality
MAH	US EPA SW846 Methods 8260B & MGT Method 350A	0.05	10 + (5 + 5) quality
PAH	US EPA SW846 Method 8270C(GC/MS)	0.1	90+ (5 + 5) quality
TRH	MGT Method 100A-GC	Various (20-100)	10 + (5 + 5) quality
Phenols & Cresols	USEPA SW846 8270C	0.1, 0.2 or 0.5	10 + (5 + 5) quality
Cyanide	US EPA SW846 Method 9010B	5	10 + (5 + 5) quality
Chlorinated Hydrocarbons	US EPA SW846 Method 8121B	0.05 or 0.2	10 + (5 + 0) quality
Organochlorine Pesticides	US EPA SW846 Method 8081A	0.05 or 0.1	10 + (5 + 5) quality
Organophosphorus Pesticides	US EPA SW846 Method 8141A	0.2	10 + (5 + 5) quality
Polychlorinated Biphenyls	US EPA SW846 Method 8082	0.1	10 + (5 + 5) quality

Note – Units are in mg/kg unless otherwise stated.
Quality in the table (within brackets) refers to intra and inter laboratory duplicates respectively. Inter laboratory duplicates were undertaken by WSL Ecowise (NATA registered).

4 QUALITY

4.1 General

Tierra Environment conducts investigations in accordance with the principles of quality assurance and quality control (QA/QC). The 'National Environment Protection (Assessment of Site Contamination) Measure, 1999', states that a quality assurance system is 'actions, procedures, checks and decisions to ensure representativeness and integrity of samples and accuracy and reliability of analysis results'. It goes on to say that the system involves 'selection of appropriate sampling and presentation methods, documentation and sample storage, cleaning of tools before sampling and between samples, cleaning of containers, maintenance of sample environment to minimise sample contamination and analyte losses, delivery to the laboratory in good condition and within timeframes required for the particular analytes'.

The Tierra QA/QC principles include:

- Use of established procedures and suitably qualified field personnel for environmental sampling
- Documentation of chain-of-custody and sample handling and storage
- Use of NATA registered laboratories
- Use of field duplicates samples and trip blank samples

Quality of project outputs is maintained by ensuring:

- All staff are appropriately trained
- Safety standards are defined and implemented
- Good housekeeping practices are adopted during all phases of the project
- Complete records of fieldwork, samples and data are maintained

Specific quality control procedures conducted for this project include:

- The use of appropriate sample collection and handling procedures
- The use of appropriately skilled and experienced personnel
- The application of decontamination procedures where appropriate to minimise cross contamination
- The extraction and analysis within appropriate handling times
- The use of an independent, NATA accredited laboratory for analysis
- The collection and analysis of blind duplicates, split duplicates, and internal laboratory duplicates and matrix spike/matrix spike duplicates

4.2 Field QA/QC procedures

The laboratory supplied clean jars for soil samples. The jars were labelled prior to field work based on the predetermined sampling program. On site the jars were filled with soil and stored in an esky with ice. At the end of each day samples were stored in a refrigerator if not sent to the laboratory. During transportation to the laboratory the samples were packed in an esky with ice and packaging to avoid damage.

Blind (intra-laboratory) samples and split (inter-laboratory) duplicate sample were collected at rates specified above.

4.3 Laboratory QA/QC procedures

During the analysis of samples, the analytical laboratories conducted internal QA/QC procedures including the analysis of laboratory duplicates, laboratory spiked samples and method blank samples. All percentage recoveries for laboratory spiked sample analyses were within the acceptance criteria of 60-140%. Similarly all results of method blank samples are of an acceptable quality. Spiked sample and method blank sample results are provided in Appendix E.

4.4 Duplicates

Duplicate samples were collected to provide an indication of the reliability of the sampling and analysis process. Duplicate soil samples were analysed for the full range of parameters. Duplicate soil sample results are presented in final laboratory reports in Appendix E and in the quality assessment data provided in Appendix D.

Relative Percentage Differences (RPDs) for intra-laboratory and inter-laboratory duplicate samples were calculated and are presented in Appendix D. It was noted that several elevated RPDs were observed for samples where results were relatively low and close to the limits of laboratory reporting, or where limits of reporting differed between laboratories. It was also noted that some RPDs were high for sample results not near the limits of reporting. However this is not uncommon in heterogeneous soil matrices.

4.5 QA/QC discussion

Quality assurance and quality control was conducted based upon Tierra Environment's environmental investigation principles to ensure that data of known quality is reported.

The required scope of sample numbers, analytical testing, and quality testing was achieved

Specific aspects of the project used to maintain QA/QC were:

- Field Procedures – The investigations, including the collection of duplicates, is of a standard that provides confidence in the quality of the samples collected.
- Analytical Procedures – The laboratory's internal QA/QC results indicate that analytical information provided by the laboratory is reliable.
- Intra Laboratory Duplicate Samples – The obtained laboratory results are considered representative of the materials subjected to testing. In addition the primary laboratory results proved to be reliable.
- Inter Laboratory Duplicate Samples – The results indicate that there was no bias in the analysis as a consequence of the selection of the laboratory

Based on the QA/QC information available for this project, the results are of an appropriate standard and can be used as part of a basis of interpretation of site conditions.

5 RESULTS

5.1 Assessment criteria

The laboratory results for soil were assessed against the Auditor's Clean Up Goals as presented in Appendix C with the summary results. In addition the results were compared with NEPM A, D and EIL criteria and Southern Waste Depot disposal criteria.

5.1.1 Statistics

Statistical calculations such as the mean, standard deviation and 95% upper confidence level of the arithmetic mean (95%UCL) were undertaken for each analyte detected at concentrations above the limit of reporting. The confidence statistic provides a measure of the uncertainty of the estimate of the population proportion, i.e. there is a 95% confidence that the true unknown mean of the population portion is in the computed interval. The standard deviation and 95%UCL were only calculated where there were three or more samples in the data set.

The 95%UCLs were calculated based on the assumption of normal data distribution, which was considered sufficient given that the 95%UCL results were not close to the Auditor's Clean Up Goals. As a precautionary measure a reassessment of data distribution and recalculation of 95%UCL values was undertaken for PAH and B(a)P as the main contaminants of concern. using a computer program ProUCL 3.0, developed for the US EPA.

In some instances individual samples exceeded guideline levels, however it is believed that the mean and 95%UCL values relating to the average quality of material over the entire reuse area are more relevant. This approach is suggested as the material is contained in a small area beneath pavement, subgrade and a clay liner, hence no individual point source is likely to have a significant effect.

The mean and 95%UCL of sample sets was assessed against the criteria described above.

For statistical purposes, all values below the laboratories' limits of reporting (LOR) were substituted with a value equal to 50% of the LOR.

5.2 Results and discussion

5.2.1 Soil description and PID survey

Soil descriptions are provided on the sample register (refer Appendix B). Soil samples were screened for volatile organic carbon with a PID calibrated prior to commencing works. All PID readings were less than 5.4ppm.

5.2.2 pH

There was no Auditor's Clean Up Goal for pH. All sample results were between 8.4 and 9.6. This is considered consistent with natural clays and calcretes in the area. As a precaution leachability assessment of metals and PAH were undertaken at a pH of 9.0 representative of field pH in addition to a pH of 7.0 representative of stormwater.

5.2.3 Metals

The Auditor's Clean Up Goals for metals are presented in the summary results in Appendix C. All individual sample results and means and 95% UCLs for each metal data set meet the Auditor's criteria.

The results were also compared with the NEPM A, D and EIL criteria and Southern Waste Depot disposal criteria presented in Appendix C.

5.2.4 Total PAH

The most stringent Auditor's Clean Up Goal for total PAH was used for the assessment of results, i.e. those applying to beneath pavements. The 95% UCL meets the Auditor's criteria. In addition PAH results comply with NEPM HIL A and D, and Southern Waste Depot intermediate landfill cover and low level contaminated waste disposal criteria.

5.2.5 B(a)P

The most stringent Auditor's Clean Up Goal for benzo(a)pyrene was used for the assessment of results, i.e. those applying to beneath pavements. The 95% UCL meets the auditor's criteria. In addition B(a)P results comply with NEPM HIL A and D, and Southern Waste Depot waste fill, intermediate landfill cover and low level contaminated waste disposal criteria.

5.2.6 OCP

The Auditor did not specify any OCP criteria. The results obtained for OCPs comply with the NEPM and Southern Waste Depot disposal criteria.

5.2.7 Other analytes

The results of all other analytes are less than the limits of reporting. As all limits of reporting are below the Auditor's, NEPM and Southern Waste Depot disposal criteria, the results of all other analytes comply with the relevant criteria.

5.2.8 TCLP assessment of metals and PAH

The TCLP assessment was undertaken at two pH values, pH 7.0 (representative of stormwater) and pH 9.0 (representative of field soil pH). Every second sample was analysed. for both pH values.

It was found that Naphthalene was leached from twelve samples at levels close to the limits of reporting and Acenaphthene and Phenanthrene were leached from two samples at levels close to the limits of reporting.

Some leaching of metals was observed. All eight metals observed to be leachable (arsenic, chromium, copper, lead, mercury, zinc, antimony and vanadium) were found to have means and 95% UCLs relatively close to the limits of reporting.

Given the low leachability rates and the placement of these materials below pavement with stormwater controls and a clay layer, it appears unlikely that mobilisation of these metals will occur in the future.

6 CONCLUSIONS

In summary, the following conclusions are provided:

Reuse material appearance	Reuse materials were of similar appearance to fill and natural materials observed on site during previous investigations
Sampling density	The sampling density was agreed with the Environmental Auditor and was complied with. The investigations provided sufficient grid based sampling to provide reasonable confidence in the average quality of material across the reuse area.
Data quality	QA/QC standards were agreed with the Environmental Auditor and were considered acceptable.
Results of metals and PAH within the reuse area	The tested materials meet the Auditor's criteria, NEPM HIL A and D and Southern Waste Depot's intermediate landfill cover and low level contaminated waste criteria
Concentration of other chemicals within the reuse area	All individual samples analysed for other chemicals and their statistics meet the Auditor's criteria, NEPM HIL A and D and Southern Waste Depot's waste fill, intermediate landfill cover and low level contaminated waste criteria
TCLP assessment of metals and PAH	Observed leachabilities are low and there appear to be low potential for mobilisation of contaminants under current site conditions.

Based on the results presented in this report it appears that fill materials in the Reuse Area meet the Auditor's Clean Up Goals.

7 LIMITATIONS OF USE

Site contamination is generally a product of man-made processes and therefore exhibits characteristics and properties that vary from place to place and can change with time. Contamination assessments involve gathering and assimilating limited facts about these characteristics and properties in order to better understand or predict the status of contamination on a particular site under certain conditions.

The facts reported and utilised in this document may have been obtained by inspection, excavation, probing, sampling, testing, and other means of investigation or from the client. They are directly relevant only to the ground at the place where and time when an investigation was carried out.

Any interpretation or recommendation given in this report is based on judgment and experience and not on greater knowledge of the facts than the sources of information indicate. The interpretations and recommendations are opinions provided for the sole use by the Client identified on the cover sheet and in accordance with a specific brief.

Tierra does not represent that the information or interpretation contained in this document addresses completely existing features such as surface and subsurface contamination, groundwater and geotechnical conditions or ground or contamination behaviour on the subject site.

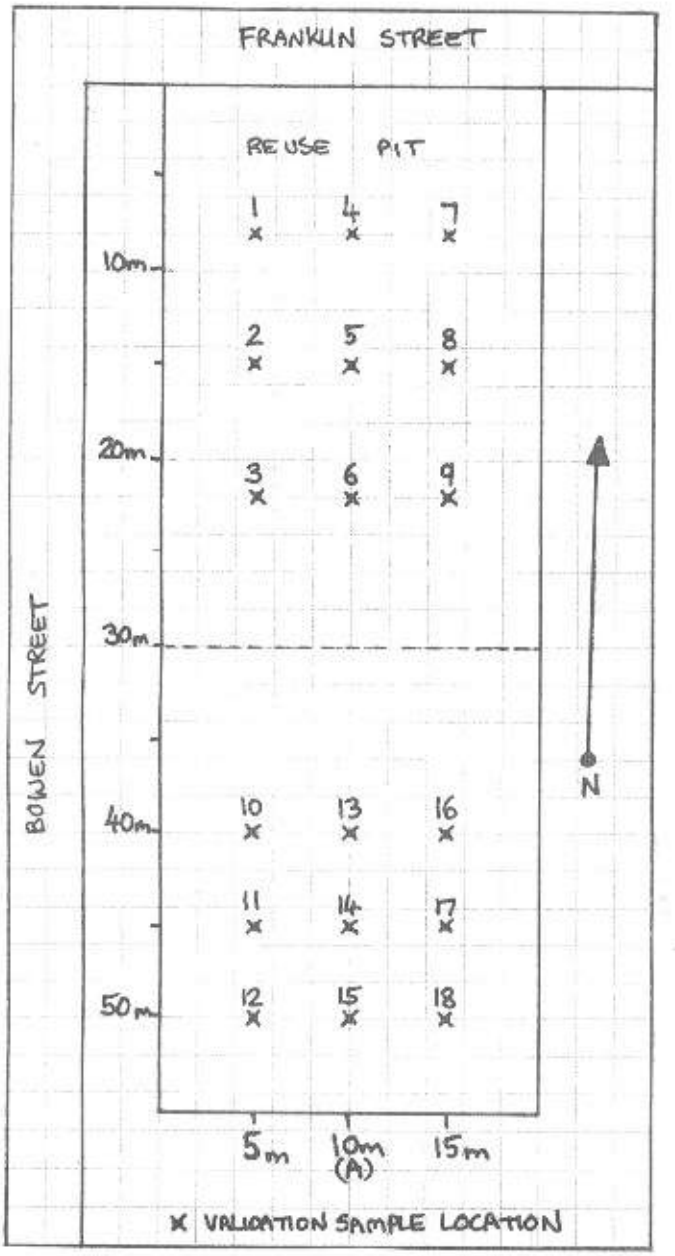
The responsibility of Tierra Environment Pty Ltd is solely to its Client. It is not intended that this document be relied upon by any third party, other than the Environment Protection Authority or an Environmental Auditor (engaged by the Client) for the purpose of a contaminated land audit. Tierra does not undertake any duty or accept any responsibility to any other parties who may rely upon this document

APPENDIX A – SITE PLANS

Project:	Bus Station Redevelopment	Project No:	AAA 05 002 02
Principal:	Adelaide City Council	Date:	27/06/2006
Contractor:	P.D Excavations	Plan No.	**BS0001**
Description:	Validation Locations in Reuse Pit		

Tierra Environment Pty Ltd
ABN: 84 111 615 680

71 Belair Road,
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515
general@tierra.com.au



APPENDIX B – ENVIRONMENTAL SAMPLE REGISTER

Sample Number	Duplicate Samples	Collection Date	Stage	Plan #:	Location	Lift	Depth interval of lift (m)	Height from base of pit (m)	COC#	PID	Primary Lab	Secondary Lab	Analyses	Description of Material	Comments	Report #	Complies
1RF1-A	X & Y	7/06/2006	1	BS0001	1	1	0.3	0.3	S0017 & S0018	2.5	MGT	WSL	VIC EPA SCREEN, pH and TCLP VIC EPA SCREEN	Silty Gravelly Sandy CLAY, brown, moist, gravel angular to 50mm, sand variable fine to coarse, minor masonry		194986 & 952164	Yes
1RF2-A	Nil	7/06/2006	1	BS0001	8	1	0.3	0.3	S0017	1.6	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Silty Gravelly Sandy CLAY, brown, moist, gravel angular to 50mm, sand variable fine to coarse, minor masonry		194986, 194987 &	Yes
1RF3-A	Nil	7/06/2006	1	BS0001	7	2	0.3	0.6	S0017	0.2	MGT	NA	Metals screen, Hg, PAH and pH	Sandy Gravelly CLAY, tan, moist, sand variable fine to coarse, gravel subangular to 40mm		194986	Yes
1RF4-A	Nil	7/06/2006	1	BS0001	2	2	0.3	0.6	S0017	0.6	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Sandy Gravelly CLAY, tan, moist, sand variable fine to coarse, gravel subangular to 40mm		194986, 194987 &	Yes
1RF5-A	Nil	7/06/2006	1	BS0001	4	3	0.5	1.1	S0017	1.6	MGT	NA	Metals screen, Hg, PAH and pH	Sandy Gravelly CLAY, light tan, moist, sand variable fine to coarse, gravel subangular to 40mm		194986	Yes
1RF6-A	Nil	7/06/2006	1	BS0001	3	3	0.5	1.1	S0017	3.5	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Sandy Gravelly CLAY, light tan, moist, sand variable fine to coarse, gravel subangular to 40mm		194986, 194987 &	Yes
1RF7-A	Nil	7/06/2006	1	BS0001	9	3	0.5	1.1	S0017	1.8	MGT	NA	Metals screen, Hg, PAH and pH	Sandy Gravelly CLAY, tan, moist, sand variable fine to coarse, gravel subangular to 40mm, minor masonry and minor slag		194986	Yes
1RF8-A	Nil	8/06/2006	1	BS0001	5	4	0.3	1.4	S0017	3	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Sandy Gravelly CLAY, light tan, moist, sand variable fine to medium grain, gravel angular to 30mm, minor slag		194986, 194987 &	Yes
1RF9-A	Nil	8/06/2006	1	BS0001	1	4	0.3	1.4	S0017	1	MGT	NA	Metals screen, Hg, PAH and pH	Sandy Gravelly CLAY, tan brown, moist, sand variable fine to coarse, gravel angular to 50mm, minor slag and ash		194986	Yes
1RF10-A	Nil	8/06/2006	1	BS0001	6	5	0.3	1.7	S0017	0.2	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Sandy Gravelly CLAY, dark tan, moist, sand variable fine to medium grain, gravel subangular to 40mm, minor masonry and minor slag		194986, 194987 & 194988	Yes
1RF11-A	Nil	8/06/2006	1	BS0001	2	5	0.3	1.7	S0017	1	MGT	NA	Metals screen, Hg, PAH and pH	Sandy Gravelly CLAY, tan, moist, sand variable fine to coarse, gravel subangular to 30mm, minor masonry and minor slag		194986	Yes
1RF12-A	Nil	8/06/2006	1	BS0001	8	6	0.3	2	S0017	1.2	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Sandy CLAY/Gravelly Clayey SAND, dark tan, moist, sand variable fine to very coarse, gravel angular to 40mm		194986, 194987 & 194988	Yes
1RF13-A	Nil	8/06/2006	1	BS0001	7	6	0.3	2	S0017	0.6	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Sandy CLAY/Gravelly Clayey SAND, dark tan, moist, sand variable fine to very coarse, gravel angular to 40mm		194986	Yes
1RF14-A	Nil	8/06/2006	1	BS0001	2	7	0.4	2.4	S0017	1.1	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Sandy CLAY, light tan, dry, gravel angular to 30mm, sand variable fine to very coarse		194986, 194987 &	Yes
1RF15-A	Nil	8/06/2006	1	BS0001	4	7	0.4	2.4	S0017	0.8	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Sandy CLAY, dark tan, moist, gravel subangular to 20mm, sand variable fine to medium grain, minor pieces of plastic, slag and shells		194986	Yes
1RF16-A	Nil	8/06/2006	1	BS0001	9	8	0.3	2.7	S0119	1.4	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Sandy CLAY, dark tan, moist, gravel angular to 30mm, sand variable fine to very coarse		195102, 195103 &	Yes
1RF17-A	Nil	8/06/2006	1	BS0001	1	8	0.3	2.7	S0119	1.2	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Sandy CLAY, dark tan, moist, gravel subangular to 20mm, sand variable fine to medium grain	lots of slag and/or ash	195102	Yes
1RF18-A	Nil	9/06/2006	1	BS0001	5	9	0.3	3	S0119	1	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Sandy CLAY, dark tan, moist, gravel angular to 30mm, sand variable fine to very coarse, minor masonry and slag		195102, 195103 & 195104	Yes
1RF19-A	Nil	9/06/2006	1	BS0001	3	9	0.3	3	S0119	0.3	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Sandy CLAY, dark tan, moist, gravel angular to 20mm, sand variable fine to very coarse, minor masonry	lots of slag and/or ashphalt	195102	Yes
1RF20-A	Nil	9/06/2006	1	BS0001	6	10	0.4	3.4	S0119	1.3	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Sandy CLAY, dark tan, dry, hard, sand variable fine to medium grain, subangular gravel to 40mm, minor masonry		195102, 195103 &	Yes
1RF21-A	X & Y	9/06/2006	1	BS0001	7	10	0.4	3.4	S0019 & S0120	2	MGT	WSL	VIC EPA SCREEN and pH	Gravelly Sandy CLAY, tan brown, moist, sand variable fine to very coarse, subangular gravel to 20mm, minor slag and ash		195102 & 952732	Yes
1RF22-A	Nil	9/06/2006	1	BS0001	4	11	0.3	3.7	S0119	0.9	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Sandy CLAY, dark tan, moist, sand variable fine to coarse, gravel angular to 20mm, minor masonry and slag		195102, 195103 &	Yes
1RF23-A	Nil	9/06/2006	1	BS0001	9	11	0.3	3.7	S0119	1.3	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Sandy CLAY, dark tan, moist, sand variable fine to coarse, gravel angular to 20mm, minor masonry and slag		195102	Yes
1RF24-A	Nil	13/06/2006	1	BS0001	3	12	0.4	4.1	S0119	0.1	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Sandy CLAY, brown, tan, moist, sand variable fine to very coarse, minor subangualr gravel to 30mm, minor masonry		195102, 195103 &	Yes
1RF25-A	Nil	13/06/2006	1	BS0001	8	12	0.4	4.1	S0119	0.3	MGT	NA	Metals screen, Hg, PAH and pH	Sandy CLAY, brown, tan, moist, sand variable fine to very coarse, minor subangualr gravel to 30mm, minor masonry		195102	Yes
1RF26-A	Nil	13/06/2006	1	BS0001	6	13	0.5	4.6	S0119	1.3	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Clayey Gravelly SAND, tan, dry, hard, gravel angular to 30mm, sand variable fine to medium grain, minor masonry		195102, 195103 &	Yes
1RF27-A	Nil	13/06/2006	1	BS0001	5	13	0.5	4.6	S0119	1.1	MGT	NA	VIC EPA SCREEN and pH	Gravelly Sandy CLAY, brown tan, slightly moist, sand fine grain, gravel subangular to 30mm	patches of dark brown and olive clay in this location	195102	Yes
1RF28-A	Nil	13/06/2006	1	BS0001	1	13	0.5	4.6	S0119	1.8	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Clayey Sandy GRAVEL, tan, dry, angular gravel to 40mm, minor masonry	lots of slag and/or ash	195102, 195103 &	Yes

Sample Number	Duplicate Samples	Collection Date	Stage	Plan #:	Location	Lift	Depth interval of lift (m)	Height from base of pit (m)	COC#	PID	Primary Lab	Secondary Lab	Analyses	Description of Material	Comments	Report #	Complies
1RF29-A	Nil	13/06/2006	1	BS0001	2	14	0.4	5	S0119	1.2	MGT	NA	Metals screen, Hg, PAH and pH	Silty Gravelly Sandy CLAY, grey brown, moist, sand variable fine to coarse grain, gravel angular to subangular to 20mm, minor masonry		195102	Yes
1RF30-A	Nil	13/06/2006	1	BS0001	7	14	0.4	5	S0119	0.9	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Silty Gravelly Sandy CLAY, grey brown, moist, sand variable fine to coarse grain, gravel angular to subangular to 30mm, minor masonry		195102, 195103 & 195104	Yes
1RF31-A	Nil	13/06/2006	1	BS0001	4	14	0.4	5	S0119	1.5	MGT	NA	VIC EPA SCREEN and pH	Gravelly Sandy CLAY, tan grey, dry, hard, sand variable fine to coarse grain, gravel angular to 20mm.		195102	Yes
1RF32-A	Nil	14/06/2006	1	BS0001	8	15	0.4	5.4	S0124	0.7	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Silty Gravelly Clayey SAND, brown, moist, sand variable fine to medium grain, gravel angular ton 20mm	lots of slag, masonry and glass in this lift	195150, 195151 &	Yes
1RF33-A	Nil	14/06/2006	1	BS0001	3	15	0.4	5.4	S0124	1	MGT	NA	Metals screen, Hg, PAH and pH	Silty Gravelly Sandy CLAY, tan brown, moist, sand variable fine to medium grain, gravel angular ton 20mm	lots of slag, masonry and glass in this lift	195150	Yes
1RF34-A	Nil	14/06/2006	1	BS0001	6	15	0.4	5.4	S0124	1.3	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Silty Gravelly Clayey SAND, brown, moist, sand variable fine to medium grain, gravel angular ton 20mm	lots of slag, masonry and glass in this lift	195150, 195151 &	Yes
1RF35-A	Nil	14/06/2006	1	BS0001	5	16	0.5	5.9	S0124	0.7	MGT	NA	Metals screen, Hg, PAH and pH	Silty Gravelly Sandy CLAY, orange tan, moist, sand variable fine to medium grain, gravel angular ton 20mm	lots of slag, masonry and some pieces of wood in this lift	195150	Yes
1RF36-A	Nil	14/06/2006	1	BS0001	9	16	0.5	5.9	S0124	1.6	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Sandy CLAY, brown tan, slightly moist, sand fine grain, gravel subangular to 20mm		195150, 195151 &	Yes
1RF37-A	Nil	15/06/2006	1	BS0001	1	17	0.5	6.4	S0127	0.2	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Sandy CLAY, brown orange, dry, sand variable fine to coarse grain, gravel angular to 20mm	minor slag and plastic	195213	Yes
1RF38-A	Nil	15/06/2006	1	BS0001	3	17	0.5	6.4	S0127	0.3	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Sandy CLAY, brown orange, dry, sand variable fine to coarse grain, gravel angular to 20mm	minor slag and plastic	195213, 195214 &	Yes
1RF39-A	Nil	15/06/2006	1	BS0001	5	17	0.5	6.4	S0127	0.8	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Clayey SAND, brown, slightly moist, sand variable fine to coarse grain, gravel angular to 30mm		195213	Yes
1RF40-A	Nil	15/06/2006	1	BS0001	7	17	0.5	6.4	S0127	1.5	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Sandy CLAY, brown, slightly moist, sand variable fine to coarse, minor angular gravel to 20mm		195213, 195214 &	Yes
1RF41-A	X & Y	16/06/2006	1	BS0001	2	18	0.5	6.9	S0130 & S0133	2.2	MGT	WSL	VIC EPA SCREEN and pH	Gravelly Sandy Silty CLAY, brown to tan brown, moist, sand variable fine to very coarse, gravel angular to 20mm		195302 & 954448	Yes
1RF42-A	Nil	16/06/2006	1	BS0001	4	18	0.5	6.9	S0130	2.3	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Sandy Silty CLAY, brown to tan brown, moist, sand variable fine to very coarse, gravel angular to 20mm		195302, 195303 &	Yes
1RF43-A	Nil	16/06/2006	1	BS0001	8	18	0.5	6.9	S0130	2.3	MGT	NA	Metals screen, Hg, PAH and pH	Silty Clayey Gravelly SAND, tan brown, moist, sand variable fine to very coarse, gravel angular to 20mm		195302	Yes
1RF44-A	Nil	16/06/2006	1	BS0001	9	18	0.5	6.9	S0130	0	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Silty Clayey Gravelly SAND, tan brown, moist, sand variable fine to very coarse, gravel angular to 20mm		195302, 195303 &	Yes
1RF45-A	Nil	27/06/2006	1	BS0001	10	1	0.5	0.5	S0150	0	MGT	NA	Metals screen, Hg, PAH and pH	Silty Gravelly Sandy CLAY, tan brown, dry, sand variable fine to very coarse, angular gravel 10 40mm	lots of slag	195620	Yes
1RF46-A	Nil	27/06/2006	1	BS0001	14	1	0.5	0.5	S0150	0.7	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Silty Gravelly Sandy CLAY, tan brown, dry, sand variable fine to very coarse, angular gravel 10 40mm	minor slag	195620, 195621 &	Yes
1RF47-A	Nil	27/06/2006	1	BS0001	18	1	0.5	0.5	S0150	0.3	MGT	NA	Metals screen, Hg, PAH and pH	Silty Gravelly Sandy CLAY, tan brown, dry, sand variable fine to very coarse, angular gravel 10 40mm		195620	Yes
1RF48-A	Nil	27/06/2006		BS0001	16	2	0.5	1	S0150	0	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Sandy CLAY, brown, moist, sand variable fine to coarse grain, minor angular gravel to 10mm		195620, 195621 &	Yes
1RF49-A	Nil	27/06/2006	1	BS0001	17	2	0.5	1	S0150	0	MGT	NA	Metals screen, Hg, PAH and pH	Sandy CLAY, brown, moist, sand variable fine to coarse grain, minor angular gravel to 10mm		195620	Yes
1RF50-A	Nil	27/06/2006	1	BS0001	11	2	0.5	1	S0150	0	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Sandy CLAY, brown, moist, sand variable fine to coarse grain, minor angular gravel to 10mm		195620, 195621 &	Yes
1RF51-A	Nil	27/06/2006		BS0001	13	3	0.5	1.5	S0150	0	MGT	NA	VIC EPA SCREEN and pH	Gravelly Slagey SAND, tan brown, slightly moist, sand variable fine to coarse, gravel angular to 20mm		195620	Yes
1RF52-A	Nil	27/06/2006	1	BS0001	12	3	0.5	1.5	S0150	0	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Sandy CLAY, tan brown, moist, sand variable fine to coarse, gravel angular to 20mm		195620, 195621 &	Yes
1RF53-A	Nil	27/06/2006	1	BS0001	15	3	0.5	1.5	S0150	0	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Slagey SAND, tan brown, slightly moist, sand variable fine to coarse, gravel angular to 20mm		195620	Yes
1RF54-A	Nil	27/06/2006	1	BS0001	10	4	0.5	2	S0150	0	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Sandy CLAY, tan brown, moist, sand variable fine to coarse, gravel angular to 20mm		195620, 195621 &	Yes
1RF55-A	Nil	27/06/2006	1	BS0001	14	4	0.5	2	S0150	0	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Sandy CLAY, dark tan, dry, sand variable fine to coarse, gravel angular to 30mm		195620	Yes
1RF56-A	Nil	27/06/2006	1	BS0001	18	4	0.5	2	S0150	0	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Sandy Clayey GRAVEL, dark tan, dry, sand variable fine to very coarse, angular gravel to 15mm	minor slag	195620, 195621 &	Yes
1RF57-A	Nil	27/06/2006	1	BS0001	16	5	0.3	2.3	S0150	0	MGT	NA	Metals screen, Hg, PAH and pH	Sandy CLAY, red brown, slightly moist, sand fine to medium grain		195620	Yes
1RF58-A	Nil	27/06/2006	1	BS0001	17	5	0.3	2.3	S0150	0	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Sandy CLAY, red brown, slightly moist, sand fine to medium grain		195620, 195621 &	Yes
1RF59-A	Nil	27/06/2006	1	BS0001	11	5	0.3	2.3	S0150	0	MGT	NA	Metals screen, Hg, PAH and pH	Sandy CLAY, red brown, slightly moist, sand fine to medium grain	minor masonary & slag	195620	Yes

Sample Number	Duplicate Samples	Collection Date	Stage	Plan #:	Location	Lift	Depth interval of lift (m)	Height from base of pit (m)	COC#	PID	Primary Lab	Secondary Lab	Analyses	Description of Material	Comments	Report #	Complies
1RF60-A	Nil	28/06/2006	1	BS0001	13	6	0.5	2.8	S0153	0.2	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Sandy CLAY, tan, slightly moist, sand variable fine to coarse, gravel angular to 30mm	minor slag	195670, 195671 &	Yes
1RF61-A	X & Y	28/06/2006	1	BS0001	12	6	0.5	2.8	S0153 & S0154	0	MGT	WSL	VIC EPA SCREEN and pH	Sandy CLAY, red brown, slightly moist, sand fine to medium grain	minor slag	195670 & 957762	Yes
1RF62-A	Nil	28/06/2006	1	BS0001	15	6	0.5	2.8	S0153	0	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Sandy SAND, tan brown, slightly moist, sand variable fine to coarse, gravel angular to 20mm		195670, 195671 &	Yes
1RF63-A	Nil	28/06/2006	1	BS0001	10	7	0.5	3.3	S0153	0.7	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Sandy SAND, tan brown, slightly moist, sand variable fine to coarse, gravel angular to 20mm		195670	Yes
1RF64-A	Nil	28/06/2006	1	BS0001	14	7	0.5	3.3	S0153	1.4	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Sandy SAND, tan brown, slightly moist, sand variable fine to coarse, gravel angular to 20mm	minor slag and masonary	195670, 195671 &	Yes
1RF65-A	Nil	28/06/2006	1	BS0001	18	7	0.5	3.3	S0153	0.5	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Sandy CLAY, grey tan, slightly moist, sand variable fine to coarse, gravel angular grained to 10mm	minor masonary	195670	Yes
1RF66-A	Nil	29/06/2006	1	BS0001	16	8	0.4	3.7	S0157	1.5	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Sandy Gravelly CLAY, dark tan, dry, sand variable fine to very coarse grain, angular gravel to 40mm		195670, 195671 &	Yes
1RF67-A	Nil	29/06/2006	1	BS0001	17	8	0.4	3.7	S0157	0.9	MGT	NA	Metals screen, Hg, PAH and pH	Sandy Gravelly CLAY, dark tan, dry, sand variable fine to very coarse grain, angular gravel to 20mm	minor slag	195670	Yes
1RF68-A	Nil	29/06/2006	1	BS0001	11	8	0.4	3.7	S0157	1.1	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Sandy Gravelly CLAY, dark tan, dry, sand variable fine to very coarse grain, angular gravel to 40mm		195670, 195671 &	Yes
1RF69-A	Nil	30/06/2006	1	BS0001	13	9	0.3	4	S0158	0.6	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Clayey SAND, tan brown, moist, sand variable fine to coarse, angular gravel to 20mm		195814	Yes
1RF70-A	Nil	30/06/2006	1	BS0001	12	9	0.3	4	S0158	0.8	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Clayey SAND, dark tan , moist, sand variable fine to coarse, angular gravel to 20mm		195814, 195815 &	Yes
1RF71-A	Nil	30/06/2006	1	BS0001	15	9	0.3	4	S0158	0.2	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Clayey SAND, dark tan , moist, sand variable fine to coarse, angular gravel to 20mm, minor masonry to 40mm		195814	Yes
1RF72-A	Nil	30/06/2006	1	BS0001	10	10	0.5	4.5	S0158	1.1	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Clayey SAND, tan brown, moist, sand variable fine to coarse, angular gravel to 20mm	minor masonry and slag	195814, 195815 &	Yes
1RF73-A	Nil	30/06/2006	1	BS0001	14	10	0.5	4.5	S0158	1.7	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Clayey SAND, tan brown, moist, sand variable fine to coarse, angular gravel to 20mm	minor masonry and slag	195814	Yes
1RF74-A	Nil	30/06/2006	1	BS0001	18	10	0.5	4.5	S0158	2.3	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Clayey SAND, tan brown, moist, sand variable fine to coarse, angular gravel to 20mm	minor masonry and slag	195814, 195815 &	Yes
1RF75-A	Nil	30/06/2006	1	BS0001	16	11	0.5	5	S0158	0.4	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Clayey SAND, tan brown, moist, sand variable fine to coarse, angular gravel to 20mm		195814	Yes
1RF76-A	Nil	30/06/2006	1	BS0001	17	11	0.5	5	S0158	1.5	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Clayey SAND, tan brown, moist, sand variable fine to coarse, angular gravel to 20mm		195814, 195815 &	Yes
1RF77-A	Nil	30/06/2006	1	BS0001	11	11	0.5	5	S0158	1.8	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Clayey SAND, tan brown, moist, sand variable fine to coarse, angular gravel to 20mm		195814	Yes
1RF78-A	Nil	1/07/2006	1	BS0001	13	12	0.7	5.7	S0158	1.3	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Clayey SAND, dark brown, moist, sand variable fine to coarse, angular gravel to 20mm	minor slag	195814, 195815 &	Yes
1RF79-A	Nil	1/07/2006	1	BS0001	12	12	0.7	5.7	S0158	1.4	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Clayey SAND, dark tan, moist, sand variable fine to coarse, angular gravel to 20mm		195814	Yes
1RF80-A	Nil	1/07/2006	1	BS0001	15	12	0.7	5.7	S0158	1.2	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Clayey SAND, dark tan, moist, sand variable fine to coarse, angular gravel to 20mm		195814, 195815 &	Yes
1RF81-A	X & Y	1/07/2006	1	BS0001	10	13	0.5	6.2	S0158 & S0159	0.9	MGT	WSL	VIC EPA SCREEN and pH	Gravelly Clayey SAND, tan brown, very moist, sand variable fine to coarse, angular gravel to 20mm	minor slag	195814 & 959205	Yes
1RF82-A	Nil	1/07/2006	1	BS0001	14	13	0.5	6.2	S0158	1	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Clayey SAND, tan brown, very moist, sand variable fine to coarse, angular gravel to 20mm	minor slag	195814, 195815 &	Yes
1RF83-A	Nil	1/07/2006	1	BS0001	18	13	0.5	6.2	S0158	0.8	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Clayey SAND, tan brown, very moist, sand variable fine to coarse, angular gravel to 20mm	minor slag	195814	Yes
1RF84-A	Nil	3/07/2006	1	BS0001	16	14	0.5	6.7	S0158	5.4	MGT	NA	Metals screen, Hg, PAH and pH	Sandy CLAY, brown, moist, sand variable fine to coarse grain, minor gravel		195814, 195815 &	Yes
1RF85-A	Nil	3/07/2006	1	BS0001	17	14	0.5	6.7	S0158	1.4	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Gravelly Clayey SAND, dark brown, dry, sand variable fine to coarse, angular gravel to 20mm		195814	Yes
1RF86-A	Nil	3/07/2006	1	BS0001	11	14	0.5	6.7	S0158	2	MGT	NA	Metals screen, Hg, PAH and pH	Gravelly Clayey SAND, olive tan, very moist, sand variable fine to coarse, angular gravel to 20mm	minor slag	195814, 195815 &	Yes
1RF87-A	Nil	3/07/2006	1	BS0001	13	15	0.5	7.2	S0158	2.7	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Sandy Gravelly CLAY, dark tan, slightly moist, sand variable fine to coarse grain, gravel angular to 20mm	minor slag and masonary	195814	Yes
1RF88-A	Nil	3/07/2006	1	BS0001	12	15	0.5	7.2	S0158	1.4	MGT	NA	Metals screen, Hg, PAH and pH	Sandy Gravelly CLAY, tan, slightly moist, sand variable fine to coarse grain, gravel angular to 20mm	minor slag and masonary	195814, 195815 &	Yes
1RF89-A	Nil	3/07/2006	1	BS0001	15	15	0.5	7.2	S0158	1.5	MGT	NA	Metals screen, Hg, PAH, pH, TCLP of Metals + Hg & PAH	Sandy Gravelly CLAY, dark tan, slightly moist, sand variable fine to coarse grain, gravel angular to 20mm	minor slag and masonary	195814	Yes
1RF90-A	Nil	3/07/2006	1	BS0001	10	16	0.3	7.5	S0158	2.9	MGT	NA	Metals screen, Hg, PAH and pH	Sandy CLAY, tan olive, moist, minor gravel, sand variable fine to medium grain		195814, 195815 &	Yes

APPENDIX C – SUMMARY RESULTS

Central West Precinct

Reused Material Validation Sample Summary

Sample Number	1RF1-A	1RF2-A	1RF3-A	1RF4-A	1RF5-A	1RF6-A	1RF7-A	1RF8-A	1RF9-A	1RF10-A	1RF11-A	1RF12-A	1RF13-A	1RF14-A	1RF15-A	1RF16-A	1RF17-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN02460	06-JN02462	06-JN02463	06-JN02464	06-JN02465	06-JN02466	06-JN02467	06-JN02468	06-JN02469	06-JN02470	06-JN02471	06-JN02472	06-JN02473	06-JN02474	06-JN02475	06-JN03131	06-JN03132
MISCELLANEOUS ANALYSES																	
% Moisture	14	15	15	14	16	14	17	18	15	17	12	18	20	14	14	15	11
Cyanide (total)	< 5										< 5						
pH (units) (1:5 aqueous extract)*	9	9.2	9.4	9.4	9.3	9.3	9.4	9.5	9.3	9.2	9.1	9.3	9.4	9.2	9.2	9.5	9.6
CHLORINATED HYDROCARBONS	<LOR										<LOR						
HEAVY METALS																	
Antimony	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Arsenic	17	18	14	12	7.9	8.3	12	***1***	***1***	***1***	6.8	10	***1***	***1***	9.3	6.9	5.4
Beryllium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Cadmium	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***
Chromium	26	19	20	15	15	16	18	20	14	16	17	20	18	15	14	14	16
Cobalt	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	6.4	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***
Copper	30	16	16	14	31	16	18	13	15	17	16	18	19	17	15	14	13
Lead	72	47	46	31	38	30	24	16	18	39	30	48	34	24	34	29	61
Mercury	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Molybdenum	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Nickel	9.2	7.6	8.1	6.5	6.8	7.1	7.8	7	6.9	7	7.6	7.8	7.8	7.1	6.5	6.6	6.4
Selenium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Tin	15	***5***	***5***	***5***	23	***5***	***5***	***5***	***5***	16	***5***	***5***	***5***	17	***5***	10	***5***
Vanadium	45	36	36	22	26	27	66	56	24	27	26	29	28	24	30	29	45
Zinc	140	100	93	66	58	62	45	83	27	52	58	96	53	36	55	59	43
MAH's AROMATIC VOLATILE ORGANICS	<LOR										<LOR						
ORGANOCHLORINE PESTICIDES	<LOR										<LOR						
Aldrin	0.17										***0.025***						
Dieldrin	***0.025***										***0.025***						
Chlordane	0.5										0.2						
POLYNUCLEAR AROMATIC HYDROCARBONS																	
Naphthalene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthylene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluorene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Phenanthrene	0.2	***0.05***	***0.05***	***0.05***	0.1	0.1	***0.05***	0.3	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	0.5	***0.05***
Anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***
Fluoranthrene	0.9	0.3	0.3	0.1	0.3	0.3	0.2	0.6	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.7	0.2
Pyrene	0.9	0.3	0.3	0.1	0.3	0.3	0.2	0.6	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.7	0.2
Benzo(a)anthracene	0.5	0.2	0.1	***0.05***	0.1	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.1	***0.05***	0.2	0.4	***0.05***
Chrysene	0.6	0.2	0.2	0.1	0.2	0.2	***0.05***	0.3	0.1	0.1	0.1	0.1	0.1	***0.05***	0.2	0.4	0.1
Benzo(b)fluoranthene	0.6	0.2	0.2	***0.05***	0.2	0.1	***0.05***	0.2	***0.05***	0.1	***0.05***	0.1	0.1	0.1	0.2	0.5	0.1
Benzo(k)fluoranthene	0.3	0.1	0.2	***0.05***	0.1	0.1	***0.05***	0.1	***0.05***	***0.05***	0.1	0.1	***0.05***	***0.05***	0.2	0.3	0.1
Benzo(a)pyrene	0.7	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	***0.05***	0.1	0.2	0.4	0.2
Dibenzo(a,h)anthracene	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(g,h,i)perylene	0.5	0.1	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	0.2	0.3	***0.05***
Indeno(1,2,3-cd)pyrene	0.4	0.1	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	0.2	***0.05***
Total PAH	**5.95**	**2.05**	**2.15**	**1**	**1.9**	**1.9**	**1.2**	**3**	**1.25**	**1.3**	**1.4**	**1.4**	**1.15**	**1**	**2.3**	**4.75**	**1.4**
POLYCHLORINATED BIPHENYLS (PCB's)	<LOR										<LOR						
PHENOLS & CRESOLS	<LOR										<LOR						
TOTAL RECOVERABLE HYDROCARBONS	<LOR										<LOR						

All results in mg/kg unless stated otherwise

<LOR - All results less than the limits of reporting

<LOR - All results except those listed less than the limits of reporting

* Statistics calculated are of numerical pH not absolute hydrogen ion concentration

** Consult NEPM tables for form of analyte

*** The most stringent auditor criteria was adopted for comparison purposes.

NEPM Health Based A Criteria exceeded

Waste Fill Criteria exceeded

Numbers in bold blue and Italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Sample Number	1RF18-A	1RF19-A	1RF20-A	1RF21-A	1RF22-A	1RF23-A	1RF24-A	1RF25-A	1RF26-A	1RF27-A	1RF28-A	1RF29-A	1RF30-A	1RF31-A	1RF32-A	1RF33-A	1RF34-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN03133	06-JN03134	06-JN03135	06-JN03136	06-JN03137	06-JN03138	06-JN03139	06-JN03140	06-JN03141	06-JN03142	06-JN03143	06-JN03144	06-JN03145	06-JN03146	06-JN03438	06-JN03439	06-JN03440
MISCELLANEOUS ANALYSES																	
% Moisture	11	14	13	14	11	16	15	17	12	14	10	15	14	14	13	11	11
Cyanide (total)				< 5						< 5				< 5			
pH (units) (1:5 aqueous extract)*	9.5	9.5	9.4	9.3	9.4	9.4	9.4	9.3	9.4	9.3	9.4	9.2	9.2	9.3	9.3	9.2	9.1
CHLORINATED HYDROCARBONS				<LOR						<LOR				<LOR			
HEAVY METALS																	
Antimony	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	11	***5***
Arsenic	8	7.3	4.6	7	9.7	9.2	9.3	4.1	4.4	4.2	3.7	5.1	6.5	4.7	5.9	***0.5***	***2***
Beryllium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Cadmium	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***
Chromium	13	15	17	15	16	15	16	14	16	14	11	16	17	15	18	15	18
Cobalt	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***
Copper	15	14	14	15	20	17	27	12	26	16	12	22	28	22	39	20	31
Lead	34	33	28	34	81	42	74	25	48	72	29	81	100	77	170	81	60
Mercury	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Molybdenum	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	14	13	11
Nickel	6.4	6.6	7.6	6.6	6.9	7.1	7.5	7.3	8	6.9	5.1	8.4	7.8	6.9	8.7	7.6	8.4
Selenium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	11	9.9	9.3
Tin	***5***	***5***	***5***	***5***	12	13	42	12	11	13	***5***	14	110	14	86	40	64
Vanadium	26	28	30	29	30	31	26	22	31	23	17	27	28	28	18	18	10
Zinc	65	56	57	73	120	190	84	30	56	47	44	100	130	78	240	87	130
MAH's AROMATIC VOLATILE ORGANICS				<LOR						<LOR				<LOR			
ORGANOCHLORINE PESTICIDES				<LOR						<LOR				<LOR			
Aldrin				***0.025***						0.08				0.1			
Dieldrin				***0.025***						***0.025***				0.1			
Chlordane				0.2						***0.05***				***0.05***			
POLYNUCLEAR AROMATIC HYDROCARBONS																	
Naphthalene	***0.05***	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthylene	***0.05***	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluorene	***0.05***	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Phenanthrene	0.2	2.4	***0.05***	***0.05***	0.1	***0.05***	0.2	***0.05***	***0.05***	***0.05***	0.1	0.2	0.1	***0.05***	***0.05***	***0.05***	0.2
Anthracene	***0.05***	0.5	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluoranthrene	0.4	2.7	0.2	0.2	0.4	0.4	0.4	0.2	0.2	0.1	0.4	0.4	0.4	0.2	0.4	0.2	0.3
Pyrene	0.5	2.6	0.3	0.2	0.4	0.4	0.4	0.2	0.2	0.1	0.4	0.4	0.5	0.2	0.4	0.3	0.4
Benzo(a)anthracene	0.3	1.3	0.2	***0.05***	0.3	0.3	0.3	0.1	0.1	***0.05***	0.2	0.2	0.3	0.1	0.3	0.2	0.2
Chrysene	0.3	1	0.2	***0.05***	0.3	0.3	0.2	***0.05***	0.2	***0.05***	0.2	0.3	0.2	0.1	0.3	0.2	0.2
Benzo(b)fluoranthene	0.2	0.8	0.2	0.2	0.3	0.2	0.2	***0.05***	0.1	***0.05***	0.3	0.2	0.3	0.2	0.2	0.1	0.2
Benzo(k)fluoranthene	0.2	0.7	0.2	0.2	0.3	0.2	0.2	***0.05***	0.1	***0.05***	0.1	0.2	0.2	0.1	0.2	0.2	0.2
Benzo(a)pyrene	0.3	0.8	0.2	0.1	0.3	0.2	0.2	***0.05***	0.1	***0.05***	0.2	0.3	0.3	0.1	0.3	0.2	0.2
Dibenzo(a,h)anthracene	***0.05***	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(g,h,i)perylene	0.1	0.9	***0.05***	***0.05***	0.2	0.3	0.1	***0.05***	***0.05***	***0.05***	***0.05***	0.2	0.2	***0.05***	0.3	0.1	0.2
Indeno(1,2,3-cd)pyrene	0.1	0.7	***0.05***	***0.05***	0.2	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	0.1	***0.05***	0.2	0.1	0.1
Total PAH	**2.9**	**15.25**	**1.95**	**1.45**	**3.1**	**2.85**	**2.55**	**1.15**	**1.45**	**0.9**	**2.3**	**2.8**	**2.9**	**1.45**	**2.95**	**1.95**	**2.5**
POLYCHLORINATED BIPHENYLS (PCB's)				<LOR						<LOR				<LOR			
PHENOLS & CRESOLS				<LOR						<LOR				<LOR			
TOTAL RECOVERABLE HYDROCARBONS				<LOR						<LOR				<LOR			

All results in mg/kg unless stated otherwise

<LOR - All results less than the limits of reporting

<LOR - All results except those listed less than th

* Statistics calculated are of numerical pH not ab

** Consult NEPM tables for form of analyte

*** The most stringent auditor criteria was adopte

NEPM Health Based A Criteria exceeded

Waste Fill Criteria exceeded

Numbers in bold blue and Italics represent va

Sample Number	1RF35-A	1RF36-A	1RF37-A	1RF38-A	1RF39-A	1RF40-A	1RF41-A	1RF42-A	1RF43-A	1RF44-A	1RF45-A	1RF46-A	1RF47-A	1RF48-A	1RF49-A	1RF50-A	1RF51-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN03441	06-JN03442	06-JN03748	06-JN03749	06-JN03750	06-JN03751	06-JN04249	06-JN04251	06-JN04252	06-JN04253	06-JN05860	06-JN05861	06-JN05862	06-JN05863	06-JN05864	06-JN05865	06-JN05866
MISCELLANEOUS ANALYSES																	
% Moisture	12	8.6	9.4	9.6	13	8.1	4.2	13	2.6	12	12	11	13	25	15	14	13
Cyanide (total)							< 5										< 5
pH (units) (1:5 aqueous extract)*	9.1	9.3	9.1	8.7	9.3	9.1	8.4	8.9	8.7	9.6	9.1	9	8.8	9.1	9.2	9	9.2
CHLORINATED HYDROCARBONS							<LOR										<LOR
HEAVY METALS																	
Antimony	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Arsenic	5.2	***2***	3.2	3.5	2.5	3.3	***1***	7.8	***1***	3.1	***1***	3.8	3.9	13	5.6	4.4	3.8
Beryllium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Cadmium	0.5	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***
Chromium	25	22	19	20	17	15	***2.5***	26	***2.5***	11	11	12	13	28	18	20	14
Cobalt	5.5	5.4	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	5.6	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	15	***2.5***	5	***2.5***
Copper	45	22	9.5	14	11	16	***2.5***	44	***2.5***	11	22	22	94	16	15	15	18
Lead	200	***2.5***	45	85	23	32	5.1	84	6.5	18	40	33	40	36	56	26	45
Mercury	0.1	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	0.2	***0.05***	***0.05***	***0.05***	0.7	3	***0.05***	***0.05***	***0.05***	***0.05***
Molybdenum	13	13	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Nickel	11	12	6	7.9	6.3	6.3	***2.5***	13	***2.5***	5.3	5.8	6.5	6	10	7.5	8.7	7
Selenium	11	8.4	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Tin	94	36	***5***	11	10	11	***5***	18	***5***	11	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Vanadium	26	22	30	34	26	22	***5***	40	***5***	24	19	24	22	63	38	30	20
Zinc	280	45	25	56	23	36	8.7	140	12	28	55	47	69	47	47	41	55
MAH's AROMATIC VOLATILE ORGANICS							<LOR										<LOR
ORGANOCHLORINE PESTICIDES							<LOR										<LOR
Aldrin							***0.025***										***0.025***
Dieldrin							***0.025***										***0.025***
Chlordane							***0.05***										***0.05***
POLYNUCLEAR AROMATIC HYDROCARBONS																	
Naphthalene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthylene	***0.05***	***0.05***	***0.05***	0.3	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluorene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Phenanthrene	0.2	0.2	0.1	2.1	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.7	1.2	0.8	***0.05***	0.1	***0.05***	0.9
Anthracene	***0.05***	***0.05***	***0.05***	0.5	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.2	0.3	0.3	***0.05***	***0.05***	***0.05***	0.2
Fluoranthrene	0.6	0.9	0.7	6.4	0.8	0.4	***0.05***	0.1	***0.05***	***0.05***	1.3	2	1.6	0.2	0.2	***0.05***	1.8
Pyrene	0.6	0.9	0.7	5.9	0.9	0.4	***0.05***	0.2	***0.05***	***0.05***	1.3	2	1.6	0.2	0.3	0.1	2
Benzo(a)anthracene	0.3	0.4	0.4	3.2	0.4	0.2	***0.05***	***0.05***	***0.05***	***0.05***	0.7	1.2	1	0.1	0.1	***0.05***	1
Chrysene	0.4	0.5	0.5	3	0.5	0.2	***0.05***	***0.05***	***0.05***	***0.05***	0.7	1.2	0.9	0.2	0.1	***0.05***	1.1
Benzo(b)fluoranthene	0.3	0.4	0.3	2.3	0.5	0.3	***0.05***	***0.05***	***0.05***	***0.05***	0.8	1.1	0.8	0.2	0.1	***0.05***	1.3
Benzo(k)fluoranthene	0.3	0.5	0.4	1.8	0.4	0.2	***0.05***	0.1	***0.05***	***0.05***	0.6	0.7	0.8	***0.05***	***0.05***	***0.05***	1
Benzo(a)pyrene	0.3	0.4	0.4	2.8	0.6	0.3	***0.05***	***0.05***	***0.05***	***0.05***	0.9	1.7	1.5	0.2	0.2	***0.05***	1.4
Dibenzo(a,h)anthracene	***0.05***	***0.05***	***0.05***	0.3	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.2	0.2	***0.05***	***0.05***	***0.05***	***0.05***	0.1
Benzo(g,h,i)perylene	0.3	0.3	0.2	1.5	0.4	0.3	***0.05***	***0.05***	***0.05***	***0.05***	0.7	1	0.9	0.1	***0.05***	***0.05***	0.8
Indeno(1,2,3-cd)pyrene	0.2	0.2	0.2	1.4	0.3	0.2	***0.05***	***0.05***	***0.05***	***0.05***	0.6	1.1	0.9	0.1	***0.05***	***0.05***	0.7
Total PAH	**3.8**	**5**	**4.2**	**31.65**	**5.3**	**2.85**	**0.8**	**1.05**	**0.8**	**0.8**	**8.9**	**13.9**	**11.4**	**1.7**	**1.55**	**0.85**	**12.5**
POLYCHLORINATED BIPHENYLS (PCB's)							<LOR										<LOR
PHENOLS & CRESOLS							<LOR										<LOR
TOTAL RECOVERABLE HYDROCARBONS							<LOR										<LOR
All results in mg/kg unless stated otherwise																	
<LOR - All results less than the limits of reporting																	
<LOR - All results except those listed less than th																	
* Statistics calculated are of numerical pH not ab																	
** Consult NEPM tables for form of analyte																	
*** The most stringent auditor criteria was adopte																	
NEPM Health Based A Criteria exceeded																	
Waste Fill Criteria exceeded																	
Numbers in bold blue and Italics represent va																	

Sample Number	1RF52-A	1RF53-A	1RF54-A	1RF55-A	1RF56-A	1RF57-A	1RF58-A	1RF59-A	1RF60-A	1RF61-A	1RF62-A	1RF63-A	1RF64-A	1RF65-A	1RF66-A	1RF67-A	1RF68-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN05867	06-JN05868	06-JN05869	06-JN05870	06-JN05871	06-JN05872	06-JN05873	06-JN05874	06-JN06137	06-JN06138	06-JN06139	06-JN06140	06-JN06141	06-JN06142	06-JN06626	06-JN06627	06-JN06628
MISCELLANEOUS ANALYSES																	
% Moisture	16	17	17	12	11	18	17	14	18	15	16	9.8	12	15	15	18	13
Cyanide (total)										< 5							
pH (units) (1:5 aqueous extract)*	9	9.6	9.4	9.4	8.9	9.5	9.3	8.6	8.9	8.7	9.1	8.9	8.8	9.3	9.1	9.1	8.8
CHLORINATED HYDROCARBONS										<LOR							
HEAVY METALS																	
Antimony	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Arsenic	5.1	6.4	4.9	4.3	3.7	5.4	4.9	6	4.1	3.4	4	1.9	2	12	6.2	6	3.3
Beryllium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Cadmium	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***
Chromium	15	16	22	13	13	27	25	24	20	20	17	9.6	8.5	18	19	22	14
Cobalt	***2.5***	***2.5***	5.8	***2.5***	***2.5***	5.6	5.7	6.2	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***
Copper	17	14	47	23	43	17	17	20	16	15	13	6.2	6.1	12	10	11	7.9
Lead	30	31	47	39	49	17	24	50	22	15	13	***2.5***	6.9	6.8	13	12	6.4
Mercury	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Molybdenum	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Nickel	7	6.5	9.2	6.5	6.6	12	11	11	7.7	8.8	7.3	***2.5***	***2.5***	7.2	7.5	7.9	5.7
Selenium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Tin	***5***	***5***	***5***	***5***	***5***	***5***	***5***	12	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Vanadium	36	45	39	19	20	46	40	44	51	36	46	14	16	86	76	89	32
Zinc	44	43	58	50	55	34	30	70	26	24	21	10	11	14	18	20	13
MAH's AROMATIC VOLATILE ORGANICS										<LOR							
ORGANOCHLORINE PESTICIDES										<LOR							
Aldrin										***0.025***							
Dieldrin										***0.025***							
Chlordane										***0.05***							
POLYNUCLEAR AROMATIC HYDROCARBONS																	
Naphthalene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthylene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.9	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluorene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.3	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Phenanthrene	0.3	0.1	0.3	0.7	0.8	***0.05***	0.1	0.1	***0.05***	6	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Anthracene	0.1	***0.05***	***0.05***	0.2	0.2	***0.05***	***0.05***	***0.05***	***0.05***	0.9	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluoranthrene	0.8	0.2	0.5	1.5	1.5	***0.05***	0.3	0.7	***0.05***	10	0.6	***0.05***	0.1	***0.05***	0.2	***0.05***	***0.05***
Pyrene	0.8	0.2	0.4	1.1	1.7	***0.05***	0.3	0.7	***0.05***	8.8	0.6	***0.05***	0.1	***0.05***	0.2	***0.05***	***0.05***
Benzo(a)anthracene	0.4	0.1	0.2	0.6	0.9	***0.05***	0.1	0.4	***0.05***	5.1	0.2	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***
Chrysene	0.4	0.1	0.2	0.6	0.9	***0.05***	0.2	0.6	***0.05***	3.8	0.3	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***
Benzo(b)fluoranthene	0.3	***0.05***	0.1	0.5	1.1	***0.05***	0.2	0.5	***0.05***	4.4	0.2	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***
Benzo(k)fluoranthene	0.3	***0.05***	0.2	0.5	0.7	***0.05***	0.1	0.4	***0.05***	2.8	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(a)pyrene	0.4	***0.05***	0.2	0.7	1	***0.05***	0.2	0.5	***0.05***	5.9	0.3	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***
Dibenzo(a,h)anthracene	***0.05***	***0.05***	***0.05***	0.1	0.2	***0.05***	***0.05***	***0.05***	***0.05***	0.7	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(g,h,i)perylene	0.2	***0.05***	***0.05***	0.6	1	***0.05***	***0.05***	0.3	***0.05***	2.9	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Indeno(1,2,3-cd)pyrene	0.2	***0.05***	***0.05***	0.5	0.7	***0.05***	***0.05***	0.3	***0.05***	2.6	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Total PAH	**4.45**	**1.25**	**2.5**	**7.8**	**10.9**	**0.8**	**1.9**	**4.8**	**0.8**	**55.2**	**3.1**	**0.8**	**0.9**	**0.8**	**1.3**	**0.8**	**0.8**
POLYCHLORINATED BIPHENYLS (PCB's)										<LOR							
PHENOLS & CRESOLS										<LOR							
TOTAL RECOVERABLE HYDROCARBONS										<LOR							
All results in mg/kg unless stated otherwise																	
<LOR - All results less than the limits of reporting																	
<LOR - All results except those listed less than th																	
* Statistics calculated are of numerical pH not ab																	
** Consult NEPM tables for form of analyte																	
*** The most stringent auditor criteria was adopte																	
NEPM Health Based A Criteria exceeded																	
Waste Fill Criteria exceeded																	
Numbers in bold blue and Italics represent va																	

Sample Number	1RF69-A	1RF70-A	1RF71-A	1RF72-A	1RF73-A	1RF74-A	1RF75-A	1RF76-A	1RF77-A	1RF78-A	1RF79-A	1RF80-A	1RF81-A	1RF82-A	1RF83-A	1RF84-A	1RF85-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JL00276	06-JL00277	06-JL00278	06-JL00279	06-JL00280	06-JL00281	06-JL00282	06-JL00283	06-JL00284	06-JL00285	06-JL00286	06-JL00287	06-JL00288	06-JL00289	06-JL00290	06-JL00291	06-JL00292
MISCELLANEOUS ANALYSES																	
% Moisture	13	10	12	10	11	11	19	16	18	19	16	16	17	21	21	16	14
Cyanide (total)			< 5										< 5				
pH (units) (1:5 aqueous extract)*	9.1	9.2	9.3	9.2	9.1	9	9.3	9.3	9.4	8.9	9	8.9	8.9	9.1	9	8.9	9.2
CHLORINATED HYDROCARBONS			<LOR										<LOR				
HEAVY METALS																	
Antimony	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Arsenic	3.1	***1***	2.4	3.2	3.4	2.9	4.6	5.8	3.3	4.9	3	5.8	4	5.1	4.6	3.6	4
Beryllium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Cadmium	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***
Chromium	16	12	16	18	17	19	20	21	21	23	17	21	19	22	19	20	16
Cobalt	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	6	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***
Copper	11	7.6	9.1	11	10	11	11	11	11	19	11	21	31	22	18	29	13
Lead	11	8.3	9.3	17	22	11	12	8.2	12	140	17	48	86	54	29	50	15
Mercury	***0.05***	***0.05***	***0.05***	0.1	0.3	***0.05***	***0.05***	***0.05***	***0.05***	0.2	***0.05***	0.3	0.1	***0.05***	0.1	0.1	***0.05***
Molybdenum	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Nickel	6.9	5.1	7.3	6.3	6.2	7.9	7.9	8	7.4	9.1	7.4	7.5	7.8	8.1	7.7	8.3	7
Selenium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Tin	***5***	***5***	***5***	67	22	11	15	***5***	***5***	22	***5***	17	11	16	13	10	***5***
Vanadium	28	18	18	30	31	30	52	85	39	43	26	54	30	43	39	30	31
Zinc	16	11	15	21	25	17	19	17	21	53	19	75	48	120	38	64	55
MAH's AROMATIC VOLATILE ORGANICS			<LOR										<LOR				
ORGANOCHLORINE PESTICIDES			<LOR										<LOR				
Aldrin			***0.025***										***0.025***				
Dieldrin			***0.025***										***0.025***				
Chlordane			***0.05***										***0.05***				
POLYNUCLEAR AROMATIC HYDROCARBONS																	
Naphthalene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthylene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.2	***0.05***	***0.05***	0.2	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluorene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***
Phenanthrene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.2	0.3	***0.05***	3.6	1	0.4	1.2	0.5	0.6	0.2	0.2
Anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.7	0.3	0.1	0.2	0.1	0.1	***0.05***	***0.05***
Fluoranthrene	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	0.3	0.3	***0.05***	3.7	1.7	0.6	1.3	1	0.7	0.4	0.4
Pyrene	***0.05***	***0.05***	***0.05***	0.1	0.1	***0.05***	0.3	0.3	***0.05***	3.6	1.8	0.6	1.2	1	0.8	0.4	0.4
Benzo(a)anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	1.1	0.7	0.2	0.5	0.5	0.3	0.2	0.2
Chrysene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	0.1	***0.05***	1.1	0.7	0.3	0.5	0.5	0.3	0.2	0.2
Benzo(b)fluoranthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	0.9	0.6	0.3	0.5	0.4	0.3	0.2	0.2
Benzo(k)fluoranthene	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	0.8	0.4	0.2	0.6	0.4	0.3	0.2	0.2
Benzo(a)pyrene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	1	0.6	0.3	0.7	0.5	0.3	0.2	0.3
Dibenzo(a,h)anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(g,h,i)perylene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.4	0.3	***0.05***	0.4	0.2	0.2	0.2	0.2
Indeno(1,2,3-cd)pyrene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.4	0.3	***0.05***	0.3	0.2	0.2	***0.05***	0.1
Total PAH	**0.8**	**0.8**	**0.8**	**0.9**	**0.9**	**0.8**	**1.55**	**1.6**	**0.8**	**17.75**	**8.65**	**3.35**	**7.9**	**5.55**	**4.35**	**2.55**	**2.7**
POLYCHLORINATED BIPHENYLS (PCB's)			<LOR										<LOR				
PHENOLS & CRESOLS			<LOR										<LOR				
TOTAL RECOVERABLE HYDROCARBONS			<LOR										<LOR				
All results in mg/kg unless stated otherwise																	
<LOR - All results less than the limits of reporting																	
<LOR - All results except those listed less than th																	
* Statistics calculated are of numerical pH not ab																	
** Consult NEPM tables for form of analyte																	
*** The most stringent auditor criteria was adopte																	
NEPM Health Based A Criteria exceeded																	
Waste Fill Criteria exceeded																	
Numbers in bold blue and Italics represent va																	

Sample Number	1RF86-A	1RF87-A	1RF88-A	1RF89-A	1RF90-A	**STATISTICS**					**CRITERIA**						
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material						**NEPM**			**Auditor**	**Southern Waste Depot**		
Laboratory Number	06-JL00293	06-JL00294	06-JL00295	06-JL00296	06-JL00297						HIL A	HIL D	EIL	Site	WF	ILC	LLCW
MISCELLANEOUS ANALYSES						Count	Max	Mean	Std Dev	95% UCL				Specific			
% Moisture	17	13	13	13	16												
Cyanide (total)											250**	1000**			500	1,000	3,500
pH (units) (1:5 aqueous extract)*	9	8.9	8.8	9	9	90	9.6	9.2	0.2	9.2							
CHLORINATED HYDROCARBONS																	
HEAVY METALS																	
Antimony	***5***	***5***	***5***	***5***	***5***	90	11	5.1	0.6	5.2							
Arsenic	4.5	3.2	3.7	3.4	3.2	90	18	5.1	3.4	5.9	100	400	20		20	200	750
Beryllium	***1***	***1***	***1***	***1***	***1***	90	1	1.0	0.0	-	20	80			20	40	150
Cadmium	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	90	0.5	0.3	0.0	0.3	20	80	3		3	30	60
Chromium	18	16	18	17	13	90	28	17.0	4.4	17.9	100**	400**	1**		400	12%	30%
Cobalt	6.5	***2.5***	***2.5***	***2.5***	***2.5***	90	15	3.0	1.7	3.4	100	400			170	170	1,000
Copper	13	11	13	13	9.3	90	94	18.2	11.9	20.7	1,000	4,000	100		60	2,000	7,500
Lead	19	18	20	17	8.9	90	200	38.7	33.7	45.7	300	1,200	600	600***	300	1,200	5,000
Mercury	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	90	3	0.1	0.3	0.2	15**	60**	1**		1	30	110
Molybdenum	***5***	***5***	***5***	***5***	***5***	90	14	5.4	1.8	5.8							
Nickel	7.5	7	7.4	7	5.8	90	13	7.3	1.8	7.7	600	2,400	60		60	600	3,000
Selenium	***1***	***1***	***1***	***1***	***1***	90	11	1.5	2.1	1.9							
Tin	***5***	***5***	***5***	***5***	***5***	90	110	13.3	19.2	17.2							
Vanadium	36	29	32	29	26	90	89	32.9	15.7	36.2			50				
Zinc	31	26	28	33	15	90	280	56.0	46.4	65.5	7,000	28,000	200		200	14,000	50,000
MAH's AROMATIC VOLATILE ORGANICS																	
ORGANOCHLORINE PESTICIDES																	
Aldrin						10	0.17	0.1	0.0	0.1	10	40			2	2	50
Dieldrin						10	0.1	0.0	0.0	0.0							
Chlordane						10	0.5	0.1	0.1	0.2	50	200			2	2	50
POLYNUCLEAR AROMATIC HYDROCARBONS																	
Naphthalene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	90	0.2	0.1	0.0	0.1							
Acenaphthylene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	90	0.9	0.1	0.1	0.1							
Acenaphthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	90	0.05	0.0	0.0	0.0							
Fluorene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	90	0.3	0.1	0.0	0.1							
Phenanthrene	0.3	***0.05***	***0.05***	***0.05***	0.3	90	6	0.3	0.8	0.5							
Anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	90	0.9	0.1	0.1	0.1							
Fluoranthrene	0.7	0.2	0.2	0.2	0.5	90	10	0.7	1.3	0.9							
Pyrene	0.7	0.2	0.2	0.2	0.4	90	8.8	0.6	1.2	0.9							
Benzo(a)anthracene	0.4	0.1	0.1	0.1	0.2	90	5.1	0.3	0.7	0.5							
Chrysene	0.4	0.1	0.1	0.1	0.2	90	3.8	0.3	0.5	0.4							
Benzo(b)fluoranthene	0.3	0.2	0.1	0.1	0.2	90	4.4	0.3	0.6	0.4							
Benzo(k)fluoranthene	0.4	0.2	0.2	0.1	0.2	90	2.8	0.3	0.4	0.3							
Benzo(a)pyrene	0.5	0.2	0.2	0.2	0.2	90	5.9	0.4	0.7	0.5	1	4		8***	1	2	5
Dibenzo(a,h)anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	90	0.7	0.1	0.1	0.1							
Benzo(g,h,i)perylene	0.2	0.1	***0.05***	***0.05***	0.1	90	2.9	0.2	0.4	0.3							
Indeno(1,2,3-cd)pyrene	0.2	***0.05***	***0.05***	***0.05***	***0.05***	90	2.6	0.2	0.3	0.3							
Total PAH	**4.4**	**1.7**	**1.55**	**1.45**	**2.65**	**90**	**55.2**	**4.1**	**7.1**	**5.5**	**20**	**80**		**164*** **	**5**	**40**	**200**
POLYCHLORINATED BIPHENYLS (PCB's)																	
PHENOLS & CRESOLS																	
TOTAL RECOVERABLE HYDROCARBONS																	
All results in mg/kg unless stated otherwise																	
<LOR - All results less than the limits of reporting																	
<LOR - All results except those listed less than th																	
* Statistics calculated are of numerical pH not ab																	
** Consult NEPM tables for form of analyte																	
*** The most stringent auditor criteria was adopte																	
NEPM Health Based A Criteria exceeded																	
Waste Fill Criteria exceeded																	
Numbers in bold blue and Italics represent va																	

Central West Precinct

Reused Material TCLP Summary

Sample Number	1RF2-A	1RF2-A	1RF4-A	1RF4-A	1RF6-A	1RF6-A	1RF8-A	1RF8-A	1RF10-A	1RF10-A	1RF12-A	1RF12-A	1RF14-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN02476	06-JN02483	06-JN02477	06-JN02484	06-JN02478	06-JN02485	06-JN02479	06-JN02486	06-JN02480	06-JN02487	06-JN02481	06-JN02488	06-JN02482
pH at which TCLP was undertaken	7	9	7	9	7	9	7	9	7	9	7	9	7
HEAVY METALS													
Antimony	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Arsenic	0.03	0.03	0.04	0.04	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.03	0.01
Beryllium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Cobalt	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	***0.005***	***0.005***	***0.005***	0.06	0.05	0.04	0.04	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.04
Lead	***0.005***	0.01	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.02	***0.005***	***0.005***
Mercury	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Molybdenum	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tin	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	***0.025***	0.06	***0.025***	***0.025***	***0.025***	***0.025***	0.11	0.11	0.08	0.08	***0.025***	***0.025***	***0.025***
Zinc	0.03	0.06	0.01	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.04	***0.005***	0.01
POLYNUCLEAR AROMATIC HYDROCARBONS													
Naphthalene	***0.0025***	***0.0005***	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***	0.001	***0.0025***	***0.0005***	***0.0025***	***0.0005***	***0.0025***
Acenaphthylene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Acenaphthene	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***
Fluorene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Phenanthrene	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***	0.001	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***
Anthracene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Fluoranthrene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Pyrene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Benzo(a)anthracene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Chrysene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Benzo(b)fluoranthene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Benzo(k)fluoranthene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Benzo(a)pyrene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Dibenzo(a,h)anthracene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Benzo(g,h,i)perylene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Indeno(1,2,3-cd)pyrene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Total PAH	**0.014**	**0.0075**	**0.014**	**0.00725**	**0.014**	**0.00725**	**0.014**	**0.00875**	**0.014**	**0.0075**	**0.014**	**0.0075**	**0.014**
All results in mg/L unless stated otherwise													
Numbers in bold blue and Italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics													

Sample Number	1RF14-A	1RF16-A	1RF16-A	1RF18-A	1RF18-A	1RF20-A	1RF20-A	1RF22-A	1RF22-A	1RF24-A	1RF24-A	1RF26-A	1RF26-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN02489	06-JN03148	06-JN03156	06-JN03149	06-JN03157	06-JN03150	06-JN03158	06-JN03151	06-JN03159	06-JN03152	06-JN03160	06-JN03153	06-JN03161
pH at which TCLP was undertaken	9	7	9	7	9	7	9	7	9	7	9	7	9
HEAVY METALS													
Antimony	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Arsenic	0.01	0.03	0.02	0.04	0.02	0.02	0.02	0.03	0.03	0.04	0.03	0.01	***0.005***
Beryllium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Cobalt	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	***0.005***	0.04	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Lead	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Mercury	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Molybdenum	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tin	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	***0.025***	0.11	***0.025***	0.06	0.05	0.06	***0.025***	0.14	***0.025***	***0.025***	***0.025***	0.06	0.06
Zinc	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
POLYNUCLEAR AROMATIC HYDROCARBONS													
Naphthalene	***0.0005***	***0.0001***	***0.0005***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0005***	***0.0005***	***0.0001***	***0.00025***	***0.0001***	***0.0005***
Acenaphthylene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Acenaphthene	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***
Fluorene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Phenanthrene	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***
Anthracene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Fluoranthrene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Pyrene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Benzo(a)anthracene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Chrysene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Benzo(b)fluoranthene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Benzo(k)fluoranthene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Benzo(a)pyrene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Dibenzo(a,h)anthracene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Benzo(g,h,i)perylene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Indeno(1,2,3-cd)pyrene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Total PAH	**0.0075**	**0.0068**	**0.0075**	**0.0068**	**0.00725**	**0.0068**	**0.00725**	**0.0072**	**0.0075**	**0.0068**	**0.00725**	**0.0068**	**0.0075**
All results in mg/L unless stated otherwise													
Numbers in bold blue and Italics represent value													

Sample Number	1RF28-A	1RF28-A	1RF30-A	1RF30-A	1RF32-A	1RF32-A	1RF34-A	1RF34-A	1RF36-A	1RF36-A	1RF38-A	1RF38-A	1RF40-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN03154	06-JN03162	06-JN03155	06-JN03163	06-JN03446	06-JN03443	06-JN03447	06-JN03444	06-JN03448	06-JN03445	06-JN03754	06-JN03752	06-JN03755
pH at which TCLP was undertaken	7	9	7	9	7	9	7	9	7	9	7	9	7
HEAVY METALS													
Antimony	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Arsenic	***0.005***	***0.005***	0.02	0.01	0.01	0.02	0.02	0.01	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Beryllium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Cobalt	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.04	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Lead	***0.005***	***0.005***	0.02	0.01	0.02	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Mercury	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Molybdenum	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tin	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Zinc	***0.005***	***0.005***	0.01	0.01	0.02	***0.005***	***0.005***	0.02	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
POLYNUCLEAR AROMATIC HYDROCARBONS													
Naphthalene	***0.0001***	***0.00025***	***0.0005***	***0.00025***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0001***	***0.0005***
Acenaphthylene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Acenaphthene	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0001***	***0.0001***	***0.0001***
Fluorene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Phenanthrene	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0001***	***0.0001***	***0.0001***
Anthracene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Fluoranthrene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Pyrene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Benzo(a)anthracene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Chrysene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Benzo(b)fluoranthene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Benzo(k)fluoranthene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Benzo(a)pyrene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Dibenzo(a,h)anthracene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Benzo(g,h,i)perylene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Indeno(1,2,3-cd)pyrene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Total PAH	**0.0068**	**0.00725**	**0.0072**	**0.00725**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.0072**	**0.0068**	**0.0072**
All results in mg/L unless stated otherwise													
Numbers in bold blue and Italics represent value													

Sample Number	1RF40-A	1RF42-A	1RF42-A	1RF44-A	1RF44-A	1RF46-A	1RF46-A	1RF48-A	1RF48-A	1RF50-A	1RF50-A	1RF52-A	1RF52-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN03753	06-JN04256	06-JN04254	06-JN04257	06-JN04255	06-JN05882	06-JN05875	06-JN05883	06-JN05876	06-JN05884	06-JN05877	06-JN05885	06-JN05878
pH at which TCLP was undertaken	9	7	9	7	9	7	9	7	9	7	9	7	9
HEAVY METALS													
Antimony	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Arsenic	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.02	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Beryllium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Cobalt	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Lead	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Mercury	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.002	***0.0005***	***0.0005***	***0.0005***	0.04	***0.0005***	***0.0005***
Molybdenum	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tin	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	***0.025***	***0.025***	***0.025***	0.13	0.15	***0.025***	***0.025***	0.08	***0.025***	***0.025***	***0.025***	0.05	***0.025***
Zinc	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.02	0.07	***0.005***
POLYNUCLEAR AROMATIC HYDROCARBONS													
Naphthalene	***0.0001***	***0.0001***	***0.0005***	***0.0001***	***0.0001***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.008	***0.0005***	0.011
Acenaphthylene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthene	***0.0001***	***0.0001***	***0.0001***	***0.0001***	***0.0001***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Fluorene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	***0.0001***	***0.0001***	***0.0001***	***0.0001***	***0.0001***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Anthracene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthrene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH	**0.0068**	**0.0068**	**0.0072**	**0.0068**	**0.0068**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.0155**	**0.008**	**0.0185**
All results in mg/L unless stated otherwise													
Numbers in bold blue and Italics represent value													

Sample Number	1RF54-A	1RF54-A	1RF56-A	1RF56-A	1RF58-A	1RF58-A	1RF60-A	1RF60-A	1RF62-A	1RF62-A	1RF64-A	1RF64-A	1RF66-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN05886	06-JN05879	06-JN05887	06-JN05880	06-JN05888	06-JN05881	06-JN06147	06-JN06144	06-JN06148	06-JN06145	06-JN06149	06-JN06146	06-JN06631
pH at which TCLP was undertaken	7	9	7	9	7	9	7	9	7	9	7	9	7
HEAVY METALS													
Antimony	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Arsenic	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Beryllium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.02	***0.005***	***0.005***
Cobalt	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Lead	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Mercury	***0.0005***	0.043	***0.0005***	***0.0005***	***0.0005***	0.051	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.0025***
Molybdenum	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tin	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	0.05	0.09	0.08	0.1	0.09	0.07	***0.025***	0.42
Zinc	***0.005***	0.01	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.02	0.03	***0.005***	***0.005***
POLYNUCLEAR AROMATIC HYDROCARBONS													
Naphthalene	0.011	***0.0005***	0.006	***0.0005***	0.003	0.013	***0.0005***	***0.0005***	0.004	***0.0005***	0.007	***0.0005***	***0.0005***
Acenaphthylene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthene	0.001	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Fluorene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH	**0.019**	**0.008**	**0.0135**	**0.008**	**0.0105**	**0.0205**	**0.008**	**0.008**	**0.0115**	**0.008**	**0.0145**	**0.008**	**0.008**
All results in mg/L unless stated otherwise													
Numbers in bold blue and Italics represent value													

Sample Number	1RF66-A	1RF68-A	1RF68-A	1RF70-A	1RF70-A	1RF72-A	1RF72-A	1RF74-A	1RF74-A	1RF76-A	1RF76-A	1RF78-A	1RF78-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN06629	06-JN06632	06-JN06630	06-JL00310	06-JL00299	06-JL00311	06-JL00300	06-JL00312	06-JL00301	06-JL00313	06-JL00302	06-JL00314	06-JL00303
pH at which TCLP was undertaken	9	7	9	7	9	7	9	7	9	7	9	7	9
HEAVY METALS													
Antimony	***0.025***	***0.025***	***0.025***	***0.025***	0.15	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Arsenic	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Beryllium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Cobalt	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Lead	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Mercury	***0.0025***	***0.0025***	***0.0025***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***
Molybdenum	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tin	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	0.32	0.07	0.08	0.07	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	0.21	0.17	***0.025***	***0.025***
Zinc	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.01	0.01	0.01	***0.005***	0.01	***0.005***	0.03	***0.005***
POLYNUCLEAR AROMATIC HYDROCARBONS													
Naphthalene	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.002	***0.0005***	0.004	***0.0005***	0.001	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Acenaphthylene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthene	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Fluorene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH	**0.008**	**0.008**	**0.008**	**0.008**	**0.0095**	**0.008**	**0.0115**	**0.008**	**0.0085**	**0.008**	**0.008**	**0.008**	**0.008**
All results in mg/L unless stated otherwise													
Numbers in bold blue and Italics represent value													

Sample Number	1RF80-A	1RF80-A	1RF82-A	1RF82-A	1RF84-A	1RF84-A	1RF86-A	1RF86-A	1RF88-A	1RF88-A	1RF90-A	1RF90-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JL00315	06-JL00304	06-JL00316	06-JL00305	06-JL00317	06-JL00306	06-JL00318	06-JL00307	06-JL00319	06-JL00308	06-JL00320	06-JL00309
pH at which TCLP was undertaken	7	9	7	9	7	9	7	9	7	9	7	9
HEAVY METALS												
Antimony	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Arsenic	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Beryllium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Cobalt	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Lead	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Mercury	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***
Molybdenum	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tin	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	0.07	0.06	***0.025***	***0.025***	***0.025***
Zinc	0.01	0.02	***0.005***	0.02	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.04
POLYNUCLEAR AROMATIC HYDROCARBONS												
Naphthalene	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Acenaphthylene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthene	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Fluorene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**
All results in mg/L unless stated otherwise												
Numbers in bold blue and Italics represent value												

Sample Number **Material Type** **Laboratory Number**	**STATISTICS**				
pH at which TCLP was undertaken	Count	Max	Mean	Std Dev	95% UCL
HEAVY METALS					
Antimony	90	0.15	0.03	0.0	0.0
Arsenic	90	0.04	0.01	0.01	0.01
Beryllium					-
Cadmium					
Chromium	90	0.02	0.01	0.00	0.01
Cobalt					
Copper	90	0.06	0.01	0.01	0.01
Lead	90	0.02	0.01	0.00	0.01
Mercury	90	0.051	0.00	0.01	0.01
Molybdenum					
Nickel					
Selenium					
Tin					
Vanadium	90	0.42	0.05	0.06	0.07
Zinc	90	0.07	0.01	0.01	0.01
POLYNUCLEAR AROMATIC HYDROCARBONS					
Naphthalene	90	0.013	0.0	0.0	0.0
Acenaphthylene					
Acenaphthene	90	0.0025	0.0	0.0	0.0
Fluorene					
Phenanthrene	90	0.0025	0.0	0.0	0.0
Anthracene					
Fluoranthrene					
Pyrene					
Benzo(a)anthracene					
Chrysene					
Benzo(b)fluoranthene					
Benzo(k)fluoranthene					
Benzo(a)pyrene					
Dibenzo(a,h)anthracene					
Benzo(g,h,i)perylene					
Indeno(1,2,3-cd)pyrene					
Total PAH	**90**	**0.0205**	**0.0**	**0.0**	**0.0**
All results in mg/L unless stated otherwise					
Numbers in bold blue and Italics represent value					

Central West Precinct

Recalculated 95% UCL - B(a)P

Data File J:\05\AAA_05_002\02\reuse validation\Summ Variable: B(a)P

Raw Statistics	
Number of Valid Samples	90
Number of Unique Samples	16
Minimum	0.05
Maximum	5.9
Mean	0.372778
Median	0.2
Standard Deviation	0.721623
Variance	0.520739
Coefficient of Variation	1.935799
Skewness	5.739823

Gamma Statistics	
k hat	0.836806
k star (bias corrected)	0.81632
Theta hat	0.445477
Theta star	0.456656
nu hat	150.6251
nu star	146.9376
Approx.Chi Square Value (.05)	119.9168
Adjusted Level of Significance	0.047333
Adjusted Chi Square Value	119.5219

Log-transformed Statistics	
Minimum of log data	-2.995732
Maximum of log data	1.774952
Mean of log data	-1.691862
Standard Deviation of log data	1.090403
Variance of log data	1.18898

RECOMMENDATION

Data are Non-parametric (0.05)

Use 97.5% Chebyshev (Mean, Sd) UCL

Normal Distribution Test	
Lilliefors Test Statisitic	0.327
Lilliefors 5% Critical Value	0.093
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	0.499

Gamma Distribution Test	
A-D Test Statistic	4.404
A-D 5% Critical Value	0.790
K-S Test Statistic	0.198
K-S 5% Critical Value	0.098
Data do not follow gamma distribution	
at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	0.457
Adjusted Gamma UCL	0.458

Lognormal Distribution Test	
Lilliefors Test Statisitic	0.162
Lilliefors 5% Critical Value	0.093
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	0.436
95% Chebyshev (MVUE) UCL	0.534
97.5% Chebyshev (MVUE) UCL	0.621
99% Chebyshev (MVUE) UCL	0.794

95% Non-parametric UCLs	
CLT UCL	0.498
Adj-CLT UCL (Adjusted for skewness)	0.547
Mod-t UCL (Adjusted for skewness)	0.507
Jackknife UCL	0.499
Standard Bootstrap UCL	0.496
Bootstrap-t UCL	0.621
Hall's Bootstrap UCL	1.047
Percentile Bootstrap UCL	0.506
BCA Bootstrap UCL	0.574
95% Chebyshev (Mean, Sd) UCL	0.704
97.5% Chebyshev (Mean, Sd) UCL	0.848
99% Chebyshev (Mean, Sd) UCL	1.130

Recalculated 95% UCL - PAH

Data File J:\05\AAA_05_002\02\reuse validation\Summ Variable: PAH

Raw Statistics	
Number of Valid Samples	90
Number of Unique Samples	53
Minimum	0.8
Maximum	55.2
Mean	4.055
Median	1.925
Standard Deviation	7.087138
Variance	50.22753
Coefficient of Variation	1.747753
Skewness	5.170627

Gamma Statistics	
k hat	1.011957
k star (bias corrected)	0.985633
Theta hat	4.007086
Theta star	4.114108
nu hat	182.1523
nu star	177.4139
Approx.Chi Square Value (.05)	147.602
Adjusted Level of Significance	0.047333
Adjusted Chi Square Value	147.1623

Log-transformed Statistics	
Minimum of log data	-0.223144
Maximum of log data	4.010963
Mean of log data	0.830348
Standard Deviation of log data	0.927533
Variance of log data	0.860318

RECOMMENDATION

Data are Non-parametric (0.05)

Use 95% Chebyshev (Mean, Sd) UCL

Normal Distribution Test	
Lilliefors Test Statisitic	0.323
Lilliefors 5% Critical Value	0.093
Data not normal at 5% significance level	

95% UCL (Assuming Normal Distribution)	
Student's-t UCL	5.297

Gamma Distribution Test	
A-D Test Statistic	5.312
A-D 5% Critical Value	0.783
K-S Test Statistic	0.200
K-S 5% Critical Value	0.097
Data do not follow gamma distribution	
at 5% significance level	

95% UCLs (Assuming Gamma Distribution)	
Approximate Gamma UCL	4.874
Adjusted Gamma UCL	4.889

Lognormal Distribution Test	
Lilliefors Test Statisitic	0.128
Lilliefors 5% Critical Value	0.093
Data not lognormal at 5% significance level	

95% UCLs (Assuming Lognormal Distribution)	
95% H-UCL	4.359
95% Chebyshev (MVUE) UCL	5.254
97.5% Chebyshev (MVUE) UCL	6.011
99% Chebyshev (MVUE) UCL	7.499

95% Non-parametric UCLs	
CLT UCL	5.284
Adj-CLT UCL (Adjusted for skewness)	5.719
Mod-t UCL (Adjusted for skewness)	5.365
Jackknife UCL	5.297
Standard Bootstrap UCL	5.288
Bootstrap-t UCL	6.333
Hall's Bootstrap UCL	10.977
Percentile Bootstrap UCL	5.379
BCA Bootstrap UCL	5.849
95% Chebyshev (Mean, Sd) UCL	7.311
97.5% Chebyshev (Mean, Sd) UCL	8.720
99% Chebyshev (Mean, Sd) UCL	11.488

APPENDIX D – QUALITY

Sample Number	1RF1-A	1RF1-X	**RPD**	1RF1-Y	**RPD**	1RF21-A	1RF21-X	**RPD**	1RF21-Y	**RPD**	1RF41-A	1RF41-X	**RPD**		**RPD**	1RF61-A	1RF61-X	**RPD**	1RF61-Y	**RPD**	1RF81-A	1RF81-X	**RPD**	1RF81-Y	**RPD**
Fill/Natural	Sample	Intra -		Inter -		Sample	Intra -		Inter -		Sample	Intra -		Inter -		Sample	Intra -		Inter -		Sample	Intra -		Inter -	
		Duplicate		Duplicate			Duplicate		Duplicate			Duplicate		Duplicate			Duplicate		Duplicate			Duplicate		Duplicate	
Laboratory Number	06-JN02460	06-JN02461		952164		06-JN03136	06-JN03147		952732		06-JN04249	06-JN04250				06-JN06138	06-JN06143		957762		06-JL00288	06-JL00298		959205	
MISCELLANEOUS ANALYSES																									
% Moisture	14	16	**13.3%**	-	**-**	14	14	**0.0%**	-	**-**	4.2	2.8	**40.0%**	-	**-**	15	15	**0.0%**	-	**-**	17	18	**5.7%**	-	**-**
Cyanide (total)	< 5	< 5	**-**	<5	**-**	< 5	< 5	**-**	<5	**-**	< 5	< 5	**-**	<5	**-**	< 5	< 5	**-**	<5	**-**	< 5	<5	**-**	<5	**-**
pH (units) (1:5 aqueous extract)	9	8.9	**1.1%**	9.6	**6.5%**	9.3	9.3	**0.0%**	8.3	**11.4%**	8.4	8.4	**0.0%**	8.7	**3.5%**	8.7	9.3	**6.7%**	9.3	**6.7%**	8.9	8.9	**0.0%**	8.7	**2.3%**
Total Organic Carbon			**-**		**-**			**-**		**-**			**-**		**-**			**-**		**-**			**-**		**-**
CHLORINATED HYDROCARBONS																									
1.2-Dichlorobenzene	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**
1.2.3-Trichlorobenzene	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**
1.2.3.4-Tetrachlorobenzene	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**
1.2.3.5-Tetrachlorobenzene	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**
1.2.4-Trichlorobenzene	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**
1.2.4.5-Tetrachlorobenzene	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**
1.3-Dichlorobenzene	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**
1.3.5-Trichlorobenzene	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**
1.4-Dichlorobenzene	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**
Benzal chloride	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**
Benzotrichloride	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**
Benzyl chloride	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**	< 0.2	< 0.2	**-**	**-**	**-**
Hexachlorobenzene	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**
Hexachlorobutadiene	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**
Hexachlorocyclopentadiene	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**
Hexachloroethane	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**
Pentachlorobenzene	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**	< 0.05	< 0.05	**-**	**-**	**-**
HEAVY METALS																									
Antimony	< 10	< 10	**-**	-	**-**	< 10	< 10	**-**	-	**-**	< 10	< 10	**-**	-	**-**	< 10	< 10	**-**	-	**-**	< 10	< 10	**-**	-	**-**
Arsenic	17	12	**34.5%**	16	**6.1%**	7	7.9	**12.1%**	6	**15.4%**	< 2	< 2	**-**	<5	**-**	3.4	3.4	**-**	<5	**NCD**	4	4.4	**9.5%**	<5	**NCD**
Beryllium	< 2	< 2	**-**	-	**-**	< 2	< 2	**-**	-	**-**	< 2	< 2	**-**	-	**-**	< 2	< 2	**-**	-	**-**	< 2	< 2	**-**	-	**-**
Cadmium	< 0.5	< 0.5	**-**	0.3	**NCD**	< 0.5	< 0.5	**-**	<0.2	**-**	< 0.5	< 0.5	**-**	<0.2	**-**	< 0.5	< 0.5	**-**	<0.2	**-**	< 0.5	< 0.5	**-**	<0.2	**-**
Chromium	26	26	**0.0%**	27	**3.8%**	15	17	**12.5%**	17	**12.5%**	< 5	< 5	**-**	16	**NCD**	20	19	**5.1%**	27	**29.8%**	19	21	**10.0%**	27	**34.8%**
Cobalt	< 5	5.5	**NCD**	8	**NCD**	< 5	< 5	**-**	6	**NCD**	< 5	< 5	**-**	5	**NCD**	< 5	< 5	**-**	7	**NCD**	< 5	< 5	**-**	8	**NCD**
Copper	30	21	**35.3%**	22	**30.8%**	15	19	**23.5%**	12	**22.2%**	< 5	< 5	**-**	17	**NCD**	15	14	**6.9%**	14	**6.9%**	31	29	**6.7%**	28	**10.2%**
Lead	72	67	**7.2%**	190	**90.1%**	34	40	**16.2%**	50	**38.1%**	5.1	< 5	**-**	55	**166.1%**	15	13	**14.3%**	32	**72.3%**	86	38	**77.4%**	100	**15.1%**
Mercury	< 0.1	0.1	**-**	0.26	**NCD**	< 0.1	< 0.1	**-**	0.08	**NCD**	< 0.1	< 0.1	**-**	0.09	**NCD**	< 0.1	< 0.1	**-**	0.11	**NCD**	0.1	< 0.1	**NCD**	2.7	**185.7%**
Molybdenum	< 10	< 10	**-**	<5	**-**	< 10	< 10	**-**	<5	**-**	< 10	< 10	**-**	<5	**-**	< 10	< 10	**-**	<5	**-**	< 10	< 10	**-**	<5	**-**
Nickel	9.2	9.5	**3.2%**	12	**26.4%**	6.6	7.9	**17.9%**	10	**41.0%**	< 5	< 5	**-**	9	**NCD**	8.8	8.4	**4.7%**	13	**38.5%**	7.8	8	**2.5%**	12	**42.4%**
Selenium	< 2	< 2	**-**	<5	**-**	< 2	< 2	**-**	<5	**-**	< 2	< 2	**-**	<5	**-**	< 2	< 2	**-**	<5	**-**	< 2	< 2	**-**	<5	**-**
Tin	15	<10	**NCD**	7	**72.7%**	< 10	12	**NCD**	<5	**-**	< 10	< 10	**-**	<5	**-**	< 10	< 10	**-**	<5	**-**	11	15	**30.8%**	5	**75.0%**
Vanadium	45	56	**21.8%**	-	**-**	29	31	**6.7%**	-	**-**	< 10	< 10	**-**	-	**-**	36	34	**5.7%**	-	**-**	30	35	**15.4%**	-	**-**
Zinc	140	110	**24.0%**	170	**19.4%**	73	130	**56.2%**	86	**16.4%**	8.7	8.4	**3.5%**	73	**157.4%**	24	22	**8.7%**	37	**42.6%**	48	51	**6.1%**	82	**52.3%**
MAH's																									
Benzene	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**
Toluene	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**
Ethyl Benzene	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**
Xylenes	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**	< 0.05	<0.05	**-**	<0.05	**-**
ORGANOCHLORINE PESTICIDES																									
Aldrin	0.17	0.1	**51.9%**	0.09	**61.5%**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	0.09	**NCD**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**
Dieldrin	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**
alpha-BHC	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**
beta-BHC	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**
delta-BHC	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**
Lindane	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**
Chlordane	0.5	0.3	**50.0%**	< 0.05	**-**	0.2	0.1	**66.7%**	< 0.05	**-**	< 0.1	< 0.1	**-**	0.52	**NCD**	< 0.1	< 0.1	**-**	< 0.05	**-**	< 0.1	< 0.1	**-**	< 0.05	**-**
4,4'-DDD	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**
4,4'-DDE	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**
4,4'-DDT	< 0.05	0.08	**NCD**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**
Endosulfan I	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**
Endosulfan II	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**
Endosulfan Sulphate	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**
Endrin	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**
Endrin Aldehyde	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**
Endrin Ketone	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**
Heptachlor	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**	< 0.05	< 0.05	**-**	< 0.05	**-**

Sample Number	1RF1-A	1RF1-X	**RPD**	1RF1-Y	**RPD**	1RF21-A	1RF21-X	**RPD**	1RF21-Y	**RPD**	1RF41-A	1RF41-X	**RPD**		**RPD**	1RF61-A	1RF61-X	**RPD**	1RF61-Y	**RPD**	1RF81-A	1RF81-X	**RPD**	1RF81-Y	**RPD**
Fill/Natural	Sample	Intra -		Inter -		Sample	Intra -		Inter -		Sample	Intra -		Inter -		Sample	Intra -		Inter -		Sample	Intra -		Inter -	
		Duplicate		Duplicate			Duplicate		Duplicate			Duplicate		Duplicate			Duplicate		Duplicate			Duplicate		Duplicate	
Laboratory Number	06-JN02460	06-JN02461		952164		06-JN03136	06-JN03147		952732		06-JN04249	06-JN04250				06-JN06138	06-JN06143		957762		06-JL00288	06-JL00298		959205	
Heptachlor epoxide	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-
Hexachlorobenzene	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-
Methoxychlor	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-
Toxaphene	< 0.1	< 0.1	-	< 0.05	-	< 0.1	< 0.1	-	< 0.05	-	< 0.1	< 0.1	-	< 0.05	-	< 0.1	< 0.1	-	< 0.05	-	< 0.1	< 0.1	-	< 0.05	-
POLYNUCLEAR AROMATIC HYDROCARBONS																									
Naphthalene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-
Acenaphthylene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.2	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	0.9	< 0.1	-	0.1	**160.0%**	0.2	< 0.1	**NCD**	< 0.1	**NCD**
Acenaphthene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.2	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-
Fluorene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.2	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	0.3	< 0.1	-	< 0.1	**NCD**	0.1	< 0.1	**NCD**	< 0.1	**NCD**
Phenanthrene	0.2	0.2	**0.0%**	0.2	**0.0%**	< 0.1	0.8	**NCD**	< 0.1	-	< 0.1	< 0.1	-	0.2	-	6	0.3	**181.0%**	2.4	**85.7%**	1.2	0.3	**120.0%**	0.3	**120.0%**
Anthracene	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.2	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	0.9	< 0.1	-	0.5	**57.1%**	0.2	0.1	**66.7%**	0.1	**66.7%**
Fluoranthrene	0.9	1	**10.5%**	1	**10.5%**	0.2	< 0.1	**NCD**	0.3	**40.0%**	< 0.1	< 0.1	-	0.8	-	10	0.7	**173.8%**	3.2	**103.0%**	1.3	0.7	**60.0%**	0.7	**60.0%**
Pyrene	0.9	1.2	**28.6%**	1.1	**20.0%**	0.2	< 0.1	**NCD**	0.3	**40.0%**	< 0.1	< 0.1	-	0.9	-	8.8	0.7	**170.5%**	2.8	**103.4%**	1.2	0.7	**52.6%**	0.7	**52.6%**
Benzo(a)anthracene	0.5	0.5	**0.0%**	0.7	**33.3%**	< 0.1	< 0.1	-	0.2	**NCD**	< 0.1	< 0.1	-	0.5	-	5.1	0.4	**170.9%**	1.7	**100.0%**	0.5	0.3	**50.0%**	0.4	**22.2%**
Chrysene	0.6	0.7	**15.4%**	0.6	**0.0%**	< 0.1	< 0.1	-	0.1	**NCD**	< 0.1	< 0.1	-	0.4	-	3.8	0.3	**170.7%**	1	**116.7%**	0.5	0.3	**50.0%**	0.3	**50.0%**
Benzo(b)fluoranthene	0.6	0.6	**0.0%**	0.5	**18.2%**	0.2	< 0.1	**NCD**	0.2	**0.0%**	< 0.1	< 0.1	-	0.3	-	4.4	0.3	**174.5%**	1	**125.9%**	0.5	0.3	**50.0%**	0.2	**85.7%**
Benzo(k)fluoranthene	0.3	0.6	**66.7%**	0.7	**80.0%**	0.2	< 0.1	**NCD**	0.2	**0.0%**	< 0.1	< 0.1	-	0.5	-	2.8	0.3	**161.3%**	1	**94.7%**	0.6	0.2	**100.0%**	0.3	**66.7%**
Benzo(a)pyrene	0.7	0.8	**13.3%**	0.7	**0.0%**	0.1	< 0.1	**NCD**	0.2	**66.7%**	< 0.1	< 0.1	-	0.5	-	5.9	0.4	**174.6%**	1.3	**127.8%**	0.7	0.4	**54.5%**	0.4	**54.5%**
Dibenzo(a,h)anthracene	0.1	0.1	**0.0%**	<0.1	**NCD**	< 0.1	< 0.1	-	<0.1	-	< 0.1	< 0.1	-	<0.1	-	0.7	< 0.1	-	0.1	**150.0%**	0.1	< 0.1	**NCD**	<0.1	**NCD**
Benzo(g,h,i)perylene	0.5	0.5	**0.0%**	0.6	**18.2%**	< 0.1	< 0.1	-	0.2	**NCD**	< 0.1	< 0.1	-	0.5	-	2.9	0.2	**174.2%**	0.6	**131.4%**	0.4	0.2	**66.7%**	0.2	**66.7%**
Indeno(1,2,3-cd)pyrene	0.4	0.4	**0.0%**	0.6	**40.0%**	< 0.1	< 0.1	-	0.1	**NCD**	< 0.1	< 0.1	-	0.4	-	2.6	0.1	**185.2%**	0.6	**125.0%**	0.3	0.2	**40.0%**	0.2	**40.0%**
Total PAH	**6.2**	**7.1**	**13.5%**	**7**	**12.1%**	**2**	**2.7**	**29.8%**	**2.15**	**7.2%**	**<0.8**	**<0.8**	-	**5.3**	-	**55**	**4.3**	**171.0%**	**16.45**	**107.9%**	**8**	**4.2**	**62.3%**	**3.95**	**67.8%**
POLYCHLORINATED BIPHENYLS (PCB's)																									
Arochlor-1016	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-
Arochlor-1221	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-
Arochlor-1232	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-
Arochlor-1242	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-
Arochlor-1248	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-
Arochlor-1254	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-
Arochlor-1260	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-	< 0.1	<0.1	-	<0.1	-
PHENOLS & CRESOLS																									
2-Chlorophenol	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-
2-Methylphenol (o-Cresol)	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-
2-Nitrophenol	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	-	-	-
2.4-Dichlorophenol	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-
2.4-Dimethylphenol	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-
2.4.6-Trichlorophenol	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-
2.6-Dichlorophenol	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-
3&4-Methylphenol (m&p-Cresol)	< 0.2	< 0.2	-	-	-	< 0.2	< 0.2	-	-	-	< 0.2	< 0.2	-	-	-	< 0.2	< 0.2	-	-	-	< 0.2	< 0.2	-	-	-
4-Chloro-3-methylphenol	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-	< 0.1	< 0.1	-	-	-
Pentachlorophenol	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	-	-	-
Phenol	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-
TOTAL RECOVERABLE HYDROCARBONS																									
T.R.H. C6-C9 Fraction by GC	< 20	< 20	-	< 20	-	< 20	< 20	-	< 20	-	< 20	< 20	-	< 20	-	< 20	< 20	-	< 20	-	< 20	< 20	-	< 20	-
T.R.H. C10-C14 Fraction by GC	< 50	< 50	-	< 20	-	< 50	< 50	-	< 20	-	< 50	< 50	-	< 20	-	< 50	< 50	-	< 20	-	< 50	< 50	-	< 20	-
T.R.H. C15-C28 Fraction by GC	< 100	< 100	-	< 50	-	< 100	< 100	-	< 50	-	< 100	< 100	-	< 50	-	< 100	< 100	-	< 50	-	< 100	< 100	-	< 50	-
T.R.H. C29-C36 Fraction by GC	< 100	< 100	-	< 50	-	< 100	< 100	-	< 50	-	< 100	< 100	-	< 50	-	< 100	< 100	-	< 50	-	< 100	< 100	-	< 50	-

All concentrations are mg/L unless otherwise stated
NCD - Non Calculable Data
* Relative percentage difference of numerical pH not absolute hydrogen ion concentration

APPENDIX E - LABORATORY REPORTS

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION REDEVELOPMENT AAB 05 002.02

Order Number:
Date Received: Jun 9, 2006
Date Sampled: Jun 7, 2006
Date Reported: Jun 19, 2006
Contact: Scott Slater

Methods

- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- USEPA 8270C Phenols
- USEPA 8082 Polychlorinated Biphenyls
- USEPA 8121 Chlorinated Hydrocarbons
- USEPA 8081A Organochlorine Pesticides
- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- USEPA 8260B - MGT 350A Monocyclic Aromatic Hydrocarbons
- MGT100A-GC Total Recoverable Hydrocarbons
- USEPA 9010B Cyanide
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF1-A	1RF1-X	1RF2-A	1RF3-A
	Lab Number		06-JN02460	06-JN02461	06-JN02462	06-JN02463
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	< 20	< 20	-	-
TRH C10-C14 Fraction by GC	50	mg/kg	< 50	< 50	-	-
TRH C15-C28 Fraction by GC	100	mg/kg	< 100	< 100	-	-
TRH C29-C36 Fraction by GC	100	mg/kg	< 100	< 100	-	-
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Toluene	0.05	mg/kg	< 0.05	< 0.05	-	-
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Xylenes(ortho.meta and para)	0.05	mg/kg	< 0.05	< 0.05	-	-
Fluorobenzene (surr.)	1	%	92	92	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.5	0.5	0.2	0.1
Benzo(a)pyrene	0.1	mg/kg	0.7	0.8	0.2	0.2
Benzo(b)fluoranthene	0.1	mg/kg	0.6	0.6	0.2	0.2
Benzo(g.h.i)perylene	0.1	mg/kg	0.5	0.5	0.1	0.2
Benzo(k)fluoranthene	0.1	mg/kg	0.3	0.6	0.1	0.2
Chrysene	0.1	mg/kg	0.6	0.7	0.2	0.2
Dibenz(a.h)anthracene	0.1	mg/kg	0.1	0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.9	1.0	0.3	0.3
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	0.4	0.4	0.1	0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	0.2	0.2	< 0.1	< 0.1
Pyrene	0.1	mg/kg	0.9	1.2	0.3	0.3
Total PAH	1.6	mg/kg	6.2	7.1	2.4	2.5
Chrysene-d12 (surr.)	1	%	100	100	98	90
2-Fluorobiphenyl (surr.)	1	%	98	95	91	88

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF1-A	1RF1-X	1RF2-A	1RF3-A
	Lab Number		06-JN02460	06-JN02461	06-JN02462	06-JN02463
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	0.08	-	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	0.17	0.10	-	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Chlordane	0.1	mg/kg	0.5	0.3	-	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Toxophene	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	98	100	-	-
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.2	mg/kg	< 0.2	< 0.2	-	-
1.2.3-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF1-A	1RF1-X	1RF2-A	1RF3-A
	Lab Number		06-JN02460	06-JN02461	06-JN02462	06-JN02463
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006
Analysis Type	**LOR**	**Units**				
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
1.3-Dichlorobenzene	0.2	mg/kg	< 0.2	< 0.2	-	-
1.3.5-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
1.4-Dichlorobenzene	0.2	mg/kg	< 0.2	< 0.2	-	-
Benzal chloride	0.05	mg/kg	< 0.05	< 0.05	-	-
Benzotrichloride	0.05	mg/kg	< 0.05	< 0.05	-	-
Benzyl chloride	0.2	mg/kg	< 0.2	< 0.2	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobutadiene	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorocyclopentadiene	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachloroethane	0.05	mg/kg	< 0.05	< 0.05	-	-
Pentachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Dibutylchlorendate (surr.)	1	%	98	100	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	-	-
Total PCB	1	mg/kg	< 1	< 1	-	-
Dibutylchlorendate (surr.)	1	%	98	100	-	-
Phenols						
2-Chlorophenol	0.1	mg/kg	< 0.1	< 0.1	-	-
2-Methylphenol (o-Cresol)	0.1	mg/kg	< 0.1	< 0.1	-	-
2-Nitrophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dichlorophenol	0.1	mg/kg	< 0.1	< 0.1	-	-
2.4-Dimethylphenol	0.1	mg/kg	< 0.1	< 0.1	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF1-A	1RF1-X	1RF2-A	1RF3-A
	Lab Number		06-JN02460	06-JN02461	06-JN02462	06-JN02463
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006
Analysis Type	**LOR**	**Units**				
2.4.6-Trichlorophenol	0.1	mg/kg	< 0.1	< 0.1	-	-
2.6-Dichlorophenol	0.1	mg/kg	< 0.1	< 0.1	-	-
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	< 0.2	< 0.2	-	-
4-Chloro-3-methylphenol	0.1	mg/kg	< 0.1	< 0.1	-	-
Pentachlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenol	0.1	mg/kg	< 0.1	< 0.1	-	-
Phenol-d6 (surr.)	1	%	91	84	-	-
% Moisture	0.1	%	14	16	15	15
Cyanide (total)	5	mg/kg	< 5	< 5	-	-
pH (1:5 Aqueous extract)	0.1	units	9.0	8.9	9.2	9.4
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	17	12	18	14
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	26	26	19	20
Cobalt	5	mg/kg	< 5	5.5	< 5	< 5
Copper	5	mg/kg	30	21	16	16
Lead	5	mg/kg	72	67	47	46
Mercury	0.1	mg/kg	< 0.1	0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	9.2	9.5	7.6	8.1
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	15	<10	<10	<10
Vanadium	10	mg/kg	45	56	36	36
Zinc	5	mg/kg	140	110	100	93

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1RF4-A	1RF5-A	1RF6-A	1RF7-A
71 Belair Rd	Lab Number		06-JN02464	06-JN02465	06-JN02466	06-JN02467
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	0.1	0.2	0.1
Benzo(a)pyrene	0.1	mg/kg	0.1	0.2	0.2	0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	0.2	0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	0.1	0.1	< 0.1
Chrysene	0.1	mg/kg	0.1	0.2	0.2	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.1	0.3	0.3	0.2
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	0.1	0.1	< 0.1
Pyrene	0.1	mg/kg	0.1	0.3	0.3	0.2
Total PAH	1.6	mg/kg	1.6	2.3	2.3	1.8
Chrysene-d12 (surr.)	1	%	83	98	94	92
2-Fluorobiphenyl (surr.)	1	%	91	110	93	87
% Moisture	0.1	%	14	16	14	17
pH (1:5 Aqueous extract)	0.1	units	9.4	9.3	9.3	9.4
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	12	7.9	8.3	12
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	15	15	16	18
Cobalt	5	mg/kg	< 5	< 5	< 5	6.4
Copper	5	mg/kg	14	31	16	18

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF4-A**	**1RF5-A**	**1RF6-A**	**1RF7-A**
	Lab Number		**06-JN02464**	**06-JN02465**	**06-JN02466**	**06-JN02467**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 7, 2006**	**Jun 7, 2006**	**Jun 7, 2006**	**Jun 7, 2006**
Analysis Type	**LOR**	**Units**				
Lead	5	mg/kg	31	38	30	24
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	6.5	6.8	7.1	7.8
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	<10	23	<10	<10
Vanadium	10	mg/kg	22	26	27	66
Zinc	5	mg/kg	66	58	62	45

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1RF8-A	1RF9-A	1RF10-A	1RF11-A
71 Belair Rd	Lab Number		06-JN02468	06-JN02469	06-JN02470	06-JN02471
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	-	-	-	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	-	-	-	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	-	-	-	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	-	-	-	< 100
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	-	-	-	< 0.05
Toluene	0.05	mg/kg	-	-	-	< 0.05
Ethylbenzene	0.05	mg/kg	-	-	-	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	-	-	-	< 0.05
Fluorobenzene (surr.)	1	%	-	-	-	84
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.3	0.1	0.1	0.1
Benzo(a)pyrene	0.1	mg/kg	0.2	0.1	0.1	0.2
Benzo(b)fluoranthene	0.1	mg/kg	0.2	< 0.1	0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	0.1	< 0.1	< 0.1	0.1
Chrysene	0.1	mg/kg	0.3	0.1	0.1	0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.6	0.2	0.2	0.2
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	0.3	< 0.1	< 0.1	< 0.1
Pyrene	0.1	mg/kg	0.6	0.2	0.2	0.2
Total PAH	1.6	mg/kg	3.4	1.8	1.8	1.9
Chrysene-d12 (surr.)	1	%	110	92	98	100
2-Fluorobiphenyl (surr.)	1	%	98	100	92	91

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF8-A	1RF9-A	1RF10-A	1RF11-A
	Lab Number		06-JN02468	06-JN02469	06-JN02470	06-JN02471
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-BHC	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-BHC	0.05	mg/kg	-	-	-	< 0.05
Chlordane	0.1	mg/kg	-	-	-	0.2
d-BHC	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	-	< 0.05
Toxophene	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	110
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.2	mg/kg	-	-	-	< 0.2
1.2.3-Trichlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.2.4-Trichlorobenzene	0.05	mg/kg	-	-	-	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF8-A	1RF9-A	1RF10-A	1RF11-A
	Lab Number		06-JN02468	06-JN02469	06-JN02470	06-JN02471
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006
Analysis Type	**LOR**	**Units**				
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.3-Dichlorobenzene	0.2	mg/kg	-	-	-	< 0.2
1.3.5-Trichlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.4-Dichlorobenzene	0.2	mg/kg	-	-	-	< 0.2
Benzal chloride	0.05	mg/kg	-	-	-	< 0.05
Benzotrichloride	0.05	mg/kg	-	-	-	< 0.05
Benzyl chloride	0.2	mg/kg	-	-	-	< 0.2
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobutadiene	0.05	mg/kg	-	-	-	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	-	-	-	< 0.05
Hexachloroethane	0.05	mg/kg	-	-	-	< 0.05
Pentachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Dibutylchlorendate (surr.)	1	%	-	-	-	110
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB	1	mg/kg	-	-	-	< 1
Dibutylchlorendate (surr.)	1	%	-	-	-	110
Phenols						
2-Chlorophenol	0.1	mg/kg	-	-	-	< 0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	-	-	-	< 0.1
2-Nitrophenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dichlorophenol	0.1	mg/kg	-	-	-	< 0.1
2.4-Dimethylphenol	0.1	mg/kg	-	-	-	< 0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF8-A	1RF9-A	1RF10-A	1RF11-A
	Lab Number		06-JN02468	06-JN02469	06-JN02470	06-JN02471
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006
Analysis Type	**LOR**	**Units**				
2.4.6-Trichlorophenol	0.1	mg/kg	-	-	-	< 0.1
2.6-Dichlorophenol	0.1	mg/kg	-	-	-	< 0.1
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	-	-	-	< 0.2
4-Chloro-3-methylphenol	0.1	mg/kg	-	-	-	< 0.1
Pentachlorophenol	0.5	mg/kg	-	-	-	< 0.5
Phenol	0.1	mg/kg	-	-	-	< 0.1
Phenol-d6 (surr.)	1	%	-	-	-	95
% Moisture	0.1	%	18	15	17	12
Cyanide (total)	5	mg/kg	-	-	-	< 5
pH (1:5 Aqueous extract)	0.1	units	9.5	9.3	9.2	9.1
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	<2	<2	<2	6.8
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	20	14	16	17
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	13	15	17	16
Lead	5	mg/kg	16	18	39	30
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	7.0	6.9	7.0	7.6
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	<10	<10	16	<10
Vanadium	10	mg/kg	56	24	27	26
Zinc	5	mg/kg	83	27	52	58

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1RF12-A	1RF13-A	1RF14-A	1RF15-A
71 Belair Rd	Lab Number		06-JN02472	06-JN02473	06-JN02474	06-JN02475
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.1	0.1	< 0.1	0.2
Benzo(a)pyrene	0.1	mg/kg	0.1	< 0.1	0.1	0.2
Benzo(b)fluoranthene	0.1	mg/kg	0.1	0.1	0.1	0.2
Benzo(g.h.i)perylene	0.1	mg/kg	0.1	< 0.1	< 0.1	0.2
Benzo(k)fluoranthene	0.1	mg/kg	0.1	< 0.1	< 0.1	0.2
Chrysene	0.1	mg/kg	0.1	0.1	< 0.1	0.2
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.2	0.1	0.1	0.3
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Pyrene	0.1	mg/kg	0.2	0.2	0.1	0.3
Total PAH	1.6	mg/kg	1.8	1.7	1.6	2.6
Chrysene-d12 (surr.)	1	%	98	100	100	95
2-Fluorobiphenyl (surr.)	1	%	94	95	87	89
% Moisture	0.1	%	18	20	14	14
pH (1:5 Aqueous extract)	0.1	units	9.3	9.4	9.2	9.2
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	10	<2	<2	9.3
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	20	18	15	14
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	18	19	17	15

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF12-A**	**1RF13-A**	**1RF14-A**	**1RF15-A**
	Lab Number		**06-JN02472**	**06-JN02473**	**06-JN02474**	**06-JN02475**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 7, 2006**	**Jun 7, 2006**	**Jun 7, 2006**	**Jun 7, 2006**
Analysis Type	**LOR**	**Units**				
Lead	5	mg/kg	48	34	24	34
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	7.8	7.8	7.1	6.5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	<10	<10	17	<10
Vanadium	10	mg/kg	29	28	24	30
Zinc	5	mg/kg	96	53	36	55

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1RF1-A	1RF1-A	1RF1-A	1RF1-A	Method blank
	Lab Number	06-JN02460	06-JN02460	06-JN02460	06-JN02460	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
Cyanide (total)		< 5	< 5	<1	123	< 0.5
pH (1:5 Aqueous extract)		9.0	9.1	-	-	-
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC		-	-	<1	-	< 0.02
TRH C10-C14 Fraction by GC		< 50	< 50	<1	79	< 0.05
TRH C15-C28 Fraction by GC		< 100	< 100	<1	-	< 0.1
TRH C29-C36 Fraction by GC		< 100	< 100	<1	-	< 0.1
Monocyclic Aromatic Hydrocarbons						
Benzene		< 0.05	< 0.05	<1	89	< 0.005
Toluene		< 0.05	< 0.05	<1	94	< 0.005
Ethylbenzene		< 0.05	< 0.05	<1	89	< 0.005
Xylenes(ortho.meta and para)		< 0.05	< 0.05	<1	97	< 0.005
Fluorobenzene (surr.)		92	87	-	81	88
Polycyclic Aromatic Hydrocarbons						
Acenaphthene		-	-	<1	92	< 0.001
Acenaphthylene		-	-	<1	92	< 0.001
Anthracene		-	-	<1	92	< 0.001
Benz(a)anthracene		-	-	18	92	< 0.001
Benzo(a)pyrene		-	-	<1	100	< 0.001
Benzo(b)fluoranthene		-	-	9.5	106	< 0.001
Benzo(g.h.i)perylene		-	-	<1	101	< 0.001
Benzo(k)fluoranthene		-	-	<1	100	< 0.001
Chrysene		-	-	14	107	< 0.001
Dibenz(a.h)anthracene		-	-	<1	90	< 0.001
Fluoranthene		-	-	4.9	95	< 0.001
Fluorene		-	-	<1	104	< 0.001
Indeno(1.2.3-cd)pyrene		-	-	<1	109	< 0.001
Naphthalene		-	-	<1	92	< 0.001
Phenanthrene		-	-	<1	100	< 0.001

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	1RF1-A	1RF1-A	1RF1-A	1RF1-A	Method blank
Lab Number	06-JN02460	06-JN02460	06-JN02460	06-JN02460	Batch
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006
Analysis Type	Units		% RPD	% Recovery	mg/L
Polycyclic Aromatic Hydrocarbons					
Pyrene	-	-	12	114	< 0.001
Total PAH	-	-	-	-	< 0.016
Chrysene-d12 (surr.)	-	-	-	99	95
2-Fluorobiphenyl (surr.)	-	-	-	89	97
Organochlorine Pesticides					
4.4'-DDD	< 0.05	< 0.05	<1	129	< 0.005
4.4'-DDE	< 0.05	< 0.05	<1	94	< 0.005
4.4'-DDT	< 0.05	0.07	11	129	< 0.005
a-BHC	< 0.05	< 0.05	<1	129	< 0.005
Aldrin	-	-	<1	120	< 0.005
b-BHC	< 0.05	< 0.05	<1	109	< 0.005
Chlordane	0.5	0.6	23	119	< 0.01
d-BHC	< 0.05	< 0.05	<1	129	< 0.005
Dieldrin	< 0.05	< 0.05	<1	94	< 0.005
Endosulfan I	< 0.05	< 0.05	<1	129	< 0.005
Endosulfan II	< 0.05	< 0.05	<1	124	< 0.005
Endosulfan sulphate	< 0.05	< 0.05	<1	122	< 0.005
Endrin	< 0.05	< 0.05	<1	125	< 0.005
Endrin aldehyde	< 0.05	< 0.05	<1	114	< 0.005
Endrin ketone	< 0.05	< 0.05	<1	124	< 0.005
g-BHC (Lindane)	< 0.05	< 0.05	<1	128	< 0.005
Heptachlor	< 0.05	< 0.05	<1	119	< 0.005
Heptachlor epoxide	< 0.05	< 0.05	<1	121	< 0.005
Methoxychlor	< 0.05	< 0.05	<1	101	< 0.005
Toxophene	< 0.1	< 0.1	<1	-	< 0.01
Chlorinated Hydrocarbons					
1.2-Dichlorobenzene	< 0.2	< 0.2	<1	87	< 0.02
1.2.3-Trichlorobenzene	< 0.05	< 0.05	<1	104	< 0.005

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	1RF1-A	1RF1-A	1RF1-A	1RF1-A	Method blank
Lab Number	06-JN02460	06-JN02460	06-JN02460	06-JN02460	Batch
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
Chlorinated Hydrocarbons						
1.2.3.4-Tetrachlorobenzene		< 0.05	< 0.05	<1	115	< 0.005
1.2.3.5-Tetrachlorobenzene		< 0.05	< 0.05	<1	-	< 0.005
1.2.4-Trichlorobenzene		< 0.05	< 0.05	<1	-	< 0.005
1.2.4.5-Tetrachlorobenzene		< 0.05	< 0.05	<1	106	< 0.005
1.3-Dichlorobenzene		< 0.2	< 0.2	<1	97	< 0.02
1.3.5-Trichlorobenzene		< 0.05	< 0.05	<1	111	< 0.005
1.4-Dichlorobenzene		< 0.2	< 0.2	<1	98	< 0.02
Benzal chloride		< 0.05	< 0.05	<1	96	< 0.005
Benzotrichloride		< 0.05	< 0.05	<1	95	< 0.005
Benzyl chloride		< 0.2	< 0.2	<1	-	< 0.02
Hexachlorobenzene		< 0.05	< 0.05	<1	119	< 0.005
Hexachlorobutadiene		< 0.05	< 0.05	<1	103	< 0.005
Hexachlorocyclopentadiene		< 0.05	< 0.05	<1	100	< 0.005
Hexachloroethane		< 0.05	< 0.05	<1	99	< 0.005
Pentachlorobenzene		< 0.05	< 0.05	<1	105	< 0.005
Polychlorinated Biphenyls						
Aroclor-1221		< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1232		< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1242		< 0.1	< 0.1	<1	105	< 0.01
Aroclor-1248		< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1254		< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1260		< 0.1	< 0.1	<1	85	< 0.01
Total PCB		< 1	< 1	<1	105	< 0.1
Dibutylchlorendate (surr.)		98	130	-	89	110
Phenols						
2-Chlorophenol		-	-	<1	104	< 0.01
2-Methylphenol (o-Cresol)		-	-	<1	96	< 0.01
2-Nitrophenol		-	-	<1	98	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	1RF1-A	1RF1-A	1RF1-A	1RF1-A	Method blank
Lab Number	06-JN02460	06-JN02460	06-JN02460	06-JN02460	Batch
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006	Jun 7, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
Phenols						
2.4-Dichlorophenol		-	-	<1	98	< 0.01
2.4-Dimethylphenol		-	-	<1	91	< 0.01
2.4.6-Trichlorophenol		-	-	<1	101	< 0.01
2.6-Dichlorophenol		-	-	<1	92	< 0.01
3&4-Methylphenol (m&p-Cresol)		-	-	<1	96	< 0.02
4-Chloro-3-methylphenol		-	-	<1	92	< 0.01
Pentachlorophenol		-	-	<1	92	< 0.05
Phenol		-	-	<1	104	< 0.01
Phenol-d6 (surr.)		-	-	-	83	85
Heavy Metals						
Antimony		< 10	< 10	<1	79	< 0.5
Arsenic		17	19	<1	94	< 0.02
Beryllium		< 2	< 2	<1	80	< 0.02
Cadmium		< 0.5	< 0.5	<1	79	< 0.02
Chromium		26	21	2.6	94	< 0.05
Cobalt		< 5	< 5	<1	87	< 0.05
Copper		30	37	5.0	78	< 0.05
Lead		72	83	13	85	< 0.05
Mercury		-	-	<1	76	0.04
Molybdenum		< 10	< 10	<1	93	< 0.5
Nickel		9.2	8.6	0.10	82	< 0.05
Selenium		< 2	< 2	<1	90	< 0.02
Tin		15	16	18	92	< 0.5
Vanadium		45	36	4.0	93	< 0.5
Zinc		140	170	6.8	98	< 0.05
Aroclor-1016		< 0.1	< 0.1	<1	95	< 0.01

COMMENTS:

Chain of Custody

COC No: S0117
Page 1 of 2

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals Screen	Hg	PAH	Vic EPA Screen	pH	TCLP of Metals + Hg	TCLP of PAH
1RF1-A			7 June 06	Soil	1 Jar				X	X		
1RF1-X			7 June 06	Soil	1 Jar				X	X		
1RF2-A			7 June 06	Soil	1 Jar	X	X	X		X	X	X
1RF3-A			7 June 06	Soil	1 Jar	X	X	X		X		
1RF4-A			7 June 06	Soil	1 Jar	X	X	X		X	X	X
1RF5-A			7 June 06	Soil	1 Jar	X	X	X		X		
1RF6-A			7 June 06	Soil	1 Jar	X	X	X		X	X	X
1RF7-A			7 June 06	Soil	1 Jar	X	X	X		X		
1RF8-A			8 June 06	Soil	1 Jar	X	X	X		X	X	X

COMMENTS: **TCLPs to be undertaken at pH of 9.0 and then repeated at pH of 7.0. So each sample selected is tested twice.**

Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT Courier	DATE/TIME: 4:00pm 8/6/06	PREPARED BY (signature):
RECEIVED BY: (signature) C Mac.	DATE/TIME: 9/6/06	CHECKED BY: (signature) 19498 19497 19499

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA_05_002\02\Samples\COCS0117.doc

Chain of Custody

COC No: S0117
Page 2 of 2

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals Screen	Hg	PAH	Vic EPA Screen	pH	TCLP of Metals + Hg	TCLP of PAH
1RF9-A			8 June 06	Soil	1 Jar	X	X	X		X		
1RF10-A			8 June 06	Soil	1 Jar	X	X	X		X	X	X
1RF11-A			8 June 06	Soil	1 Jar				X	X		
1RF12-A			8 June 06	Soil	1 Jar	X	X	X		X	X	X
1RF13-A			8 June 06	Soil	1 Jar	X	X	X		X		
1RF14-A			8 June 06	Soil	1 Jar	X	X	X		X	X	X
1RF15-A			8 June 06	Soil	1 Jar	X	X	X		X		

COMMENTS: **TCLPs to be undertaken at pH of 9.0 and then repeated at pH of 7.0. So each sample selected is tested twice.**
Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT Courier	DATE/TIME: 4:00pm 8/6/06	PREPARED BY (signature)
RECEIVED BY: (signature) C Mills.	DATE/TIME: 9/6/06	CHECKED BY: (signature) 194986 194987 194988

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA_05 002\02\Samples\COC\S0117.doc

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION REDEVELOPMENT AAA 05 002.02

Order Number:
Date Received: Jun 14, 2006
Date Sampled: Jun 8, 2006
Date Reported: Jun 23, 2006
Contact: Scott Slater

Methods

- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- USEPA 8270C Phenols
- USEPA 8082 Polychlorinated Biphenyls
- USEPA 8121 Chlorinated Hydrocarbons
- USEPA 8081A Organochlorine Pesticides
- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- USEPA 8260B - MGT 350A Monocyclic Aromatic Hydrocarbons
- MGT100A-GC Total Recoverable Hydrocarbons
- USEPA 9010B Cyanide
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**1RF16-A**	**1RF17-A**	**1RF18-A**	**1RF19-A**
71 Belair Rd	**Lab Number**		**06-JN03131**	**06-JN03132**	**06-JN03133**	**06-JN03134**
Kingswood	**Matrix**		**Soil**	**Soil**	**Soil**	**Soil**
South Australia 5062	**Sample Date**		**Jun 8, 2006**	**Jun 8, 2006**	**Jun 8, 2006**	**Jun 8, 2006**
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.2
Anthracene	0.1	mg/kg	0.1	< 0.1	< 0.1	0.5
Benz(a)anthracene	0.1	mg/kg	0.4	< 0.1	0.3	1.3
Benzo(a)pyrene	0.1	mg/kg	0.4	0.2	0.3	0.8
Benzo(b)fluoranthene	0.1	mg/kg	0.5	0.1	0.2	0.8
Benzo(g.h.i)perylene	0.1	mg/kg	0.3	< 0.1	0.1	0.9
Benzo(k)fluoranthene	0.1	mg/kg	0.3	0.1	0.2	0.7
Chrysene	0.1	mg/kg	0.4	0.1	0.3	1.0
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.2
Fluoranthene	0.1	mg/kg	0.7	0.2	0.4	2.7
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.2
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	0.2	< 0.1	0.1	0.7
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.2
Phenanthrene	0.1	mg/kg	0.5	< 0.1	0.2	2.4
Pyrene	0.1	mg/kg	0.7	0.2	0.5	2.6
Total PAH	1.6	mg/kg	5.0	1.9	3.2	15
Chrysene-d12 (surr.)	1	%	130	95	80	88
2-Fluorobiphenyl (surr.)	1	%	90	94	97	87
% Moisture	0.1	%	15	11	11	14
pH (1:5 Aqueous extract)	0.1	units	9.5	9.6	9.5	9.5
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	6.9	5.4	8.0	7.3
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	14	16	13	15
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	14	13	15	14

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF16-A**	**1RF17-A**	**1RF18-A**	**1RF19-A**
	Lab Number		**06-JN03131**	**06-JN03132**	**06-JN03133**	**06-JN03134**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 8, 2006**	**Jun 8, 2006**	**Jun 8, 2006**	**Jun 8, 2006**
Analysis Type	**LOR**	**Units**				
Lead	5	mg/kg	29	61	34	33
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	6.6	6.4	6.4	6.6
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	10	< 10	< 10	< 10
Vanadium	10	mg/kg	29	45	26	28
Zinc	5	mg/kg	59	43	65	56

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1RF20-A	1RF21-A	1RF22-A	1RF23-A
71 Belair Rd	Lab Number		06-JN03135	06-JN03136	06-JN03137	06-JN03138
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	-	< 20	-	-
TRH C10-C14 Fraction by GC	50	mg/kg	-	< 50	-	-
TRH C15-C28 Fraction by GC	100	mg/kg	-	< 100	-	-
TRH C29-C36 Fraction by GC	100	mg/kg	-	< 100	-	-
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	-	< 0.05	-	-
Toluene	0.05	mg/kg	-	< 0.05	-	-
Ethylbenzene	0.05	mg/kg	-	< 0.05	-	-
Xylenes(ortho.meta and para)	0.05	mg/kg	-	< 0.05	-	-
Fluorobenzene (surr.)	1	%	-	100	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.2	< 0.1	0.3	0.3
Benzo(a)pyrene	0.1	mg/kg	0.2	0.1	0.3	0.2
Benzo(b)fluoranthene	0.1	mg/kg	0.2	0.2	0.3	0.2
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	0.2	0.3
Benzo(k)fluoranthene	0.1	mg/kg	0.2	0.2	0.3	0.2
Chrysene	0.1	mg/kg	0.2	< 0.1	0.3	0.3
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.2	0.2	0.4	0.4
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	0.2	0.2
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Pyrene	0.1	mg/kg	0.3	0.2	0.4	0.4
Total PAH	1.6	mg/kg	2.4	2.0	3.4	3.2
Chrysene-d12 (surr.)	1	%	93	95	100	96
2-Fluorobiphenyl (surr.)	1	%	92	93	110	86

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF20-A	1RF21-A	1RF22-A	1RF23-A
	Lab Number		06-JN03135	06-JN03136	06-JN03137	06-JN03138
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4.4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-BHC	0.05	mg/kg	-	< 0.05	-	-
Chlordane	0.1	mg/kg	-	0.2	-	-
d-BHC	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.05	mg/kg	-	< 0.05	-	-
Toxophene	0.1	mg/kg	-	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	-	81	-	-
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.2	mg/kg	-	< 0.2	-	-
1.2.3-Trichlorobenzene	0.05	mg/kg	-	< 0.05	-	-
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
1.2.4-Trichlorobenzene	0.05	mg/kg	-	< 0.05	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF20-A	1RF21-A	1RF22-A	1RF23-A
	Lab Number		06-JN03135	06-JN03136	06-JN03137	06-JN03138
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	**LOR**	**Units**				
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
1.3-Dichlorobenzene	0.2	mg/kg	-	< 0.2	-	-
1.3.5-Trichlorobenzene	0.05	mg/kg	-	< 0.05	-	-
1.4-Dichlorobenzene	0.2	mg/kg	-	< 0.2	-	-
Benzal chloride	0.05	mg/kg	-	< 0.05	-	-
Benzotrichloride	0.05	mg/kg	-	< 0.05	-	-
Benzyl chloride	0.2	mg/kg	-	< 0.2	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobutadiene	0.05	mg/kg	-	< 0.05	-	-
Hexachlorocyclopentadiene	0.05	mg/kg	-	< 0.05	-	-
Hexachloroethane	0.05	mg/kg	-	< 0.05	-	-
Pentachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Dibutylchlorendate (surr.)	1	%	-	81	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1232	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1242	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1248	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1254	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1260	0.1	mg/kg	-	< 0.1	-	-
Total PCB	1	mg/kg	-	< 1	-	-
Dibutylchlorendate (surr.)	1	%	-	81	-	-
Phenols						
2-Chlorophenol	0.1	mg/kg	-	< 0.1	-	-
2-Methylphenol (o-Cresol)	0.1	mg/kg	-	< 0.1	-	-
2-Nitrophenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dichlorophenol	0.1	mg/kg	-	< 0.1	-	-
2.4-Dimethylphenol	0.1	mg/kg	-	< 0.1	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF20-A**	**1RF21-A**	**1RF22-A**	**1RF23-A**
	Lab Number		**06-JN03135**	**06-JN03136**	**06-JN03137**	**06-JN03138**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 8, 2006**	**Jun 8, 2006**	**Jun 8, 2006**	**Jun 8, 2006**
Analysis Type	**LOR**	**Units**				
2.4.6-Trichlorophenol	0.1	mg/kg	-	< 0.1	-	-
2.6-Dichlorophenol	0.1	mg/kg	-	< 0.1	-	-
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	-	< 0.2	-	-
4-Chloro-3-methylphenol	0.1	mg/kg	-	< 0.1	-	-
Pentachlorophenol	0.5	mg/kg	-	< 0.5	-	-
Phenol	0.1	mg/kg	-	< 0.1	-	-
Phenol-d6 (surr.)	1	%	-	98	-	-
% Moisture	0.1	%	13	14	11	16
Cyanide (total)	5	mg/kg	-	< 5	-	-
pH (1:5 Aqueous extract)	0.1	units	9.4	9.3	9.4	9.4
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	4.6	7.0	9.7	9.2
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	17	15	16	15
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	14	15	20	17
Lead	5	mg/kg	28	34	81	42
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	7.6	6.6	6.9	7.1
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	12	13
Vanadium	10	mg/kg	30	29	30	31
Zinc	5	mg/kg	57	73	120	190

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1RF24-A	1RF25-A	1RF26-A	1RF27-A
71 Belair Rd	Lab Number		06-JN03139	06-JN03140	06-JN03141	06-JN03142
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	-	-	-	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	-	-	-	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	-	-	-	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	-	-	-	< 100
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	-	-	-	< 0.05
Toluene	0.05	mg/kg	-	-	-	< 0.05
Ethylbenzene	0.05	mg/kg	-	-	-	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	-	-	-	< 0.05
Fluorobenzene (surr.)	1	%	-	-	-	94
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.3	0.1	0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	0.2	< 0.1	0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	0.2	< 0.1	0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	0.2	< 0.1	0.1	< 0.1
Chrysene	0.1	mg/kg	0.2	< 0.1	0.2	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.4	0.2	0.2	0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Pyrene	0.1	mg/kg	0.4	0.2	0.2	0.1
Total PAH	1.6	mg/kg	2.9	1.8	1.9	1.6
Chrysene-d12 (surr.)	1	%	86	85	90	85
2-Fluorobiphenyl (surr.)	1	%	90	110	110	100

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF24-A	1RF25-A	1RF26-A	1RF27-A
	Lab Number		06-JN03139	06-JN03140	06-JN03141	06-JN03142
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-BHC	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	0.08
b-BHC	0.05	mg/kg	-	-	-	< 0.05
Chlordane	0.1	mg/kg	-	-	-	< 0.1
d-BHC	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	-	< 0.05
Toxophene	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	93
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.2	mg/kg	-	-	-	< 0.2
1.2.3-Trichlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.2.4-Trichlorobenzene	0.05	mg/kg	-	-	-	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF24-A	1RF25-A	1RF26-A	1RF27-A
	Lab Number		06-JN03139	06-JN03140	06-JN03141	06-JN03142
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	**LOR**	**Units**				
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.3-Dichlorobenzene	0.2	mg/kg	-	-	-	< 0.2
1.3.5-Trichlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.4-Dichlorobenzene	0.2	mg/kg	-	-	-	< 0.2
Benzal chloride	0.05	mg/kg	-	-	-	< 0.05
Benzotrichloride	0.05	mg/kg	-	-	-	< 0.05
Benzyl chloride	0.2	mg/kg	-	-	-	< 0.2
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobutadiene	0.05	mg/kg	-	-	-	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	-	-	-	< 0.05
Hexachloroethane	0.05	mg/kg	-	-	-	< 0.05
Pentachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Dibutylchlorendate (surr.)	1	%	-	-	-	93
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB	1	mg/kg	-	-	-	< 1
Dibutylchlorendate (surr.)	1	%	-	-	-	93
Phenols						
2-Chlorophenol	0.1	mg/kg	-	-	-	< 0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	-	-	-	< 0.1
2-Nitrophenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dichlorophenol	0.1	mg/kg	-	-	-	< 0.1
2.4-Dimethylphenol	0.1	mg/kg	-	-	-	< 0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF24-A**	**1RF25-A**	**1RF26-A**	**1RF27-A**
	Lab Number		**06-JN03139**	**06-JN03140**	**06-JN03141**	**06-JN03142**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 8, 2006**	**Jun 8, 2006**	**Jun 8, 2006**	**Jun 8, 2006**
Analysis Type	**LOR**	**Units**				
2.4.6-Trichlorophenol	0.1	mg/kg	-	-	-	< 0.1
2.6-Dichlorophenol	0.1	mg/kg	-	-	-	< 0.1
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	-	-	-	< 0.2
4-Chloro-3-methylphenol	0.1	mg/kg	-	-	-	< 0.1
Pentachlorophenol	0.5	mg/kg	-	-	-	< 0.5
Phenol	0.1	mg/kg	-	-	-	< 0.1
Phenol-d6 (surr.)	1	%	-	-	-	95
% Moisture	0.1	%	15	17	12	14
Cyanide (total)	5	mg/kg	-	-	-	< 5
pH (1:5 Aqueous extract)	0.1	units	9.4	9.3	9.4	9.3
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	9.3	4.1	4.4	4.2
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	16	14	16	14
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	27	12	26	16
Lead	5	mg/kg	74	25	48	72
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	7.5	7.3	8.0	6.9
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	42	12	11	13
Vanadium	10	mg/kg	26	22	31	23
Zinc	5	mg/kg	84	30	56	47

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1RF28-A	1RF29-A	1RF30-A	1RF31-A
71 Belair Rd Kingswood South Australia 5062	Lab Number		06-JN03143	06-JN03144	06-JN03145	06-JN03146
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	-	-	-	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	-	-	-	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	-	-	-	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	-	-	-	< 100
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	-	-	-	< 0.05
Toluene	0.05	mg/kg	-	-	-	< 0.05
Ethylbenzene	0.05	mg/kg	-	-	-	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	-	-	-	< 0.05
Fluorobenzene (surr.)	1	%	-	-	-	100
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.2	0.2	0.3	0.1
Benzo(a)pyrene	0.1	mg/kg	0.2	0.3	0.3	0.1
Benzo(b)fluoranthene	0.1	mg/kg	0.3	0.2	0.3	0.2
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	0.2	0.2	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	0.1	0.2	0.2	0.1
Chrysene	0.1	mg/kg	0.2	0.3	0.2	0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.4	0.4	0.4	0.2
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	0.1	0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	0.1	0.2	0.1	< 0.1
Pyrene	0.1	mg/kg	0.4	0.4	0.5	0.2
Total PAH	1.6	mg/kg	2.7	3.1	3.2	1.9
Chrysene-d12 (surr.)	1	%	90	95	87	95
2-Fluorobiphenyl (surr.)	1	%	110	100	80	95

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF28-A	1RF29-A	1RF30-A	1RF31-A
	Lab Number		06-JN03143	06-JN03144	06-JN03145	06-JN03146
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-BHC	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	0.10
b-BHC	0.05	mg/kg	-	-	-	< 0.05
Chlordane	0.1	mg/kg	-	-	-	< 0.1
d-BHC	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	0.10
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	-	< 0.05
Toxophene	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	94
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.2	mg/kg	-	-	-	< 0.2
1.2.3-Trichlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.2.4-Trichlorobenzene	0.05	mg/kg	-	-	-	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF28-A	1RF29-A	1RF30-A	1RF31-A
	Lab Number		06-JN03143	06-JN03144	06-JN03145	06-JN03146
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	**LOR**	**Units**				
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.3-Dichlorobenzene	0.2	mg/kg	-	-	-	< 0.2
1.3.5-Trichlorobenzene	0.05	mg/kg	-	-	-	< 0.05
1.4-Dichlorobenzene	0.2	mg/kg	-	-	-	< 0.2
Benzal chloride	0.05	mg/kg	-	-	-	< 0.05
Benzotrichloride	0.05	mg/kg	-	-	-	< 0.05
Benzyl chloride	0.2	mg/kg	-	-	-	< 0.2
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobutadiene	0.05	mg/kg	-	-	-	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	-	-	-	< 0.05
Hexachloroethane	0.05	mg/kg	-	-	-	< 0.05
Pentachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Dibutylchlorendate (surr.)	1	%	-	-	-	94
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB	1	mg/kg	-	-	-	< 1
Dibutylchlorendate (surr.)	1	%	-	-	-	94
Phenols						
2-Chlorophenol	0.1	mg/kg	-	-	-	< 0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	-	-	-	< 0.1
2-Nitrophenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dichlorophenol	0.1	mg/kg	-	-	-	< 0.1
2.4-Dimethylphenol	0.1	mg/kg	-	-	-	< 0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF28-A**	**1RF29-A**	**1RF30-A**	**1RF31-A**
	Lab Number		**06-JN03143**	**06-JN03144**	**06-JN03145**	**06-JN03146**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 8, 2006**	**Jun 8, 2006**	**Jun 8, 2006**	**Jun 8, 2006**
Analysis Type	**LOR**	**Units**				
2.4.6-Trichlorophenol	0.1	mg/kg	-	-	-	< 0.1
2.6-Dichlorophenol	0.1	mg/kg	-	-	-	< 0.1
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	-	-	-	< 0.2
4-Chloro-3-methylphenol	0.1	mg/kg	-	-	-	< 0.1
Pentachlorophenol	0.5	mg/kg	-	-	-	< 0.5
Phenol	0.1	mg/kg	-	-	-	< 0.1
Phenol-d6 (surr.)	1	%	-	-	-	85
% Moisture	0.1	%	10	15	14	14
Cyanide (total)	5	mg/kg	-	-	-	< 5
pH (1:5 Aqueous extract)	0.1	units	9.4	9.2	9.2	9.3
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	3.7	5.1	6.5	4.7
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	11	16	17	15
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	12	22	28	22
Lead	5	mg/kg	29	81	100	77
Mercury	0.1	mg/kg	< 0.1	0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	5.1	8.4	7.8	6.9
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	14	110	14
Vanadium	10	mg/kg	17	27	28	28
Zinc	5	mg/kg	44	100	130	78

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**1RF21-X**
71 Belair Rd	**Lab Number**		**06-JN03147**
Kingswood	**Matrix**		**Soil**
South Australia 5062	**Sample Date**		**Jun 8, 2006**
Analysis Type	**LOR**	**Units**	
Total Recoverable Hydrocarbons			
TRH C6-C9 Fraction by GC	20	mg/kg	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	< 100
Monocyclic Aromatic Hydrocarbons			
Benzene	0.05	mg/kg	< 0.05
Toluene	0.05	mg/kg	< 0.05
Ethylbenzene	0.05	mg/kg	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	< 0.05
Fluorobenzene (surr.)	1	%	92
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.1	mg/kg	< 0.2
Acenaphthylene	0.1	mg/kg	< 0.2
Anthracene	0.1	mg/kg	< 0.2
Benz(a)anthracene	0.1	mg/kg	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1
Chrysene	0.1	mg/kg	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1
Fluorene	0.1	mg/kg	< 0.2
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1
Naphthalene	0.1	mg/kg	< 0.1
Phenanthrene	0.1	mg/kg	0.8
Pyrene	0.1	mg/kg	< 0.1
Total PAH	1.6	mg/kg	2.7
Chrysene-d12 (surr.)	1	%	97
2-Fluorobiphenyl (surr.)	1	%	100

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF21-X**
	Lab Number		**06-JN03147**
	Matrix		**Soil**
	Sample Date		**Jun 8, 2006**
Analysis Type	**LOR**	**Units**	
Organochlorine Pesticides			
4.4'-DDD	0.05	mg/kg	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05
a-BHC	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-BHC	0.05	mg/kg	< 0.05
Chlordane	0.1	mg/kg	0.1
d-BHC	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxophene	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	94
Chlorinated Hydrocarbons			
1.2-Dichlorobenzene	0.2	mg/kg	< 0.2
1.2.3-Trichlorobenzene	0.05	mg/kg	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF21-X**
	Lab Number		**06-JN03147**
	Matrix		**Soil**
	Sample Date		**Jun 8, 2006**
Analysis Type	**LOR**	**Units**	
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05
1.3-Dichlorobenzene	0.2	mg/kg	< 0.2
1.3.5-Trichlorobenzene	0.05	mg/kg	< 0.05
1.4-Dichlorobenzene	0.2	mg/kg	< 0.2
Benzal chloride	0.05	mg/kg	< 0.05
Benzotrichloride	0.05	mg/kg	< 0.05
Benzyl chloride	0.2	mg/kg	< 0.2
Hexachlorobenzene	0.05	mg/kg	< 0.05
Hexachlorobutadiene	0.05	mg/kg	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	< 0.05
Hexachloroethane	0.05	mg/kg	< 0.05
Pentachlorobenzene	0.05	mg/kg	< 0.05
Dibutylchlorendate (surr.)	1	%	94
Polychlorinated Biphenyls			
Aroclor-1016	0.1	mg/kg	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1
Total PCB	1	mg/kg	< 1
Dibutylchlorendate (surr.)	1	%	94
Phenols			
2-Chlorophenol	0.1	mg/kg	< 0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	< 0.1
2-Nitrophenol	0.5	mg/kg	< 0.5
2.4-Dichlorophenol	0.1	mg/kg	< 0.1
2.4-Dimethylphenol	0.1	mg/kg	< 0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF21-X**
	Lab Number		**06-JN03147**
	Matrix		**Soil**
	Sample Date		**Jun 8, 2006**
Analysis Type	**LOR**	**Units**	
2.4.6-Trichlorophenol	0.1	mg/kg	< 0.1
2.6-Dichlorophenol	0.1	mg/kg	< 0.1
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	< 0.2
4-Chloro-3-methylphenol	0.1	mg/kg	< 0.1
Pentachlorophenol	0.5	mg/kg	< 0.5
Phenol	0.1	mg/kg	< 0.1
Phenol-d6 (surr.)	1	%	110
% Moisture	0.1	%	14
Cyanide (total)	5	mg/kg	< 5
pH (1:5 Aqueous extract)	0.1	units	9.3
Heavy Metals			
Antimony	10	mg/kg	< 10
Arsenic	2	mg/kg	7.9
Beryllium	2	mg/kg	< 2
Cadmium	0.5	mg/kg	< 0.5
Chromium	5	mg/kg	17
Cobalt	5	mg/kg	< 5
Copper	5	mg/kg	19
Lead	5	mg/kg	40
Mercury	0.1	mg/kg	< 0.1
Molybdenum	10	mg/kg	< 10
Nickel	5	mg/kg	7.9
Selenium	2	mg/kg	< 2
Tin	10	mg/kg	12
Vanadium	10	mg/kg	31
Zinc	5	mg/kg	130

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1RF16-A	1RF16-A	1RF16-A	1RF16-A	Method blank
	Lab Number	06-JN03131	06-JN03131	06-JN03131	06-JN03131	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
pH (1:5 Aqueous extract)		9.5	9.3	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene		< 0.1	< 0.1	<1	92	< 0.001
Acenaphthylene		< 0.1	0.1	<1	96	< 0.001
Anthracene		0.1	0.1	15	92	< 0.001
Benz(a)anthracene		0.4	0.4	15	91	< 0.001
Benzo(a)pyrene		0.4	0.4	16	90	< 0.001
Benzo(b)fluoranthene		0.5	0.5	2.6	97	< 0.001
Benzo(g.h.i)perylene		0.3	0.4	15	106	< 0.001
Benzo(k)fluoranthene		0.3	0.3	15	111	< 0.001
Chrysene		0.4	0.4	11	110	< 0.001
Dibenz(a.h)anthracene		< 0.1	< 0.1	<1	99	< 0.001
Fluoranthene		0.7	0.8	20	105	< 0.001
Fluorene		< 0.1	0.1	<1	101	< 0.001
Indeno(1.2.3-cd)pyrene		0.2	0.2	4.1	98	< 0.001
Naphthalene		< 0.1	< 0.1	<1	98	< 0.001
Phenanthrene		0.5	0.6	13	105	< 0.001
Pyrene		0.7	0.9	18	99	< 0.001
Total PAH		5.0	5.4	-	-	< 0.016
Chrysene-d12 (surr.)		130	84	-	99	97
2-Fluorobiphenyl (surr.)		90	85	-	97	100
Phenols						
2-Chlorophenol		-	-	<1	94	< 0.01
2-Methylphenol (o-Cresol)		-	-	<1	90	< 0.01
2-Nitrophenol		-	-	<1	98	< 0.05
2.4-Dichlorophenol		-	-	<1	98	< 0.01
2.4-Dimethylphenol		-	-	<1	100	< 0.01
2.4.6-Trichlorophenol		-	-	<1	109	< 0.01
2.6-Dichlorophenol		-	-	<1	88	< 0.01

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	1RF16-A	1RF16-A	1RF16-A	1RF16-A	Method blank
Lab Number	06-JN03131	06-JN03131	06-JN03131	06-JN03131	Batch
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	Units		% RPD	% Recovery	mg/L
Phenols					
3&4-Methylphenol (m&p-Cresol)	-	-	<1	94	< 0.02
4-Chloro-3-methylphenol	-	-	<1	96	< 0.01
Pentachlorophenol	-	-	<1	113	< 0.05
Phenol	-	-	<1	100	< 0.01
Phenol-d6 (surr.)	-	-	-	98	96
Heavy Metals					
Antimony	< 10	< 10	<1	91	< 0.5
Arsenic	6.9	8.6	22	91	< 0.02
Beryllium	< 2	< 2	<1	94	< 0.02
Cadmium	< 0.5	< 0.5	<1	84	< 0.02
Chromium	14	16	14	78	< 0.05
Cobalt	< 5	< 5	<1	88	< 0.05
Copper	14	16	14	94	< 0.05
Lead	29	34	17	79	< 0.05
Mercury	< 0.1	< 0.1	<1	84	< 0.005
Molybdenum	< 10	< 10	<1	75	< 0.5
Nickel	6.6	7.4	13	86	< 0.05
Selenium	< 2	< 2	<1	93	< 0.02
Tin	10	< 10	<1	87	< 0.5
Vanadium	29	33	13	123	< 0.5
Zinc	59	71	19	76	0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1RF21-A	1RF21-A	1RF21-A	1RF21-A	Method blank
	Lab Number	06-JN03136	06-JN03136	06-JN03136	06-JN03136	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
Cyanide (total)		-	-	<1	123	< 0.5
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC		< 20	< 20	<1	102	< 0.02
TRH C10-C14 Fraction by GC		< 50	< 50	<1	92	< 0.05
TRH C15-C28 Fraction by GC		< 100	< 100	<1	-	< 0.1
TRH C29-C36 Fraction by GC		< 100	< 100	<1	-	< 0.1
Monocyclic Aromatic Hydrocarbons						
Benzene		< 0.05	< 0.05	<1	128	< 0.005
Toluene		< 0.05	< 0.05	<1	103	< 0.005
Ethylbenzene		< 0.05	< 0.05	<1	91	< 0.005
Xylenes(ortho.meta and para)		< 0.05	< 0.05	<1	103	< 0.005
Fluorobenzene (surr.)		100	88	-	105	99
Organochlorine Pesticides						
4.4'-DDD		-	-	<1	129	< 0.005
4.4'-DDE		-	-	<1	94	< 0.005
4.4'-DDT		-	-	<1	129	< 0.005
a-BHC		-	-	<1	129	< 0.005
Aldrin		-	-	<1	120	< 0.005
b-BHC		-	-	<1	109	< 0.005
Chlordane		-	-	<1	119	< 0.01
d-BHC		-	-	<1	129	< 0.005
Dieldrin		-	-	<1	94	< 0.005
Endosulfan I		-	-	<1	129	< 0.005
Endosulfan II		-	-	<1	124	< 0.005
Endosulfan sulphate		-	-	<1	122	< 0.005
Endrin		-	-	<1	125	< 0.005
Endrin aldehyde		-	-	<1	114	< 0.005
Endrin ketone		-	-	<1	124	< 0.005
g-BHC (Lindane)		-	-	<1	128	< 0.005

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	1RF21-A	Method blank
Lab Number	BATCH	06-JN03136	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	Units	% Recovery	mg/L
Organochlorine Pesticides			
Heptachlor	<1	119	< 0.005
Heptachlor epoxide	<1	121	< 0.005
Methoxychlor	<1	101	< 0.005
Toxophene	<1	-	< 0.01
Chlorinated Hydrocarbons			
1.2-Dichlorobenzene	<1	87	< 0.02
1.2.3-Trichlorobenzene	<1	104	< 0.005
1.2.3.4-Tetrachlorobenzene	<1	115	< 0.005
1.2.3.5-Tetrachlorobenzene	<1	-	< 0.005
1.2.4-Trichlorobenzene	<1	-	< 0.005
1.2.4.5-Tetrachlorobenzene	<1	106	< 0.005
1.3-Dichlorobenzene	<1	97	< 0.02
1.3.5-Trichlorobenzene	<1	111	< 0.005
1.4-Dichlorobenzene	<1	98	< 0.02
Benzal chloride	<1	96	< 0.005
Benzotrichloride	<1	95	< 0.005
Benzyl chloride	<1	-	< 0.02
Hexachlorobenzene	<1	119	< 0.005
Hexachlorobutadiene	<1	103	< 0.005
Hexachlorocyclopentadiene	<1	100	< 0.005
Hexachloroethane	<1	99	< 0.005
Pentachlorobenzene	<1	105	< 0.005
Polychlorinated Biphenyls			
Aroclor-1016	<1	95	< 0.01
Aroclor-1221	<1	-	< 0.01
Aroclor-1232	<1	-	< 0.01
Aroclor-1242	<1	105	< 0.01
Aroclor-1248	<1	-	< 0.01

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	1RF21-A	Method blank
Lab Number	BATCH	06-JN03136	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	Units	% Recovery	mg/L
Polychlorinated Biphenyls			
Aroclor-1254	<1	-	< 0.01
Aroclor-1260	<1	85	< 0.01
Total PCB	<1	105	< 0.1
Dibutylchlorendate (surr.)	-	89	110

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1RF26-A	1RF26-A	1RF26-A	1RF26-A
	Lab Number	06-JN03141	06-JN03141	06-JN03141	06-JN03141
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	Units			% RPD	% Recovery
Polycyclic Aromatic Hydrocarbons					
Acenaphthene		< 0.1	< 0.1	<1	96
Acenaphthylene		< 0.1	< 0.1	<1	94
Anthracene		< 0.1	< 0.1	<1	98
Benz(a)anthracene		0.1	0.2	2.4	105
Benzo(a)pyrene		0.1	0.1	8.9	90
Benzo(b)fluoranthene		0.1	0.1	5.3	108
Benzo(g.h.i)perylene		< 0.1	< 0.1	<1	112
Benzo(k)fluoranthene		0.1	0.1	11	96
Chrysene		0.2	0.2	5.9	92
Dibenz(a.h)anthracene		< 0.1	< 0.1	<1	101
Fluoranthene		0.2	0.2	1.8	100
Fluorene		< 0.1	< 0.1	<1	92
Indeno(1.2.3-cd)pyrene		< 0.1	< 0.1	<1	101
Naphthalene		< 0.1	< 0.1	<1	90
Phenanthrene		< 0.1	< 0.1	<1	110
Pyrene		0.2	0.2	5.8	106
Total PAH		1.9	< 1.6	-	-
Chrysene-d12 (surr.)		90	90	-	95
2-Fluorobiphenyl (surr.)		110	98	-	92
Phenols					
2-Chlorophenol		-	-	<1	90
2-Methylphenol (o-Cresol)		-	-	<1	98
2-Nitrophenol		-	-	<1	100
2.4-Dichlorophenol		-	-	<1	94
2.4-Dimethylphenol		-	-	<1	94
2.4.6-Trichlorophenol		-	-	<1	94
2.6-Dichlorophenol		-	-	<1	100
3&4-Methylphenol (m&p-Cresol)		-	-	<1	90

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	1RF26-A	1RF26-A	1RF26-A	1RF26-A
Lab Number	06-JN03141	06-JN03141	06-JN03141	06-JN03141
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
Matrix	Soil	Soil	Soil	Soil
Sample Date	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	Units		% RPD	% Recovery
Phenols				
4-Chloro-3-methylphenol	-	-	<1	110
Pentachlorophenol	-	-	<1	107
Phenol	-	-	<1	108
Phenol-d6 (surr.)	-	-	-	94
Heavy Metals				
Antimony	< 10	< 10	<1	91
Arsenic	4.4	4.5	1.0	85
Beryllium	< 2	< 2	<1	83
Cadmium	< 0.5	< 0.5	<1	96
Chromium	16	18	7.5	78
Cobalt	< 5	< 5	<1	83
Copper	26	20	24	92
Lead	48	43	8.5	94
Mercury	< 0.1	< 0.1	<1	-
Molybdenum	< 10	< 10	<1	76
Nickel	8.0	7.6	4.7	88
Selenium	< 2	< 2	<1	84
Tin	11	13	6.8	89
Vanadium	31	35	13	87
Zinc	56	55	2.1	79

COMMENTS:

Chain of Custody

COC No: S0119
Page 1 of 2

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals Screen	Hg	PAH	Vic EPA Screen	pH	TCLP of Metals + Hg	TCLP of PAH
1RF16-A			8-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF17-A			8-6-06	Soil	1 Jar	X	X	X		X		
1RF18-A			9-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF19-A			9-6-06	Soil	1 Jar	X	X	X		X		
1RF20-A			9-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF21-A			9-6-06	Soil	1 Jar				X	X		
1RF22-A			9-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF23-A			9-6-06	Soil	1 Jar	X	X	X		X		
1RF24-A			13-6-06	Soil	1 Jar	X	X	X		X	X	X

COMMENTS: **TCLPs to be undertaken at pH of 9.0 and then repeated at pH of 7.0. So each sample selected is tested twice.**
Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT Courier	DATE/TIME: 5:00pm 13/6/06	PREPARED BY (signature): S Slater
RECEIVED BY: (signature) C Mills.	DATE/TIME: 14/6/06	CHECKED BY: (signature) 195102 195103 195104

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA_05_002\02\Samples\COCS0119.doc

Chain of Custody

COC No: S0119
Page 2 of 2

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals Screen	Hg	PAH	Vic EPA Screen	pH	TCLP of Metals + Hg	TCLP of PAH
1RF25-A			13-6-06	Soil	1 Jar	X	X	X		X		
1RF26-A			13-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF27-A			13-6-06	Soil	1 Jar				X	X		
1RF28-A			13-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF29-A			13-6-06	Soil	1 Jar	X	X	X		X		
1RF30-A			13-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF31-A			13-6-06	Soil	1 Jar				X	X		
1RF21-X			9-6-06	Soil	1 Jar				X	X		

COMMENTS:	**TCLPs to be undertaken at pH of 9.0 and then repeated at pH of 7.0. So each sample selected is tested twice.**
	Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT Courier	DATE/TIME: 5:00pm 13/6/06	PREPARED BY (signature):
RECEIVED BY: (signature) C Mills.	DATE/TIME: 14/6/06	CHECKED BY: (signature) 195102 195103 195104

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA_05_002\02\Samples\COC\S0119.doc

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION REDEVELOPMENT AAA 05 002.02

Order Number:
Date Received: Jun 15, 2006
Date Sampled: Jun 8, 2006
Date Reported: Jun 22, 2006
Contact: Scott Slater

Methods

- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**1RF32-A**	**1RF33-A**	**1RF34-A**	**1RF35-A**
71 Belair Rd	**Lab Number**		**06-JN03438**	**06-JN03439**	**06-JN03440**	**06-JN03441**
Kingswood	**Matrix**		**Soil**	**Soil**	**Soil**	**Soil**
South Australia 5062	**Sample Date**		**Jun 8, 2006**	**Jun 8, 2006**	**Jun 8, 2006**	**Jun 8, 2006**
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.3	0.2	0.2	0.3
Benzo(a)pyrene	0.1	mg/kg	0.3	0.2	0.2	0.3
Benzo(b)fluoranthene	0.1	mg/kg	0.2	0.1	0.2	0.3
Benzo(g.h.i)perylene	0.1	mg/kg	0.3	0.1	0.2	0.3
Benzo(k)fluoranthene	0.1	mg/kg	0.2	0.2	0.2	0.3
Chrysene	0.1	mg/kg	0.3	0.2	0.2	0.4
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.4	0.2	0.3	0.6
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	0.2	0.1	0.1	0.2
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	0.2	0.2
Pyrene	0.1	mg/kg	0.4	0.3	0.4	0.6
Total PAH	1.6	mg/kg	3.3	2.3	2.8	4.1
Chrysene-d12 (surr.)	1	%	120	110	100	110
2-Fluorobiphenyl (surr.)	1	%	120	88	100	120
% Moisture	0.1	%	13	11	11	12
pH (1:5 Aqueous extract)	0.1	units	9.3	9.2	9.1	9.1
Heavy Metals						
Antimony	10	mg/kg	< 10	11	< 10	< 10
Arsenic	1	mg/kg	5.9	< 1	<4	5.2
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.5
Chromium	5	mg/kg	18	15	18	25
Cobalt	5	mg/kg	< 5	< 5	< 5	5.5
Copper	5	mg/kg	39	20	31	45

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF32-A**	**1RF33-A**	**1RF34-A**	**1RF35-A**
	Lab Number		**06-JN03438**	**06-JN03439**	**06-JN03440**	**06-JN03441**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 8, 2006**	**Jun 8, 2006**	**Jun 8, 2006**	**Jun 8, 2006**
Analysis Type	**LOR**	**Units**				
Lead	5	mg/kg	170	81	60	200
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Molybdenum	10	mg/kg	14	13	11	13
Nickel	5	mg/kg	8.7	7.6	8.4	11
Selenium	2	mg/kg	11	9.9	9.3	11
Tin	10	mg/kg	86	40	64	94
Vanadium	10	mg/kg	18	18	10	26
Zinc	5	mg/kg	240	87	130	280

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**1RF36-A**
71 Belair Rd	**Lab Number**		**06-JN03442**
Kingswood	**Matrix**		**Soil**
South Australia 5062	**Sample Date**		**Jun 8, 2006**
Analysis Type	**LOR**	**Units**	
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.1	mg/kg	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1
Anthracene	0.1	mg/kg	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.4
Benzo(a)pyrene	0.1	mg/kg	0.4
Benzo(b)fluoranthene	0.1	mg/kg	0.4
Benzo(g.h.i)perylene	0.1	mg/kg	0.3
Benzo(k)fluoranthene	0.1	mg/kg	0.5
Chrysene	0.1	mg/kg	0.5
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1
Fluoranthene	0.1	mg/kg	0.9
Fluorene	0.1	mg/kg	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	0.2
Naphthalene	0.1	mg/kg	< 0.1
Phenanthrene	0.1	mg/kg	0.2
Pyrene	0.1	mg/kg	0.9
Total PAH	1.6	mg/kg	5.3
Chrysene-d12 (surr.)	1	%	110
2-Fluorobiphenyl (surr.)	1	%	110
% Moisture	0.1	%	8.6
pH (1:5 Aqueous extract)	0.1	units	9.3
Heavy Metals			
Antimony	10	mg/kg	< 10
Arsenic	1	mg/kg	<4
Beryllium	2	mg/kg	< 2
Cadmium	0.5	mg/kg	< 0.5
Chromium	5	mg/kg	22
Cobalt	5	mg/kg	5.4
Copper	5	mg/kg	22

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF36-A**
	Lab Number		**06-JN03442**
	Matrix		**Soil**
	Sample Date		**Jun 8, 2006**
Analysis Type	**LOR**	**Units**	
Lead	5	mg/kg	< 5
Mercury	0.1	mg/kg	< 0.1
Molybdenum	10	mg/kg	13
Nickel	5	mg/kg	12
Selenium	2	mg/kg	8.4
Tin	10	mg/kg	36
Vanadium	10	mg/kg	22
Zinc	5	mg/kg	45

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	RPD	1RF32-A	Method blank
	Lab Number	BATCH	06-JN03438	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	Units		% Recovery	mg/L
Polycyclic Aromatic Hydrocarbons				
Acenaphthene		<1	106	< 0.001
Acenaphthylene		16	101	< 0.001
Anthracene		19	99	< 0.001
Benz(a)anthracene		3.6	94	< 0.001
Benzo(a)pyrene		13	103	< 0.001
Benzo(b)fluoranthene		10	106	< 0.001
Benzo(g.h.i)perylene		13	109	< 0.001
Benzo(k)fluoranthene		3.6	102	< 0.001
Chrysene		5.6	91	< 0.001
Dibenz(a.h)anthracene		9.0	92	< 0.001
Fluoranthene		18	103	< 0.001
Fluorene		14	90	< 0.001
Indeno(1.2.3-cd)pyrene		18	95	< 0.001
Naphthalene		<1	102	< 0.001
Phenanthrene		18	104	< 0.001
Pyrene		16	100	< 0.001
Total PAH		-	-	< 0.016
Chrysene-d12 (surr.)		-	102	110
2-Fluorobiphenyl (surr.)		-	97	96
Heavy Metals				
Antimony		<1	91	< 0.05
Arsenic		14	91	< 0.02
Beryllium		12	94	< 0.02
Cadmium		<1	84	< 0.02
Chromium		9.2	78	< 0.05
Cobalt		<1	88	< 0.05
Copper		18	94	< 0.05
Lead		0.70	79	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	1RF32-A	Method blank
Lab Number	BATCH	06-JN03438	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	Jun 8, 2006	Jun 8, 2006	Jun 8, 2006
Analysis Type	Units	% Recovery	mg/L
Heavy Metals			
Mercury	<1	79	< 0.005
Molybdenum	<1	75	< 0.05
Nickel	20	86	< 0.05
Selenium	<1	93	< 0.02
Tin	<1	87	< 0.05
Vanadium	16	123	< 0.05
Zinc	4.1	76	< 0.05

COMMENTS:

Chain of Custody

COC No: S0124
Page 1 of 1

PROJECT NAME:	Bus Station Redevelopment	PROJECT NO:	AAA 05 002.02	CONTACT PERSON:	Scott Slater	CONTACT NO:	08 8340 9513
LABORATORY:	MGT	LAB. CONTACT:	Rhonda Chouman	LAB QUOTE NO.:		LAB PROJECT NO:	

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals Screen	Hg	PAH	Vic EPA Screen	pH	TCLP of Metals + Hg	TCLP of PAH
1RF32-A			8-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF33-A			8-6-06	Soil	1 Jar	X	X	X		X		
1RF34-A			9-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF35-A			9-6-06	Soil	1 Jar	X	X	X		X		
1RF36-A			9-6-06	Soil	1 Jar	X	X	X		X	X	X

COMMENTS: **TCLPs to be undertaken at pH of 9.0 and then repeated at pH of 7.0. So each sample selected is tested twice.**
Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD:	MGT Courier	DATE/TIME:	5:00pm 13/6/06	PREPARED BY (signature):	
RECEIVED BY: (signature)	195150-2	DATE/TIME:	15/6/06	CHECKED BY: (signature)	

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION REDEVELOPMENT AAA 05 002.02

Order Number:
Date Received: Jun 16, 2006
Date Sampled: Jun 15, 2006
Date Reported: Jun 29, 2006
Contact: Scott Slater

Methods

- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**1RF37-A**	**1RF38-A**	**1RF39-A**	**1RF40-A**
71 Belair Rd	**Lab Number**		**06-JN03748**	**06-JN03749**	**06-JN03750**	**06-JN03751**
Kingswood	**Matrix**		**Soil**	**Soil**	**Soil**	**Soil**
South Australia 5062	**Sample Date**		**Jun 15, 2006**	**Jun 15, 2006**	**Jun 15, 2006**	**Jun 15, 2006**
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	0.3	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	0.5	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.4	3.2	0.4	0.2
Benzo(a)pyrene	0.1	mg/kg	0.4	2.8	0.6	0.3
Benzo(b)fluoranthene	0.1	mg/kg	0.3	2.3	0.5	0.3
Benzo(g.h.i)perylene	0.1	mg/kg	0.2	1.5	0.4	0.3
Benzo(k)fluoranthene	0.1	mg/kg	0.4	1.8	0.4	0.2
Chrysene	0.1	mg/kg	0.5	3.0	0.5	0.2
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	0.3	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.7	6.4	0.8	0.4
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	0.2	1.4	0.3	0.2
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	0.1	2.1	0.2	< 0.1
Pyrene	0.1	mg/kg	0.7	5.9	0.9	0.4
Total PAH	1.6	mg/kg	4.5	32	5.6	3.2
Chrysene-d12 (surr.)	1	%	93	100	98	94
2-Fluorobiphenyl (surr.)	1	%	94	98	92	93
% Moisture	0.1	%	9.4	9.6	13	8.1
pH (1:5 Aqueous extract)	0.1	units	9.1	8.7	9.3	9.1
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	3.2	3.5	2.5	3.3
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	19	20	17	15
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	9.5	14	11	16

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF37-A**	**1RF38-A**	**1RF39-A**	**1RF40-A**
	Lab Number		**06-JN03748**	**06-JN03749**	**06-JN03750**	**06-JN03751**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 15, 2006**	**Jun 15, 2006**	**Jun 15, 2006**	**Jun 15, 2006**
Analysis Type	**LOR**	**Units**				
Lead	5	mg/kg	45	85	23	32
Mercury	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	6.0	7.9	6.3	6.3
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	11	10	11
Vanadium	10	mg/kg	30	34	26	22
Zinc	5	mg/kg	25	56	23	36

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	RPD	1RF37-A	Method blank
	Lab Number	BATCH	06-JN03748	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	Jun 15, 2006	Jun 15, 2006	Jun 15, 2006
Analysis Type	Units		% Recovery	mg/L
Polycyclic Aromatic Hydrocarbons				
Acenaphthene		<1	97	< 0.001
Acenaphthylene		<1	104	< 0.001
Anthracene		<1	100	< 0.001
Benz(a)anthracene		<1	91	< 0.001
Benzo(a)pyrene		<1	107	< 0.001
Benzo(b)fluoranthene		<1	96	< 0.001
Benzo(g.h.i)perylene		<1	100	< 0.001
Benzo(k)fluoranthene		<1	102	< 0.001
Chrysene		<1	112	< 0.001
Dibenz(a.h)anthracene		<1	86	< 0.001
Fluoranthene		<1	100	< 0.001
Fluorene		<1	106	< 0.001
Indeno(1.2.3-cd)pyrene		<1	104	< 0.001
Naphthalene		<1	108	< 0.001
Phenanthrene		<1	102	< 0.001
Pyrene		<1	102	< 0.001
Total PAH		-	-	< 0.016
Chrysene-d12 (surr.)		-	101	88
2-Fluorobiphenyl (surr.)		-	106	110
Heavy Metals				
Mercury		7.8	85	< 0.005

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1RF39-A	1RF39-A	1RF39-A	1RF39-A	Method blank
	Lab Number	06-JN03750	06-JN03750	06-JN03750	06-JN03750	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	Jun 15, 2006	Jun 15, 2006	Jun 15, 2006	Jun 15, 2006	Jun 15, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
Heavy Metals						
Antimony		< 10	< 10	<1	-	< 0.5
Arsenic		2.5	2.5	2.5	84	< 0.02
Beryllium		< 2	< 2	<1	83	< 0.02
Cadmium		< 0.5	< 0.5	<1	88	< 0.02
Chromium		17	17	0.40	98	< 0.05
Cobalt		< 5	< 5	<1	78	< 0.05
Copper		11	11	7.2	99	< 0.05
Lead		23	21	12	98	< 0.05
Molybdenum		< 10	< 10	<1	81	< 0.5
Nickel		6.3	6.3	0.70	75	< 0.05
Selenium		< 2	< 2	<1	79	< 0.02
Tin		10	11	17	84	< 0.5
Vanadium		26	25	4.2	103	< 0.5
Zinc		23	22	2.4	81	< 0.05

COMMENTS:

Chain of Custody

COC No: S0127
Page 1 of 1

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals Screen	Hg	PAH	Vic EPA Screen	pH	TCLP of Metals + Hg	TCLP of PAH
1RF37-A			15-6-06	Soil	1 Jar	X	X	X		X		
1RF38-A			15-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF39-A			15-6-06	Soil	1 Jar	X	X	X		X		
1RF40-A			15-6-06	Soil	1 Jar	X	X	X		X	X	X

COMMENTS: **TCLPs to be undertaken at pH of 9.0 and then repeated at pH of 7.0. So each sample selected is tested twice.**
Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT Courier	DATE/TIME: 4:00pm 15/6/06	PREPARED BY (signature): Scott Slater
RECEIVED BY: (signature) C Mills.	DATE/TIME: 16/6/06	CHECKED BY: (signature) 195213 195214 195215.

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA_05_002\02\Samples\COCS0127.doc

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION REDEVELOPMENT AAA 05 002.02

Order Number:
Date Received: Jun 20, 2006
Date Sampled: Jun 16, 2006
Date Reported: Jun 28, 2006
Contact: Scott Slater

Methods

- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- USEPA 8270C Phenols
- USEPA 8082 Polychlorinated Biphenyls
- USEPA 8121 Chlorinated Hydrocarbons
- USEPA 8081A Organochlorine Pesticides
- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- USEPA 8260B - MGT 350A Monocyclic Aromatic Hydrocarbons
- MGT100A-GC Total Recoverable Hydrocarbons
- USEPA 9010B Cyanide
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF41-A**	**1RF41-X**	**1RF42-A**	**1RF43-A**
	Lab Number		**06-JN04249**	**06-JN04250**	**06-JN04251**	**06-JN04252**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 16, 2006**	**Jun 16, 2006**	**Jun 16, 2006**	**Jun 16, 2006**
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	< 20	< 20	-	-
TRH C10-C14 Fraction by GC	50	mg/kg	< 50	< 50	-	-
TRH C15-C28 Fraction by GC	100	mg/kg	< 100	< 100	-	-
TRH C29-C36 Fraction by GC	100	mg/kg	< 100	< 100	-	-
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Toluene	0.05	mg/kg	< 0.05	< 0.05	-	-
Ethylbenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Xylenes(ortho.meta and para)	0.05	mg/kg	< 0.05	< 0.05	-	-
Fluorobenzene (surr.)	1	%	67	79	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Chrysene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1
Total PAH	1.6	mg/kg	< 1.6	< 1.6	1.7	< 1.6
Chrysene-d12 (surr.)	1	%	70	58	91	78
2-Fluorobiphenyl (surr.)	1	%	100	96	88	100

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF41-A	1RF41-X	1RF42-A	1RF43-A
	Lab Number		06-JN04249	06-JN04250	06-JN04251	06-JN04252
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 16, 2006	Jun 16, 2006	Jun 16, 2006	Jun 16, 2006
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Chlordane	0.1	mg/kg	< 0.1	< 0.1	-	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Toxophene	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	86	79	-	-
Tetrachloro-m-xylene (surr.)	1	%	76	91	-	-
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.2	mg/kg	< 0.2	< 0.2	-	-
1.2.3-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF41-A	1RF41-X	1RF42-A	1RF43-A
	Lab Number		06-JN04249	06-JN04250	06-JN04251	06-JN04252
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 16, 2006	Jun 16, 2006	Jun 16, 2006	Jun 16, 2006
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
1.3-Dichlorobenzene	0.2	mg/kg	< 0.2	< 0.2	-	-
1.3.5-Trichlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
1.4-Dichlorobenzene	0.2	mg/kg	< 0.2	< 0.2	-	-
Benzal chloride	0.05	mg/kg	< 0.05	< 0.05	-	-
Benzotrichloride	0.05	mg/kg	< 0.05	< 0.05	-	-
Benzyl chloride	0.2	mg/kg	< 0.2	< 0.2	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobutadiene	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorocyclopentadiene	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachloroethane	0.05	mg/kg	< 0.05	< 0.05	-	-
Pentachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Dibutylchlorendate (surr.)	1	%	86	79	-	-
Tetrachloro-m-xylene (surr.)	1	%	76	91	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	-	-
Total PCB	1	mg/kg	< 1	< 1	-	-
Dibutylchlorendate (surr.)	1	%	86	79	-	-
Tetrachloro-m-xylene (surr.)	1	%	76	91	-	-
Phenols						
2-Chlorophenol	0.1	mg/kg	< 0.1	< 0.1	-	-
2-Methylphenol (o-Cresol)	0.1	mg/kg	< 0.1	< 0.1	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF41-A	1RF41-X	1RF42-A	1RF43-A
	Lab Number		06-JN04249	06-JN04250	06-JN04251	06-JN04252
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 16, 2006	Jun 16, 2006	Jun 16, 2006	Jun 16, 2006
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dichlorophenol	0.1	mg/kg	< 0.1	< 0.1	-	-
2.4-Dimethylphenol	0.1	mg/kg	< 0.1	< 0.1	-	-
2.4.6-Trichlorophenol	0.1	mg/kg	< 0.1	< 0.1	-	-
2.6-Dichlorophenol	0.1	mg/kg	< 0.1	< 0.1	-	-
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	< 0.2	< 0.2	-	-
4-Chloro-3-methylphenol	0.1	mg/kg	< 0.1	< 0.1	-	-
Pentachlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenol	0.1	mg/kg	< 0.1	< 0.1	-	-
Phenol-d6 (surr.)	1	%	88	81	-	-
% Moisture	0.1	%	4.2	2.8	13	2.6
Cyanide (total)	5	mg/kg	< 5	< 5	-	-
pH (1:5 Aqueous extract)	0.1	units	8.4	8.4	8.9	8.7
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	< 2	< 2	7.8	< 2
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	< 5	< 5	26	< 5
Cobalt	5	mg/kg	< 5	< 5	5.6	< 5
Copper	5	mg/kg	< 5	< 5	44	< 5
Lead	5	mg/kg	5.1	< 5	84	6.5
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.2	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	< 5	< 5	13	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	18	< 10
Vanadium	10	mg/kg	< 10	< 10	40	< 10

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF41-A	1RF41-X	1RF42-A	1RF43-A
	Lab Number		06-JN04249	06-JN04250	06-JN04251	06-JN04252
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 16, 2006	Jun 16, 2006	Jun 16, 2006	Jun 16, 2006
Analysis Type	**LOR**	**Units**				
Zinc	5	mg/kg	8.7	8.4	140	12

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**1RF44-A**
71 Belair Rd	**Lab Number**		**06-JN04253**
Kingswood	**Matrix**		**Soil**
South Australia 5062	**Sample Date**		**Jun 16, 2006**
Analysis Type	**LOR**	**Units**	
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.1	mg/kg	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1
Anthracene	0.1	mg/kg	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1
Chrysene	0.1	mg/kg	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1
Fluorene	0.1	mg/kg	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1
Naphthalene	0.1	mg/kg	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1
Pyrene	0.1	mg/kg	< 0.1
Total PAH	1.6	mg/kg	< 1.6
Chrysene-d12 (surr.)	1	%	82
2-Fluorobiphenyl (surr.)	1	%	110
% Moisture	0.1	%	12
pH (1:5 Aqueous extract)	0.1	units	9.6
Heavy Metals			
Antimony	10	mg/kg	< 10
Arsenic	2	mg/kg	3.1
Beryllium	2	mg/kg	< 2
Cadmium	0.5	mg/kg	< 0.5
Chromium	5	mg/kg	11
Cobalt	5	mg/kg	< 5
Copper	5	mg/kg	11

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF44-A**
	Lab Number		**06-JN04253**
	Matrix		**Soil**
	Sample Date		**Jun 16, 2006**
Analysis Type	**LOR**	**Units**	
Lead	5	mg/kg	18
Mercury	0.1	mg/kg	< 0.1
Molybdenum	10	mg/kg	< 10
Nickel	5	mg/kg	5.3
Selenium	2	mg/kg	< 2
Tin	10	mg/kg	11
Vanadium	10	mg/kg	24
Zinc	5	mg/kg	28

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	RPD	1RF41-A	Method blank
	Lab Number	BATCH	06-JN04249	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	Jun 16, 2006	Jun 16, 2006	Jun 16, 2006
Analysis Type	Units		% Recovery	mg/L
Cyanide (total)		<1	130	< 0.5
Total Recoverable Hydrocarbons				
TRH C6-C9 Fraction by GC		<1	98	< 0.02
TRH C10-C14 Fraction by GC		<1	81	< 0.05
TRH C15-C28 Fraction by GC		<1	-	< 0.1
TRH C29-C36 Fraction by GC		<1	-	< 0.1
Monocyclic Aromatic Hydrocarbons				
Benzene		<1	118	< 0.005
Toluene		<1	99	< 0.005
Ethylbenzene		<1	89	< 0.005
Xylenes(ortho.meta and para)		<1	99	< 0.005
Fluorobenzene (surr.)		-	110	67
Polycyclic Aromatic Hydrocarbons				
Acenaphthene		<1	98	< 0.001
Acenaphthylene		<1	102	< 0.001
Anthracene		<1	97	< 0.001
Benz(a)anthracene		<1	109	< 0.001
Benzo(a)pyrene		<1	98	< 0.001
Benzo(b)fluoranthene		<1	107	< 0.001
Benzo(g.h.i)perylene		<1	91	< 0.001
Benzo(k)fluoranthene		<1	110	< 0.001
Chrysene		<1	98	< 0.001
Dibenz(a.h)anthracene		<1	102	< 0.001
Fluoranthene		<1	100	< 0.001
Fluorene		<1	106	< 0.001
Indeno(1.2.3-cd)pyrene		<1	97	< 0.001
Naphthalene		<1	101	< 0.001
Phenanthrene		<1	94	< 0.001
Pyrene		<1	98	< 0.001

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	1RF41-A	Method blank
Lab Number	BATCH	06-JN04249	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	Jun 16, 2006	Jun 16, 2006	Jun 16, 2006
Analysis Type	Units	% Recovery	mg/L
Polycyclic Aromatic Hydrocarbons			
Total PAH	-	-	< 0.016
Chrysene-d12 (surr.)	-	94	96
2-Fluorobiphenyl (surr.)	-	90	94
Phenols			
2-Chlorophenol	<1	96	< 0.01
2-Methylphenol (o-Cresol)	<1	96	< 0.01
2-Nitrophenol	<1	107	< 0.05
2.4-Dichlorophenol	<1	96	< 0.01
2.4-Dimethylphenol	<1	109	< 0.01
2.4.6-Trichlorophenol	<1	86	< 0.01
2.6-Dichlorophenol	<1	100	< 0.01
3&4-Methylphenol (m&p-Cresol)	<1	98	< 0.02
4-Chloro-3-methylphenol	<1	100	< 0.01
Pentachlorophenol	<1	96	< 0.05
Phenol	<1	112	< 0.01
Phenol-d6 (surr.)	-	93	97
Heavy Metals			
Antimony	<1	-	< 0.5
Arsenic	-	-	< 0.02
Beryllium	5.1	78	< 0.02
Cadmium	5.3	86	< 0.02
Chromium	5.2	79	< 0.05
Cobalt	<1	90	< 0.05
Copper	7.3	110	< 0.05
Lead	18	75	< 0.05
Mercury	<1	81	< 0.005
Molybdenum	5.4	-	< 0.5
Nickel	17	86	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	1RF41-A	Method blank
Lab Number	BATCH	06-JN04249	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	Jun 16, 2006	Jun 16, 2006	Jun 16, 2006
Analysis Type	Units	% Recovery	mg/L
Heavy Metals			
Selenium	<1	-	< 0.02
Tin	<1	-	< 0.5
Vanadium	6.0	82	< 0.5
Zinc	<1	76	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	RPD	1RF41-X	Method blank
	Lab Number	BATCH	06-JN04250	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	Jun 16, 2006	Jun 16, 2006	Jun 16, 2006
Analysis Type	Units		% Recovery	mg/L
Organochlorine Pesticides				
4.4'-DDD		<1	77	< 0.005
4.4'-DDE		<1	77	< 0.005
4.4'-DDT		<1	82	< 0.005
a-BHC		<1	123	< 0.005
Aldrin		<1	85	< 0.005
b-BHC		<1	129	< 0.005
Chlordane		<1	119	< 0.01
d-BHC		<1	118	< 0.005
Dieldrin		<1	77	< 0.005
Endosulfan I		<1	116	< 0.005
Endosulfan II		<1	77	< 0.005
Endosulfan sulphate		<1	110	< 0.005
Endrin		<1	107	< 0.005
Endrin aldehyde		<1	102	< 0.005
Endrin ketone		<1	118	< 0.005
g-BHC (Lindane)		<1	127	< 0.005
Heptachlor		<1	119	< 0.005
Heptachlor epoxide		<1	116	< 0.005
Methoxychlor		<1	83	< 0.005
Toxophene		<1	-	< 0.01
Chlorinated Hydrocarbons				
1.2-Dichlorobenzene		<1	87	< 0.02
1.2.3-Trichlorobenzene		<1	104	< 0.005
1.2.3.4-Tetrachlorobenzene		<1	115	< 0.005
1.2.3.5-Tetrachlorobenzene		<1	-	< 0.005
1.2.4-Trichlorobenzene		<1	-	< 0.005
1.2.4.5-Tetrachlorobenzene		<1	106	< 0.005
1.3-Dichlorobenzene		<1	97	< 0.02

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	1RF41-X	Method blank
Lab Number	BATCH	06-JN04250	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	Jun 16, 2006	Jun 16, 2006	Jun 16, 2006
Analysis Type	Units	% Recovery	mg/L
Chlorinated Hydrocarbons			
1.3.5-Trichlorobenzene	<1	111	< 0.005
1.4-Dichlorobenzene	<1	98	< 0.02
Benzal chloride	<1	96	< 0.005
Benzotrichloride	<1	95	< 0.005
Benzyl chloride	<1	-	< 0.02
Hexachlorobenzene	<1	111	-
Hexachlorobutadiene	<1	103	< 0.005
Hexachlorocyclopentadiene	<1	100	< 0.005
Hexachloroethane	<1	99	< 0.005
Pentachlorobenzene	<1	105	< 0.005
Polychlorinated Biphenyls			
Aroclor-1016	<1	95	< 0.01
Aroclor-1221	<1	-	< 0.01
Aroclor-1232	<1	-	< 0.01
Aroclor-1242	<1	105	< 0.01
Aroclor-1248	<1	-	< 0.01
Aroclor-1254	<1	-	< 0.01
Aroclor-1260	<1	116	< 0.01
Total PCB	<1	105	< 0.1
Dibutylchlorendate (surr.)	-	96	92
Tetrachloro-m-xylene (surr.)	-	149	-

COMMENTS:

Chain of Custody

COC No: S0130
Page 1 of 1

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals Screen	Hg	PAH	Vic EPA Screen	pH	TCLP of Metals + Hg	TCLP of PAH
1RF41-A			16-6-06	Soil	1 Jar				X	X		
1RF41-X			16-6-06	Soil	1 Jar				X	X		
1RF42-A			16-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF43-A			16-6-06	Soil	1 Jar	X	X	X		X		
1RF44-A			16-6-06	Soil	1 Jar	X	X	X		X	X	X

COMMENTS: **TCLPs to be undertaken at pH of 9.0 and then repeated at pH of 7.0. So each sample selected is tested twice.**
Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT Courier	DATE/TIME: 4:00pm 19/6/06	PREPARED BY (signature)
RECEIVED BY: (signature) 19582 - 04	DATE/TIME: 20/6/06	CHECKED BY: (signature)

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA_05_002\02\Samples\COCS0130.doc

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION REDEVELOPMENT AAA 05 002.02

Order Number:
Date Received: Jun 28, 2006
Date Sampled: Jun 27, 2006
Date Reported: Jul 7, 2006
Contact: Scott Slater

Methods

- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- USEPA 8270C Phenols
- USEPA 8082 Polychlorinated Biphenyls
- USEPA 8121 Chlorinated Hydrocarbons
- USEPA 8081A Organochlorine Pesticides
- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- USEPA 8260B - MGT 350A Monocyclic Aromatic Hydrocarbons
- MGT100A-GC Total Recoverable Hydrocarbons
- USEPA 9010B Cyanide
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF45-A	1RF46-A	1RF47-A	1RF48-A
	Lab Number		06-JN05860	06-JN05861	06-JN05862	06-JN05863
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 27, 2006	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	0.2	0.3	0.3	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.7	1.2	1.0	0.1
Benzo(a)pyrene	0.1	mg/kg	0.9	1.7	1.5	0.2
Benzo(b)fluoranthene	0.1	mg/kg	0.8	1.1	0.8	0.2
Benzo(g.h.i)perylene	0.1	mg/kg	0.7	1.0	0.9	0.1
Benzo(k)fluoranthene	0.1	mg/kg	0.6	0.7	0.8	< 0.1
Chrysene	0.1	mg/kg	0.7	1.2	0.9	0.2
Dibenz(a.h)anthracene	0.1	mg/kg	0.2	0.2	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	1.3	2.0	1.6	0.2
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	0.6	1.1	0.9	0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Phenanthrene	0.1	mg/kg	0.7	1.2	0.8	< 0.1
Pyrene	0.1	mg/kg	1.3	2.0	1.6	0.2
Total PAH	1.6	mg/kg	9.1	14	12	2.1
Chrysene-d12 (surr.)	1	%	78	96	90	78
2-Fluorobiphenyl (surr.)	1	%	82	92	81	87
% Moisture	0.1	%	12	11	13	25
pH (1:5 Aqueous extract)	0.1	units	9.1	9.0	8.8	9.1
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	1	mg/kg	<2	3.8	3.9	13
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	11	12	13	28
Cobalt	5	mg/kg	< 5	< 5	< 5	15
Copper	5	mg/kg	22	22	94	16

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF45-A**	**1RF46-A**	**1RF47-A**	**1RF48-A**
	Lab Number		**06-JN05860**	**06-JN05861**	**06-JN05862**	**06-JN05863**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 27, 2006**	**Jun 27, 2006**	**Jun 27, 2006**	**Jun 27, 2006**
Analysis Type	**LOR**	**Units**				
Lead	5	mg/kg	40	33	40	36
Mercury	0.1	mg/kg	< 0.1	0.7	3.0	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	5.8	6.5	6.0	10
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	<10	<10	<10	<10
Vanadium	10	mg/kg	19	24	22	63
Zinc	5	mg/kg	55	47	69	47

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1RF49-A	1RF50-A	1RF51-A	1RF52-A
71 Belair Rd	Lab Number		06-JN05864	06-JN05865	06-JN05866	06-JN05867
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		Jun 27, 2006	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	-	-	< 20	-
TRH C10-C14 Fraction by GC	50	mg/kg	-	-	< 50	-
TRH C15-C28 Fraction by GC	100	mg/kg	-	-	< 100	-
TRH C29-C36 Fraction by GC	100	mg/kg	-	-	< 100	-
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	-	-	< 0.05	-
Toluene	0.05	mg/kg	-	-	< 0.05	-
Ethylbenzene	0.05	mg/kg	-	-	< 0.05	-
Xylenes(ortho.meta and para)	0.05	mg/kg	-	-	< 0.05	-
Fluorobenzene (surr.)	1	%	-	-	120	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	0.2	0.1
Benz(a)anthracene	0.1	mg/kg	0.1	< 0.1	1.0	0.4
Benzo(a)pyrene	0.1	mg/kg	0.2	< 0.1	1.4	0.4
Benzo(b)fluoranthene	0.1	mg/kg	0.1	< 0.1	1.3	0.3
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	0.8	0.2
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	1.0	0.3
Chrysene	0.1	mg/kg	0.1	< 0.1	1.1	0.4
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.2	< 0.1	1.8	0.8
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	0.7	0.2
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	0.1	< 0.1	0.9	0.3
Pyrene	0.1	mg/kg	0.3	0.1	2.0	0.8
Total PAH	1.6	mg/kg	2.0	1.6	13	4.7
Chrysene-d12 (surr.)	1	%	76	79	84	79
2-Fluorobiphenyl (surr.)	1	%	78	89	100	90

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF49-A	1RF50-A	1RF51-A	1RF52-A
	Lab Number		06-JN05864	06-JN05865	06-JN05866	06-JN05867
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 27, 2006	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-BHC	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-BHC	0.05	mg/kg	-	-	< 0.05	-
Chlordane	0.1	mg/kg	-	-	0.5	-
d-BHC	0.05	mg/kg	-	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.05	mg/kg	-	-	< 0.05	-
Toxophene	0.1	mg/kg	-	-	< 0.1	-
Dibutylchlorendate (surr.)	1	%	-	-	97	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	54	-
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.2	mg/kg	-	-	< 0.2	-
1.2.3-Trichlorobenzene	0.05	mg/kg	-	-	< 0.05	-
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	-	-	< 0.05	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF49-A	1RF50-A	1RF51-A	1RF52-A
	Lab Number		06-JN05864	06-JN05865	06-JN05866	06-JN05867
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 27, 2006	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	-	-	< 0.05	-
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
1.3-Dichlorobenzene	0.2	mg/kg	-	-	< 0.2	-
1.3.5-Trichlorobenzene	0.05	mg/kg	-	-	< 0.05	-
1.4-Dichlorobenzene	0.2	mg/kg	-	-	< 0.2	-
Benzal chloride	0.05	mg/kg	-	-	< 0.05	-
Benzotrichloride	0.05	mg/kg	-	-	< 0.05	-
Benzyl chloride	0.2	mg/kg	-	-	< 0.2	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobutadiene	0.05	mg/kg	-	-	< 0.05	-
Hexachlorocyclopentadiene	0.05	mg/kg	-	-	< 0.05	-
Hexachloroethane	0.05	mg/kg	-	-	< 0.05	-
Pentachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Dibutylchlorendate (surr.)	1	%	-	-	97	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	54	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1232	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1242	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1248	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1254	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1260	0.1	mg/kg	-	-	< 0.1	-
Total PCB	1	mg/kg	-	-	< 1	-
Dibutylchlorendate (surr.)	1	%	-	-	97	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	54	-
Phenols						
2-Chlorophenol	0.1	mg/kg	-	-	< 0.1	-
2-Methylphenol (o-Cresol)	0.1	mg/kg	-	-	< 0.1	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF49-A	1RF50-A	1RF51-A	1RF52-A
	Lab Number		06-JN05864	06-JN05865	06-JN05866	06-JN05867
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 27, 2006	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dichlorophenol	0.1	mg/kg	-	-	< 0.1	-
2.4-Dimethylphenol	0.1	mg/kg	-	-	< 0.1	-
2.4.6-Trichlorophenol	0.1	mg/kg	-	-	< 0.1	-
2.6-Dichlorophenol	0.1	mg/kg	-	-	< 0.1	-
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	-	-	< 0.2	-
4-Chloro-3-methylphenol	0.1	mg/kg	-	-	< 0.1	-
Pentachlorophenol	0.5	mg/kg	-	-	< 0.5	-
Phenol	0.1	mg/kg	-	-	< 0.1	-
Phenol-d6 (surr.)	1	%	-	-	110	-
% Moisture	0.1	%	15	14	13	16
Cyanide (total)	5	mg/kg	-	-	< 5	-
pH (1:5 Aqueous extract)	0.1	units	9.2	9.0	9.2	9.0
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	1	mg/kg	5.6	4.4	3.8	5.1
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	18	20	14	15
Cobalt	5	mg/kg	< 5	5.0	< 5	< 5
Copper	5	mg/kg	15	15	18	17
Lead	5	mg/kg	56	26	45	30
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.2
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	7.5	8.7	7.0	7.0
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	<10	<10	<10	<10
Vanadium	10	mg/kg	38	30	20	36

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF49-A	1RF50-A	1RF51-A	1RF52-A
	Lab Number		06-JN05864	06-JN05865	06-JN05866	06-JN05867
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 27, 2006	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type	**LOR**	**Units**				
Zinc	5	mg/kg	47	41	55	44

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1RF53-A	1RF54-A	1RF55-A	1RF56-A
71 Belair Rd	Lab Number		06-JN05868	06-JN05869	06-JN05870	06-JN05871
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		Jun 27, 2006	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	0.2	0.2
Benz(a)anthracene	0.1	mg/kg	0.1	0.2	0.6	0.9
Benzo(a)pyrene	0.1	mg/kg	< 0.1	0.2	0.7	1.0
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	0.1	0.5	1.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	0.6	1.0
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	0.2	0.5	0.7
Chrysene	0.1	mg/kg	0.1	0.2	0.6	0.9
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	0.1	0.2
Fluoranthene	0.1	mg/kg	0.2	0.5	1.5	1.5
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	0.5	0.7
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	0.1	0.3	0.7	0.8
Pyrene	0.1	mg/kg	0.2	0.4	1.1	1.7
Total PAH	1.6	mg/kg	1.8	2.9	8.0	11
Chrysene-d12 (surr.)	1	%	92	73	100	87
2-Fluorobiphenyl (surr.)	1	%	130	110	88	110
% Moisture	0.1	%	17	17	12	11
pH (1:5 Aqueous extract)	0.1	units	9.6	9.4	9.4	8.9
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	1	mg/kg	6.4	4.9	4.3	3.7
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	16	22	13	13
Cobalt	5	mg/kg	< 5	5.8	< 5	< 5
Copper	5	mg/kg	14	47	23	43

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF53-A**	**1RF54-A**	**1RF55-A**	**1RF56-A**
	Lab Number		**06-JN05868**	**06-JN05869**	**06-JN05870**	**06-JN05871**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 27, 2006**	**Jun 27, 2006**	**Jun 27, 2006**	**Jun 27, 2006**
Analysis Type	**LOR**	**Units**				
Lead	5	mg/kg	31	47	39	49
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	6.5	9.2	6.5	6.6
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	<10	<10	<10	<10
Vanadium	10	mg/kg	45	39	19	20
Zinc	5	mg/kg	43	58	50	55

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1RF57-A	1RF58-A	1RF59-A
71 Belair Rd	Lab Number		06-JN05872	06-JN05873	06-JN05874
Kingswood	Matrix		Soil	Soil	Soil
South Australia 5062	Sample Date		Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type	**LOR**	**Units**			
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	0.1	0.4
Benzo(a)pyrene	0.1	mg/kg	< 0.1	0.2	0.5
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	0.2	0.5
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	0.3
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	0.1	0.4
Chrysene	0.1	mg/kg	< 0.1	0.2	0.6
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	0.3	0.7
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	0.3
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	0.1	0.1
Pyrene	0.1	mg/kg	< 0.1	0.3	0.7
Total PAH	1.6	mg/kg	< 1.6	2.3	5.1
Chrysene-d12 (surr.)	1	%	78	64	71
2-Fluorobiphenyl (surr.)	1	%	110	99	87
% Moisture	0.1	%	18	17	14
pH (1:5 Aqueous extract)	0.1	units	9.5	9.3	8.6
Heavy Metals					
Antimony	10	mg/kg	< 10	< 10	< 10
Arsenic	1	mg/kg	5.4	4.9	6.0
Beryllium	2	mg/kg	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	27	25	24
Cobalt	5	mg/kg	5.6	5.7	6.2
Copper	5	mg/kg	17	17	20

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF57-A**	**1RF58-A**	**1RF59-A**
	Lab Number		**06-JN05872**	**06-JN05873**	**06-JN05874**
	Matrix		**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 27, 2006**	**Jun 27, 2006**	**Jun 27, 2006**
Analysis Type	**LOR**	**Units**			
Lead	5	mg/kg	17	24	50
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10
Nickel	5	mg/kg	12	11	11
Selenium	2	mg/kg	< 2	< 2	< 2
Tin	10	mg/kg	<10	<10	12
Vanadium	10	mg/kg	46	40	44
Zinc	5	mg/kg	34	30	70

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1RF45-A	1RF45-A	1RF45-A	1RF45-A	Method blank
	Lab Number	06-JN05860	06-JN05860	06-JN05860	06-JN05860	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
pH (1:5 Aqueous extract)		9.1	9.1	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene		-	-	-	-	< 0.001
Acenaphthylene		-	-	-	-	< 0.001
Anthracene		-	-	-	-	< 0.001
Benz(a)anthracene		-	-	-	-	< 0.001
Benzo(a)pyrene		-	-	-	-	< 0.001
Benzo(b)fluoranthene		-	-	-	-	< 0.001
Benzo(g.h.i)perylene		-	-	-	-	< 0.001
Benzo(k)fluoranthene		-	-	-	-	< 0.001
Chrysene		-	-	-	-	< 0.001
Dibenz(a.h)anthracene		-	-	-	-	< 0.001
Fluoranthene		-	-	-	-	< 0.001
Fluorene		-	-	-	-	< 0.001
Indeno(1.2.3-cd)pyrene		-	-	-	-	< 0.001
Naphthalene		-	-	-	-	< 0.001
Phenanthrene		-	-	-	-	< 0.001
Pyrene		-	-	-	-	< 0.001
Total PAH		-	-	-	-	< 0.016
Chrysene-d12 (surr.)		-	-	-	-	84
2-Fluorobiphenyl (surr.)		-	-	-	-	92
Heavy Metals						
Antimony		-	-	-	-	< 0.5
Arsenic		-	-	-	-	< 0.02
Beryllium		-	-	-	-	< 0.02
Cadmium		-	-	-	-	< 0.02
Chromium		-	-	-	-	< 0.05
Cobalt		-	-	-	-	< 0.05
Copper		-	-	-	-	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	1RF45-A	Method blank
Lab Number	BATCH	06-JN05860	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type / Units		% Recovery	mg/L
Heavy Metals			
Lead	-	-	< 0.05
Mercury	16	83	< 0.005
Molybdenum	-	-	< 0.5
Nickel	-	-	< 0.05
Selenium	-	-	< 0.02
Tin	-	-	< 0.5
Vanadium	-	-	< 0.5
Zinc	-	-	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1RF51-A	1RF51-A	1RF51-A	1RF51-A	Method blank
	Lab Number	06-JN05866	06-JN05866	06-JN05866	06-JN05866	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
Cyanide (total)		< 5	< 5	<1	115	< 0.5
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC		-	-	<1	103	< 0.02
TRH C10-C14 Fraction by GC		< 50	< 50	<1	75	< 0.05
TRH C15-C28 Fraction by GC		< 100	< 100	<1	-	< 0.1
TRH C29-C36 Fraction by GC		< 100	< 100	<1	-	< 0.1
Organochlorine Pesticides						
4.4'-DDD		< 0.05	< 0.05	<1	94	< 0.005
4.4'-DDE		< 0.05	< 0.05	<1	79	< 0.005
4.4'-DDT		< 0.05	< 0.05	<1	77	< 0.005
a-BHC		< 0.05	< 0.05	<1	130	< 0.005
Aldrin		< 0.05	0.08	<1	76	< 0.005
b-BHC		< 0.05	< 0.05	<1	129	< 0.005
Chlordane		0.5	0.6	<1	119	< 0.01
d-BHC		< 0.05	< 0.05	<1	129	< 0.005
Dieldrin		< 0.05	< 0.05	<1	77	< 0.005
Endosulfan I		< 0.05	< 0.05	<1	77	< 0.005
Endosulfan II		< 0.05	< 0.05	<1	77	< 0.005
Endosulfan sulphate		< 0.05	< 0.05	<1	77	< 0.005
Endrin		< 0.05	< 0.05	<1	77	< 0.005
Endrin aldehyde		< 0.05	< 0.05	<1	77	< 0.005
Endrin ketone		< 0.05	< 0.05	<1	77	< 0.005
g-BHC (Lindane)		< 0.05	< 0.05	<1	129	< 0.005
Heptachlor		< 0.05	< 0.05	<1	77	< 0.005
Heptachlor epoxide		< 0.05	< 0.05	<1	76	< 0.005
Methoxychlor		< 0.05	< 0.05	<1	112	< 0.005
Toxophene		< 0.1	< 0.1	<1	-	< 0.01
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene		< 0.2	< 0.2	<1	82	< 0.02

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	1RF51-A	1RF51-A	1RF51-A	1RF51-A	Method blank
Lab Number	06-JN05866	06-JN05866	06-JN05866	06-JN05866	Batch
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
Chlorinated Hydrocarbons						
1.2.3-Trichlorobenzene		< 0.05	< 0.05	<1	104	< 0.005
1.2.3.4-Tetrachlorobenzene		< 0.05	< 0.05	<1	83	< 0.005
1.2.3.5-Tetrachlorobenzene		< 0.05	< 0.05	<1	-	< 0.005
1.2.4-Trichlorobenzene		< 0.05	< 0.05	<1	91	< 0.005
1.2.4.5-Tetrachlorobenzene		< 0.05	< 0.05	<1	106	< 0.005
1.3-Dichlorobenzene		< 0.2	< 0.2	<1	97	< 0.02
1.3.5-Trichlorobenzene		< 0.05	< 0.05	<1	111	< 0.005
1.4-Dichlorobenzene		< 0.2	< 0.2	<1	98	< 0.02
Benzal chloride		< 0.05	< 0.05	<1	77	< 0.005
Benzotrichloride		< 0.05	< 0.05	<1	77	< 0.005
Benzyl chloride		< 0.2	< 0.2	<1	-	< 0.02
Hexachlorobenzene		< 0.05	< 0.05	<1	82	< 0.005
Hexachlorobutadiene		< 0.05	< 0.05	<1	77	< 0.005
Hexachlorocyclopentadiene		< 0.05	< 0.05	<1	100	< 0.005
Hexachloroethane		< 0.05	< 0.05	<1	76	< 0.005
Pentachlorobenzene		< 0.05	< 0.05	<1	91	< 0.005
Polychlorinated Biphenyls						
Aroclor-1221		< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1232		< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1242		< 0.1	< 0.1	<1	105	< 0.01
Aroclor-1248		< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1254		< 0.1	< 0.1	<1	-	< 0.01
Total PCB		< 1	< 1	<1	105	< 0.1
Dibutylchlorendate (surr.)		97	150	-	96	120
Tetrachloro-m-xylene (surr.)		54	72	-	72	62
Aroclor-1016		< 0.1	< 0.1	<1	95	< 0.01
Aroclor-1260		< 0.1	< 0.1	<1	116	< 0.01

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	1RF51-A	Method blank
Lab Number	BATCH	06-JN05866	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type	Units		% Recovery	mg/L
Benzene		<1	82	< 0.005
Toluene		<1	82	< 0.005
Ethylbenzene		<1	99	< 0.005
Xylenes(ortho.meta and para)		<1	85	< 0.005
Fluorobenzene (surr.)		-	85	110

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1RF55-A	1RF55-A	1RF55-A	1RF55-A
	Lab Number	06-JN05870	06-JN05870	06-JN05870	06-JN05870
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type	Units			% RPD	% Recovery
pH (1:5 Aqueous extract)		9.4	9.2	-	-
Polycyclic Aromatic Hydrocarbons					
Acenaphthene		< 0.1	< 0.1	<1	110
Acenaphthylene		< 0.1	< 0.1	<1	102
Anthracene		0.2	0.2	5.4	105
Benz(a)anthracene		0.6	0.6	2.0	101
Benzo(a)pyrene		0.7	0.8	8.5	108
Benzo(b)fluoranthene		0.5	0.5	5.9	113
Benzo(g.h.i)perylene		0.6	0.5	6.2	97
Benzo(k)fluoranthene		0.5	0.6	16	108
Chrysene		0.6	0.7	12	97
Dibenz(a.h)anthracene		0.1	0.1	4.6	97
Fluoranthene		1.5	1.5	2.4	105
Fluorene		< 0.1	< 0.1	<1	97
Indeno(1.2.3-cd)pyrene		0.5	0.5	4.2	112
Naphthalene		< 0.1	< 0.1	<1	108
Phenanthrene		0.7	0.8	7.4	109
Pyrene		1.1	1.3	14	110
Total PAH		8.0	8.2	-	-
Chrysene-d12 (surr.)		100	90	-	98
2-Fluorobiphenyl (surr.)		88	84	-	116
Phenols					
2-Chlorophenol		-	-	<1	98
2-Methylphenol (o-Cresol)		-	-	<1	98
2-Nitrophenol		-	-	<1	-
2.4-Dichlorophenol		-	-	<1	101
2.4-Dimethylphenol		-	-	<1	100
2.4.6-Trichlorophenol		-	-	<1	104
2.6-Dichlorophenol		-	-	<1	98

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	1RF55-A	1RF55-A	1RF55-A	1RF55-A
Lab Number	06-JN05870	06-JN05870	06-JN05870	06-JN05870
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
Matrix	Soil	Soil	Soil	Soil
Sample Date	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006	Jun 27, 2006
Analysis Type	Units		% RPD	% Recovery
Phenols				
3&4-Methylphenol (m&p-Cresol)		-	-	<1	96
4-Chloro-3-methylphenol		-	-	<1	95
Pentachlorophenol		-	-	<1	-
Phenol		-	-	<1	88
Phenol-d6 (surr.)		-	-	-	103
Heavy Metals					
Antimony		< 10	< 10	<1	77
Arsenic		4.3	4.3	1.7	-
Beryllium		< 2	< 2	1.1	80
Cadmium		< 0.5	< 0.5	17	89
Chromium		13	13	2.3	92
Cobalt		< 5	< 5	5.1	78
Copper		23	24	6.2	100
Lead		39	39	0.20	-
Molybdenum		< 10	< 10	1.6	-
Nickel		6.5	6.8	4.8	77
Selenium		< 2	< 2	<1	-
Tin		<10	<10	<1	-
Vanadium		19	20	3.7	93
Zinc		50	51	2.5	88

COMMENTS:

Chain of Custody

COC No: S0150
Page 1 of 2

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals Screen	Hg	PAH	Vic EPA Screen	pH	TCLP of Metals + Hg	TCLP of PAH
1RF45-A			27-6-06	Soil	1 Jar	X	X	X		X		
1RF46-A			27-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF47-A			27-6-06	Soil	1 Jar	X	X	X		X		
1RF48-A			27-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF49-A			27-6-06	Soil	1 Jar	X	X	X		X		
1RF50-A			27-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF51-A			27-6-06	Soil	1 Jar				X	X		
1RF52-A			27-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF53-A			27-6-06	Soil	1 Jar	X	X	X		X		

COMMENTS: **TCLPs to be undertaken at pH of 9.0 and then repeated at pH of 7.0. So each sample selected is tested twice.**

Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT Courier	DATE/TIME: 4:00pm 27/6/06	PREPARED BY (signature)
RECEIVED BY: (signature) CMills.	DATE/TIME: 28/6/06	CHECKED BY: (signature) 195620 195621 195622

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
...\05AAA 05 002\[illegible] 05AAA.doc

Chain of Custody

COC No: S0150
Page 2 of 2

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals Screen	Hg	PAH	Vic EPA Screen	pH	TCLP of Metals + Hg	TCLP of PAH
1RF54-A			27-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF55-A			27-6-06	Soil	1 Jar	X	X	X		X		
1RF56-A			27-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF57-A			27-6-06	Soil	1 Jar	X	X	X		X		
1RF58-A			27-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF59-A			27-6-06	Soil	1 Jar	X	X	X		X		

COMMENTS: **TCLPs to be undertaken at pH of 9.0 and then repeated at pH of 7.0. So each sample selected is tested twice.**

Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT Courier	DATE/TIME: 4:00pm 27/6/06	PREPARED BY (signature)
RECEIVED BY: (signature) C Mills.	DATE/TIME: 28/6/06	CHECKED BY: (signature) 195620 195621 195622

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2513
...\AAA_05_002\[illegible]

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION REDEVELOPMENT AAA 05 002.02

Order Number:
Date Received: Jun 29, 2006
Date Sampled: Jun 28, 2006
Date Reported: Jul 10, 2006
Contact: Scott Slater

Methods

- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- USEPA 8270C Phenols
- USEPA 8082 Polychlorinated Biphenyls
- USEPA 8121 Chlorinated Hydrocarbons
- USEPA 8081A Organochlorine Pesticides
- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- USEPA 8260B - MGT 350A Monocyclic Aromatic Hydrocarbons
- MGT100A-GC Total Recoverable Hydrocarbons
- USEPA 9010B Cyanide
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF60-A	1RF61-A	1RF62-A	1RF63-A
	Lab Number		06-JN06137	06-JN06138	06-JN06139	06-JN06140
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 28, 2006	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	-	< 20	-	-
TRH C10-C14 Fraction by GC	50	mg/kg	-	< 50	-	-
TRH C15-C28 Fraction by GC	100	mg/kg	-	< 100	-	-
TRH C29-C36 Fraction by GC	100	mg/kg	-	< 100	-	-
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	-	< 0.05	-	-
Toluene	0.05	mg/kg	-	< 0.05	-	-
Ethylbenzene	0.05	mg/kg	-	< 0.05	-	-
Xylenes(ortho.meta and para)	0.05	mg/kg	-	< 0.05	-	-
Fluorobenzene (surr.)	1	%	-	98	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	0.9	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	0.9	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	5.1	0.2	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	5.9	0.3	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	4.4	0.2	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	2.9	0.2	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	2.8	0.1	< 0.1
Chrysene	0.1	mg/kg	< 0.1	3.8	0.3	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	0.7	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	10	0.6	< 0.1
Fluorene	0.1	mg/kg	< 0.1	0.3	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	2.6	0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	6.0	0.2	< 0.1
Pyrene	0.1	mg/kg	< 0.1	8.8	0.6	< 0.1
Total PAH	1.6	mg/kg	< 1.6	55	3.4	< 1.6
Chrysene-d12 (surr.)	1	%	85	97	78	75
2-Fluorobiphenyl (surr.)	1	%	96	96	86	85

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF60-A	1RF61-A	1RF62-A	1RF63-A
	Lab Number		06-JN06137	06-JN06138	06-JN06139	06-JN06140
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 28, 2006	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4.4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-BHC	0.05	mg/kg	-	< 0.05	-	-
Chlordane	0.1	mg/kg	-	< 0.1	-	-
d-BHC	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.05	mg/kg	-	< 0.05	-	-
Toxophene	0.1	mg/kg	-	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	-	54	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	110	-	-
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.2	mg/kg	-	< 0.2	-	-
1.2.3-Trichlorobenzene	0.05	mg/kg	-	< 0.05	-	-
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	-	< 0.05	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF60-A	1RF61-A	1RF62-A	1RF63-A
	Lab Number		06-JN06137	06-JN06138	06-JN06139	06-JN06140
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 28, 2006	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	-	< 0.05	-	-
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
1.3-Dichlorobenzene	0.2	mg/kg	-	< 0.2	-	-
1.3.5-Trichlorobenzene	0.05	mg/kg	-	< 0.05	-	-
1.4-Dichlorobenzene	0.2	mg/kg	-	< 0.2	-	-
Benzal chloride	0.05	mg/kg	-	< 0.05	-	-
Benzotrichloride	0.05	mg/kg	-	< 0.05	-	-
Benzyl chloride	0.2	mg/kg	-	< 0.2	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobutadiene	0.05	mg/kg	-	< 0.05	-	-
Hexachlorocyclopentadiene	0.05	mg/kg	-	< 0.05	-	-
Hexachloroethane	0.05	mg/kg	-	< 0.05	-	-
Pentachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Dibutylchlorendate (surr.)	1	%	-	54	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	110	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1232	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1242	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1248	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1254	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1260	0.1	mg/kg	-	< 0.1	-	-
Total PCB	1	mg/kg	-	< 1	-	-
Dibutylchlorendate (surr.)	1	%	-	54	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	110	-	-
Phenols						
2-Chlorophenol	0.1	mg/kg	-	< 0.1	-	-
2-Methylphenol (o-Cresol)	0.1	mg/kg	-	< 0.1	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF60-A**	**1RF61-A**	**1RF62-A**	**1RF63-A**
	Lab Number		**06-JN06137**	**06-JN06138**	**06-JN06139**	**06-JN06140**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 28, 2006**	**Jun 28, 2006**	**Jun 28, 2006**	**Jun 28, 2006**
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dichlorophenol	0.1	mg/kg	-	< 0.1	-	-
2.4-Dimethylphenol	0.1	mg/kg	-	< 0.1	-	-
2.4.6-Trichlorophenol	0.1	mg/kg	-	< 0.1	-	-
2.6-Dichlorophenol	0.1	mg/kg	-	< 0.1	-	-
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	-	< 0.2	-	-
4-Chloro-3-methylphenol	0.1	mg/kg	-	< 0.1	-	-
Pentachlorophenol	0.5	mg/kg	-	< 0.5	-	-
Phenol	0.1	mg/kg	-	< 0.1	-	-
Phenol-d6 (surr.)	1	%	-	97	-	-
% Moisture	0.1	%	18	15	16	9.8
Cyanide (total)	5	mg/kg	-	< 5	-	-
pH (1:5 Aqueous extract)	0.1	units	8.9	8.7	9.1	8.9
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	1	mg/kg	4.1	3.4	4.0	1.9
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	20	20	17	9.6
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	16	15	13	6.2
Lead	5	mg/kg	22	15	13	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	7.7	8.8	7.3	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Vanadium	10	mg/kg	51	36	46	14

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF60-A	1RF61-A	1RF62-A	1RF63-A
	Lab Number		06-JN06137	06-JN06138	06-JN06139	06-JN06140
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 28, 2006	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Analysis Type	**LOR**	**Units**				
Zinc	5	mg/kg	26	24	21	10

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1RF64-A	1RF65-A	1RF61-X
71 Belair Rd	Lab Number		06-JN06141	06-JN06142	06-JN06143
Kingswood	Matrix		Soil	Soil	Soil
South Australia 5062	Sample Date		Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Analysis Type	**LOR**	**Units**			
Total Recoverable Hydrocarbons					
TRH C6-C9 Fraction by GC	20	mg/kg	-	-	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	-	-	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	-	-	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	-	-	< 100
Monocyclic Aromatic Hydrocarbons					
Benzene	0.05	mg/kg	-	-	< 0.05
Toluene	0.05	mg/kg	-	-	< 0.05
Ethylbenzene	0.05	mg/kg	-	-	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	-	-	< 0.05
Fluorobenzene (surr.)	1	%	-	-	110
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	0.4
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	0.4
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	0.3
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	0.2
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	0.3
Chrysene	0.1	mg/kg	< 0.1	< 0.1	0.3
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.1	< 0.1	0.7
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	0.3
Pyrene	0.1	mg/kg	0.1	< 0.1	0.7
Total PAH	1.6	mg/kg	1.6	< 1.6	4.3
Chrysene-d12 (surr.)	1	%	73	80	84
2-Fluorobiphenyl (surr.)	1	%	84	96	92

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF64-A	1RF65-A	1RF61-X
	Lab Number		06-JN06141	06-JN06142	06-JN06143
	Matrix		Soil	Soil	Soil
	Sample Date		Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Analysis Type	**LOR**	**Units**			
Organochlorine Pesticides					
4.4'-DDD	0.05	mg/kg	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	< 0.05
a-BHC	0.05	mg/kg	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05
b-BHC	0.05	mg/kg	-	-	< 0.05
Chlordane	0.1	mg/kg	-	-	< 0.1
d-BHC	0.05	mg/kg	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	< 0.05
Toxophene	0.1	mg/kg	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	80
Tetrachloro-m-xylene (surr.)	1	%	-	-	100
Chlorinated Hydrocarbons					
1.2-Dichlorobenzene	0.2	mg/kg	-	-	< 0.2
1.2.3-Trichlorobenzene	0.05	mg/kg	-	-	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	-	-	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	-	-	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF64-A	1RF65-A	1RF61-X
	Lab Number		06-JN06141	06-JN06142	06-JN06143
	Matrix		Soil	Soil	Soil
	Sample Date		Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Analysis Type	**LOR**	**Units**			
1.2.4-Trichlorobenzene	0.05	mg/kg	-	-	< 0.05
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	-	-	< 0.05
1.3-Dichlorobenzene	0.2	mg/kg	-	-	< 0.2
1.3.5-Trichlorobenzene	0.05	mg/kg	-	-	< 0.05
1.4-Dichlorobenzene	0.2	mg/kg	-	-	< 0.2
Benzal chloride	0.05	mg/kg	-	-	< 0.05
Benzotrichloride	0.05	mg/kg	-	-	< 0.05
Benzyl chloride	0.2	mg/kg	-	-	< 0.2
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05
Hexachlorobutadiene	0.05	mg/kg	-	-	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	-	-	< 0.05
Hexachloroethane	0.05	mg/kg	-	-	< 0.05
Pentachlorobenzene	0.05	mg/kg	-	-	< 0.05
Dibutylchlorendate (surr.)	1	%	-	-	80
Tetrachloro-m-xylene (surr.)	1	%	-	-	100
Polychlorinated Biphenyls					
Aroclor-1016	0.1	mg/kg	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	< 0.1
Total PCB	1	mg/kg	-	-	< 1
Dibutylchlorendate (surr.)	1	%	-	-	80
Tetrachloro-m-xylene (surr.)	1	%	-	-	100
Phenols					
2-Chlorophenol	0.1	mg/kg	-	-	< 0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	-	-	< 0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF64-A**	**1RF65-A**	**1RF61-X**
	Lab Number		**06-JN06141**	**06-JN06142**	**06-JN06143**
	Matrix		**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 28, 2006**	**Jun 28, 2006**	**Jun 28, 2006**
Analysis Type	**LOR**	**Units**			
2-Nitrophenol	0.5	mg/kg	-	-	< 0.5
2.4-Dichlorophenol	0.1	mg/kg	-	-	< 0.1
2.4-Dimethylphenol	0.1	mg/kg	-	-	< 0.1
2.4.6-Trichlorophenol	0.1	mg/kg	-	-	< 0.1
2.6-Dichlorophenol	0.1	mg/kg	-	-	< 0.1
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	-	-	< 0.2
4-Chloro-3-methylphenol	0.1	mg/kg	-	-	< 0.1
Pentachlorophenol	0.5	mg/kg	-	-	< 0.5
Phenol	0.1	mg/kg	-	-	< 0.1
Phenol-d6 (surr.)	1	%	-	-	97
% Moisture	0.1	%	12	15	15
Cyanide (total)	5	mg/kg	-	-	< 5
pH (1:5 Aqueous extract)	0.1	units	8.8	9.3	9.3
Heavy Metals					
Antimony	10	mg/kg	< 10	< 10	< 10
Arsenic	1	mg/kg	2.0	12	3.4
Beryllium	2	mg/kg	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	8.5	18	19
Cobalt	5	mg/kg	< 5	< 5	< 5
Copper	5	mg/kg	6.1	12	14
Lead	5	mg/kg	6.9	6.8	13
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10
Nickel	5	mg/kg	< 5	7.2	8.4
Selenium	2	mg/kg	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10
Vanadium	10	mg/kg	16	86	34

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF64-A	1RF65-A	1RF61-X
	Lab Number		06-JN06141	06-JN06142	06-JN06143
	Matrix		Soil	Soil	Soil
	Sample Date		Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Analysis Type	**LOR**	**Units**			
Zinc	5	mg/kg	11	14	22

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	RPD	1RF60-A	Method blank
	Lab Number	BATCH	06-JN06137	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Analysis Type	Units		% Recovery	mg/L
Heavy Metals				
Mercury		<1	78	< 0.005

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	RPD	1RF61-A	Method blank
	Lab Number	BATCH	06-JN06138	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Analysis Type	Units		% Recovery	mg/L
Cyanide (total)		<1	115	< 0.5
Total Recoverable Hydrocarbons				
TRH C6-C9 Fraction by GC		<1	87	< 0.02
TRH C10-C14 Fraction by GC		<1	81	< 0.05
TRH C15-C28 Fraction by GC		<1	-	< 0.1
TRH C29-C36 Fraction by GC		<1	-	< 0.1
Monocyclic Aromatic Hydrocarbons				
Benzene		<1	107	< 0.005
Toluene		<1	91	< 0.005
Ethylbenzene		<1	80	< 0.005
Xylenes(ortho.meta and para)		<1	89	< 0.005
Fluorobenzene (surr.)		-	105	79
Organochlorine Pesticides				
4.4'-DDD		<1	118	< 0.005
4.4'-DDE		<1	118	< 0.005
4.4'-DDT		<1	130	< 0.005
a-BHC		<1	114	< 0.005
Aldrin		<1	112	< 0.005
b-BHC		<1	123	< 0.005
Chlordane		<1	119	< 0.01
d-BHC		<1	123	< 0.005
Dieldrin		<1	130	< 0.005
Endosulfan I		<1	120	< 0.005
Endosulfan II		<1	130	< 0.005
Endosulfan sulphate		<1	81	< 0.005
Endrin		<1	122	< 0.005
Endrin aldehyde		<1	129	< 0.005
Endrin ketone		<1	123	< 0.005
g-BHC (Lindane)		<1	112	< 0.005

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	1RF61-A	Method blank
Lab Number	BATCH	06-JN06138	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Analysis Type	Units	% Recovery	mg/L
Organochlorine Pesticides			
Heptachlor	<1	114	< 0.005
Heptachlor epoxide	<1	120	< 0.005
Methoxychlor	<1	120	< 0.005
Toxophene	<1	-	< 0.01
Chlorinated Hydrocarbons			
1.2-Dichlorobenzene	<1	87	< 0.02
1.2.3-Trichlorobenzene	<1	104	< 0.005
1.2.3.4-Tetrachlorobenzene	<1	83	< 0.005
1.2.3.5-Tetrachlorobenzene	<1	-	< 0.005
1.2.4-Trichlorobenzene	<1	91	< 0.005
1.2.4.5-Tetrachlorobenzene	<1	106	< 0.005
1.3-Dichlorobenzene	<1	97	< 0.02
1.3.5-Trichlorobenzene	<1	111	< 0.005
1.4-Dichlorobenzene	<1	98	< 0.02
Benzal chloride	<1	77	< 0.005
Benzotrichloride	<1	77	< 0.005
Benzyl chloride	<1	-	< 0.02
Hexachlorobenzene	<1	83	< 0.005
Hexachlorobutadiene	<1	77	< 0.005
Hexachlorocyclopentadiene	<1	100	< 0.005
Hexachloroethane	<1	76	< 0.005
Pentachlorobenzene	<1	91	< 0.005
Polychlorinated Biphenyls			
Aroclor-1016	<1	95	< 0.01
Aroclor-1221	<1	-	< 0.01
Aroclor-1232	<1	-	< 0.01
Aroclor-1242	<1	105	< 0.01
Aroclor-1248	<1	-	< 0.01

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	RPD	1RF61-A	Method blank
Lab Number	BATCH	06-JN06138	Batch
QA Description		Spike % Recovery	
Matrix	Soil	Soil	Soil
Sample Date	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Units		% Recovery	mg/L
Polychlorinated Biphenyls			
Aroclor-1254	<1	-	< 0.01
Aroclor-1260	<1	116	< 0.01
Total PCB	<1	105	< 0.1
Dibutylchlorendate (surr.)	-	73	150
Tetrachloro-m-xylene (surr.)	-	111	120

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1RF63-A	1RF63-A	1RF63-A	1RF63-A
	Lab Number	06-JN06140	06-JN06140	06-JN06140	06-JN06140
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Analysis Type	Units			% RPD	% Recovery
pH (1:5 Aqueous extract)		8.9	8.9	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	RPD	1RF64-A	Method blank
	Lab Number	BATCH	06-JN06141	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Analysis Type	Units		% Recovery	mg/L
Heavy Metals				
Antimony		<1	85	< 0.5
Arsenic		17	82	< 0.02
Beryllium		<1	91	< 0.02
Cadmium		1.8	94	< 0.02
Chromium		-	90	< 0.05
Cobalt		<1	88	< 0.05
Copper		-	96	< 0.05
Lead		6.5	97	< 0.05
Molybdenum		8.0	91	< 0.5
Nickel		<1	88	< 0.05
Selenium		<1	83	< 0.02
Tin		15	104	< 0.5
Vanadium		13	101	< 0.5
Zinc		16	92	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1RF65-A	1RF65-A	1RF65-A	1RF65-A	Method blank
	Lab Number	06-JN06142	06-JN06142	06-JN06142	06-JN06142	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
Polycyclic Aromatic Hydrocarbons						
Acenaphthene		< 0.1	< 0.1	<1	106	< 0.001
Acenaphthylene		< 0.1	< 0.1	<1	94	< 0.001
Anthracene		< 0.1	< 0.1	<1	90	< 0.001
Benz(a)anthracene		< 0.1	< 0.1	<1	101	< 0.001
Benzo(a)pyrene		< 0.1	< 0.1	<1	123	< 0.001
Benzo(b)fluoranthene		< 0.1	< 0.1	<1	124	< 0.001
Benzo(g.h.i)perylene		< 0.1	< 0.1	<1	119	< 0.001
Benzo(k)fluoranthene		< 0.1	< 0.1	<1	93	< 0.001
Chrysene		< 0.1	< 0.1	<1	81	< 0.001
Dibenz(a.h)anthracene		< 0.1	< 0.1	<1	79	< 0.001
Fluoranthene		< 0.1	< 0.1	<1	127	< 0.001
Fluorene		< 0.1	< 0.1	<1	94	< 0.001
Indeno(1.2.3-cd)pyrene		< 0.1	< 0.1	<1	90	< 0.001
Naphthalene		< 0.1	< 0.1	<1	98	< 0.001
Phenanthrene		< 0.1	< 0.1	<1	125	< 0.001
Pyrene		< 0.1	< 0.1	<1	127	< 0.001
Total PAH		< 1.6	< 1.6	-	-	< 0.016
Chrysene-d12 (surr.)		80	71	-	88	80
2-Fluorobiphenyl (surr.)		96	80	-	96	100
Phenols						
2-Chlorophenol		-	-	<1	118	-
2-Methylphenol (o-Cresol)		-	-	<1	102	-
2-Nitrophenol		-	-	<1	-	-
2.4-Dichlorophenol		-	-	<1	106	-
2.4-Dimethylphenol		-	-	<1	92	-
2.4.6-Trichlorophenol		-	-	<1	100	-
2.6-Dichlorophenol		-	-	<1	91	-
3&4-Methylphenol (m&p-Cresol)		-	-	<1	90	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	1RF65-A	1RF65-A	1RF65-A	1RF65-A
Lab Number	06-JN06142	06-JN06142	06-JN06142	06-JN06142
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
Matrix	Soil	Soil	Soil	Soil
Sample Date	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006	Jun 28, 2006
Analysis Type	Units		% RPD	% Recovery
Phenols				
4-Chloro-3-methylphenol		-	-	<1	103
Pentachlorophenol		-	-	<1	-
Phenol		-	-	<1	113
Phenol-d6 (surr.)		-	-	-	98

COMMENTS:

Chain of Custody

COC No: S0153
Page 1 of 1

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals Screen	Hg	PAH	Vic EPA Screen	pH	TCLP of Metals + Hg	TCLP of PAH
1RF60-A			28-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF61-A			28-6-06	Soil	1 Jar				X	X		
1RF62-A			28-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF63-A			28-6-06	Soil	1 Jar	X	X	X		X		
1RF64-A			28-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF65-A			28-6-06	Soil	1 Jar	X	X	X		X		
1RF61-X			28-6-06	Soil	1 Jar				X	X		

COMMENTS: **TCLPs to be undertaken at pH of 9.0 and then repeated at pH of 7.0. So each sample selected is tested twice.**

Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT / Courier	DATE/TIME: 4:30pm 28/6/06	PREPARED BY (signature):
RECEIVED BY: (signature) 195670-72	DATE/TIME: 29/6/06	CHECKED BY: (signature)

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION REDEVELOPMENT AAA 05 002.02

Order Number:
Date Received: Jun 30, 2006
Date Sampled: Jun 29, 2006
Date Reported: Jul 10, 2006
Contact: Scott Slater

Methods

- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF66-A**	**1RF67-A**	**1RF68-A**
	Lab Number		**06-JN06626**	**06-JN06627**	**06-JN06628**
	Matrix		**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 29, 2006**	**Jun 29, 2006**	**Jun 29, 2006**
Analysis Type	**LOR**	**Units**			
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.1	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	0.1	< 0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Chrysene	0.1	mg/kg	0.1	< 0.1	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.2	< 0.1	< 0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Pyrene	0.1	mg/kg	0.2	< 0.1	< 0.1
Total PAH	1.6	mg/kg	1.8	< 1.6	< 1.6
Chrysene-d12 (surr.)	1	%	69	74	78
2-Fluorobiphenyl (surr.)	1	%	74	82	90
% Moisture	0.1	%	15	18	13
pH (1:5 Aqueous extract)	0.1	units	9.1	9.1	8.8
Heavy Metals					
Antimony	10	mg/kg	< 10	< 10	< 10
Arsenic	1	mg/kg	6.2	6.0	3.3
Beryllium	2	mg/kg	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	19	22	14
Cobalt	5	mg/kg	< 5	< 5	< 5
Copper	5	mg/kg	10	11	7.9

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF66-A**	**1RF67-A**	**1RF68-A**
	Lab Number		**06-JN06626**	**06-JN06627**	**06-JN06628**
	Matrix		**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 29, 2006**	**Jun 29, 2006**	**Jun 29, 2006**
Analysis Type	**LOR**	**Units**			
Lead	5	mg/kg	13	12	6.4
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10
Nickel	5	mg/kg	7.5	7.9	5.7
Selenium	2	mg/kg	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10
Vanadium	10	mg/kg	76	89	32
Zinc	5	mg/kg	18	20	13

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	RPD	1RF67-A	Method blank
	Lab Number	BATCH	06-JN06627	Batch
	QA Description		Spike % Recovery	
	Matrix	Soil	Soil	Soil
	Sample Date	Jun 29, 2006	Jun 29, 2006	Jun 29, 2006
Analysis Type	Units		% Recovery	mg/L
Heavy Metals				
Mercury		-	-	< 0.005

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1RF68-A	1RF68-A	1RF68-A	1RF68-A	Method blank
	Lab Number	06-JN06628	06-JN06628	06-JN06628	06-JN06628	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	Jun 29, 2006	Jun 29, 2006	Jun 29, 2006	Jun 29, 2006	Jun 29, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
pH (1:5 Aqueous extract)		8.8	8.8	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene		< 0.1	< 0.1	<1	104	< 0.001
Acenaphthylene		< 0.1	< 0.1	<1	90	< 0.001
Anthracene		< 0.1	< 0.1	<1	90	< 0.001
Benz(a)anthracene		< 0.1	< 0.1	<1	93	< 0.001
Benzo(a)pyrene		< 0.1	< 0.1	<1	95	< 0.001
Benzo(b)fluoranthene		< 0.1	< 0.1	<1	94	< 0.001
Benzo(g.h.i)perylene		< 0.1	< 0.1	<1	94	< 0.001
Benzo(k)fluoranthene		< 0.1	< 0.1	<1	103	< 0.001
Chrysene		< 0.1	< 0.1	<1	92	< 0.001
Dibenz(a.h)anthracene		< 0.1	< 0.1	<1	112	< 0.001
Fluoranthene		< 0.1	< 0.1	<1	93	< 0.001
Fluorene		< 0.1	< 0.1	<1	98	< 0.001
Indeno(1.2.3-cd)pyrene		< 0.1	< 0.1	<1	80	< 0.001
Naphthalene		< 0.1	< 0.1	<1	93	< 0.001
Phenanthrene		< 0.1	< 0.1	<1	97	< 0.001
Pyrene		< 0.1	< 0.1	<1	96	< 0.001
Total PAH		< 1.6	< 1.6	-	-	< 0.016
Chrysene-d12 (surr.)		78	84	-	79	72
2-Fluorobiphenyl (surr.)		90	99	-	92	120
Heavy Metals						
Antimony		< 10	< 10	<1	83	< 0.5
Arsenic		3.3	3.1	7.3	80	< 0.02
Beryllium		< 2	< 2	<1	79	< 0.02
Cadmium		< 0.5	< 0.5	<1	86	< 0.02
Chromium		14	14	6.9	91	< 0.05
Cobalt		< 5	< 5	<1	88	< 0.05
Copper		7.9	8.4	5.1	89	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	1RF68-A	1RF68-A	1RF68-A	1RF68-A	Method blank
Lab Number	06-JN06628	06-JN06628	06-JN06628	06-JN06628	Batch
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	Jun 29, 2006	Jun 29, 2006	Jun 29, 2006	Jun 29, 2006	Jun 29, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
Heavy Metals						
Lead		6.4	6.9	6.4	78	< 0.05
Mercury		< 0.1	< 0.1	<1	96	-
Molybdenum		< 10	< 10	<1	83	< 0.5
Nickel		5.7	6.1	6.8	76	< 0.05
Selenium		< 2	< 2	<1	78	< 0.02
Tin		< 10	< 10	<1	91	< 0.5
Vanadium		32	33	1.0	85	< 0.5
Zinc		13	13	0.50	84	< 0.05

COMMENTS:

Chain of Custody

COC No: S0157
Page 1 of 1

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals Screen	Hg	PAH	Vic EPA Screen	pH	TCLP of Metals + Hg	TCLP of PAH
1RF66-A			29-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF67-A			29-6-06	Soil	1 Jar	X	X	X		X		X
1RF68-A			29-6-06	Soil	1 Jar	X	X	X		X	X	X

COMMENTS: **TCLPs to be undertaken at pH of 9.0 and then repeated at pH of 7.0. So each sample selected is tested twice.**

Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT Courier	DATE/TIME: 4:30pm 29/6/06	PREPARED BY (signature): 195750 195751
RECEIVED BY: (signature) C Mills.	DATE/TIME: 30/6/06	CHECKED BY: (signature) 195752

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA_05_002\Samples\COC\S0157.doc

mgt Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

CERTIFICATE OF ANALYSIS

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood
South Australia 5062
Site: BUS STATION REDEVELOPMENT AAA 05 002.02

Order Number:
Date Received: Jul 4, 2006
Date Sampled: Jun 30, 2006
Date Reported: Jul 13, 2006
Contact: Scott Slater

Methods

- USEPA 6010B Heavy Metals & USEPA 7470/71 Mercury
- USEPA 8270C Phenols
- USEPA 8082 Polychlorinated Biphenyls
- USEPA 8121 Chlorinated Hydrocarbons
- USEPA 8081A Organochlorine Pesticides
- USEPA 8270C Polycyclic Aromatic Hydrocarbons
- USEPA 8260B - MGT 350A Monocyclic Aromatic Hydrocarbons
- MGT100A-GC Total Recoverable Hydrocarbons
- USEPA 9010B Cyanide
- Method 102 - ANZECC - % Moisture
- APHA 4500 pH by Direct Measurement

Comments

Notes

1. The results in this report supersede any previously corresponded results.
2. All Soil Results are reported on a dry basis.
3. Samples are analysed on an as received basis.

ABBREVIATIONS
mg/kg : milligrams per kilograms, mg/L : milligrams per litre, ppm : parts per million,
LOR : Limit of Reporting
RPD : Relative Percent Difference
CRM : Certified Reference Material
LCS : Laboratory Control Sample

Authorised

Michael Wright
NATA Signatory
Laboratory Manager

Environmental Consulting Pty. Ltd.

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**1RF69-A**	**1RF70-A**	**1RF71-A**	**1RF72-A**
71 Belair Rd	**Lab Number**		**06-JL00276**	**06-JL00277**	**06-JL00278**	**06-JL00279**
Kingswood	**Matrix**		**Soil**	**Soil**	**Soil**	**Soil**
South Australia 5062	**Sample Date**		**Jun 30, 2006**	**Jun 30, 2006**	**Jun 30, 2006**	**Jun 30, 2006**
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	-	-	< 20	-
TRH C10-C14 Fraction by GC	50	mg/kg	-	-	< 50	-
TRH C15-C28 Fraction by GC	100	mg/kg	-	-	< 100	-
TRH C29-C36 Fraction by GC	100	mg/kg	-	-	< 100	-
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	-	-	< 0.05	-
Toluene	0.05	mg/kg	-	-	< 0.05	-
Ethylbenzene	0.05	mg/kg	-	-	< 0.05	-
Xylenes(ortho.meta and para)	0.05	mg/kg	-	-	< 0.05	-
Fluorobenzene (surr.)	1	%	-	-	78	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Total PAH	1.6	mg/kg	< 1.6	< 1.6	< 1.6	1.6
Chrysene-d12 (surr.)	1	%	80	88	94	84
2-Fluorobiphenyl (surr.)	1	%	100	88	90	83

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF69-A	1RF70-A	1RF71-A	1RF72-A
	Lab Number		06-JL00276	06-JL00277	06-JL00278	06-JL00279
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-BHC	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-BHC	0.05	mg/kg	-	-	< 0.05	-
Chlordane	0.1	mg/kg	-	-	< 0.1	-
d-BHC	0.05	mg/kg	-	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.05	mg/kg	-	-	< 0.05	-
Toxophene	0.1	mg/kg	-	-	< 0.1	-
Dibutylchlorendate (surr.)	1	%	-	-	87	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	76	-
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.2	mg/kg	-	-	< 0.2	-
1.2.3-Trichlorobenzene	0.05	mg/kg	-	-	< 0.05	-
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	-	-	< 0.05	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF69-A	1RF70-A	1RF71-A	1RF72-A
	Lab Number		06-JL00276	06-JL00277	06-JL00278	06-JL00279
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	-	-	< 0.05	-
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
1.3-Dichlorobenzene	0.2	mg/kg	-	-	< 0.2	-
1.3.5-Trichlorobenzene	0.05	mg/kg	-	-	< 0.05	-
1.4-Dichlorobenzene	0.2	mg/kg	-	-	< 0.2	-
Benzal chloride	0.05	mg/kg	-	-	< 0.05	-
Benzotrichloride	0.05	mg/kg	-	-	< 0.05	-
Benzyl chloride	0.2	mg/kg	-	-	< 0.2	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobutadiene	0.05	mg/kg	-	-	< 0.05	-
Hexachlorocyclopentadiene	0.05	mg/kg	-	-	< 0.05	-
Hexachloroethane	0.05	mg/kg	-	-	< 0.05	-
Pentachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Dibutylchlorendate (surr.)	1	%	-	-	87	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	76	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1232	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1242	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1248	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1254	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1260	0.1	mg/kg	-	-	< 0.1	-
Total PCB	1	mg/kg	-	-	< 1	-
Dibutylchlorendate (surr.)	1	%	-	-	87	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	76	-
Phenols						
2-Chlorophenol	0.1	mg/kg	-	-	< 0.1	-
2-Methylphenol (o-Cresol)	0.1	mg/kg	-	-	< 0.1	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF69-A**	**1RF70-A**	**1RF71-A**	**1RF72-A**
	Lab Number		**06-JL00276**	**06-JL00277**	**06-JL00278**	**06-JL00279**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 30, 2006**	**Jun 30, 2006**	**Jun 30, 2006**	**Jun 30, 2006**
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dichlorophenol	0.1	mg/kg	-	-	< 0.1	-
2.4-Dimethylphenol	0.1	mg/kg	-	-	< 0.1	-
2.4.6-Trichlorophenol	0.1	mg/kg	-	-	< 0.1	-
2.6-Dichlorophenol	0.1	mg/kg	-	-	< 0.1	-
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	-	-	< 0.2	-
4-Chloro-3-methylphenol	0.1	mg/kg	-	-	< 0.1	-
Pentachlorophenol	0.5	mg/kg	-	-	< 0.5	-
Phenol	0.1	mg/kg	-	-	< 0.1	-
Phenol-d6 (surr.)	1	%	-	-	100	-
% Moisture	0.1	%	13	10	12	10
Cyanide (total)	5	mg/kg	-	-	< 5	-
pH (1:5 Aqueous extract)	0.1	units	9.1	9.2	9.3	9.2
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	3.1	< 2	2.4	3.2
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	16	12	16	18
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	11	7.6	9.1	11
Lead	5	mg/kg	11	8.3	9.3	17
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	6.9	5.1	7.3	6.3
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	67
Vanadium	10	mg/kg	28	18	18	30

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF69-A	1RF70-A	1RF71-A	1RF72-A
	Lab Number		06-JL00276	06-JL00277	06-JL00278	06-JL00279
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	**LOR**	**Units**				
Zinc	5	mg/kg	16	11	15	21

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1RF73-A	1RF74-A	1RF75-A	1RF76-A
71 Belair Rd	Lab Number		06-JL00280	06-JL00281	06-JL00282	06-JL00283
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Chrysene	0.1	mg/kg	< 0.1	< 0.1	0.1	0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	< 0.1	0.3	0.3
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	< 0.1	0.2	0.3
Pyrene	0.1	mg/kg	0.1	< 0.1	0.3	0.3
Total PAH	1.6	mg/kg	1.6	< 1.6	2.1	2.2
Chrysene-d12 (surr.)	1	%	93	91	84	100
2-Fluorobiphenyl (surr.)	1	%	87	90	93	110
% Moisture	0.1	%	11	11	19	16
pH (1:5 Aqueous extract)	0.1	units	9.1	9.0	9.3	9.3
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	3.4	2.9	4.6	5.8
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	17	19	20	21
Cobalt	5	mg/kg	< 5	< 5	< 5	6.0
Copper	5	mg/kg	10	11	11	11

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF73-A**	**1RF74-A**	**1RF75-A**	**1RF76-A**
	Lab Number		**06-JL00280**	**06-JL00281**	**06-JL00282**	**06-JL00283**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 30, 2006**	**Jun 30, 2006**	**Jun 30, 2006**	**Jun 30, 2006**
Analysis Type	**LOR**	**Units**				
Lead	5	mg/kg	22	11	12	8.2
Mercury	0.1	mg/kg	0.3	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	6.2	7.9	7.9	8.0
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	22	11	15	< 10
Vanadium	10	mg/kg	31	30	52	85
Zinc	5	mg/kg	25	17	19	17

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1RF77-A	1RF78-A	1RF79-A	1RF80-A
71 Belair Rd	Lab Number		06-JL00284	06-JL00285	06-JL00286	06-JL00287
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	0.2	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	0.7	0.3	0.1
Benz(a)anthracene	0.1	mg/kg	< 0.1	1.1	0.7	0.2
Benzo(a)pyrene	0.1	mg/kg	< 0.1	1.0	0.6	0.3
Benzo(b)fluoranthene	0.1	mg/kg	< 0.1	0.9	0.6	0.3
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	0.4	0.3	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	< 0.1	0.8	0.4	0.2
Chrysene	0.1	mg/kg	< 0.1	1.1	0.7	0.3
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	< 0.1	3.7	1.7	0.6
Fluorene	0.1	mg/kg	< 0.1	0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	0.4	0.3	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	3.6	1.0	0.4
Pyrene	0.1	mg/kg	< 0.1	3.6	1.8	0.6
Total PAH	1.6	mg/kg	< 1.6	18	8.9	3.7
Chrysene-d12 (surr.)	1	%	85	93	91	93
2-Fluorobiphenyl (surr.)	1	%	94	87	96	100
% Moisture	0.1	%	18	19	16	16
pH (1:5 Aqueous extract)	0.1	units	9.4	8.9	9.0	8.9
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	3.3	4.9	3.0	5.8
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	21	23	17	21
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	11	19	11	21

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF77-A**	**1RF78-A**	**1RF79-A**	**1RF80-A**
	Lab Number		**06-JL00284**	**06-JL00285**	**06-JL00286**	**06-JL00287**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 30, 2006**	**Jun 30, 2006**	**Jun 30, 2006**	**Jun 30, 2006**
Analysis Type	**LOR**	**Units**				
Lead	5	mg/kg	12	140	17	48
Mercury	0.1	mg/kg	< 0.1	0.2	< 0.1	0.3
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	7.4	9.1	7.4	7.5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	22	< 10	17
Vanadium	10	mg/kg	39	43	26	54
Zinc	5	mg/kg	21	53	19	75

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1RF81-A	1RF82-A	1RF83-A	1RF84-A
71 Belair Rd	Lab Number		06-JL00288	06-JL00289	06-JL00290	06-JL00291
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	**LOR**	**Units**				
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC	20	mg/kg	< 20	-	-	-
TRH C10-C14 Fraction by GC	50	mg/kg	< 50	-	-	-
TRH C15-C28 Fraction by GC	100	mg/kg	< 100	-	-	-
TRH C29-C36 Fraction by GC	100	mg/kg	< 100	-	-	-
Monocyclic Aromatic Hydrocarbons						
Benzene	0.05	mg/kg	< 0.05	-	-	-
Toluene	0.05	mg/kg	< 0.05	-	-	-
Ethylbenzene	0.05	mg/kg	< 0.05	-	-	-
Xylenes(ortho.meta and para)	0.05	mg/kg	< 0.05	-	-	-
Fluorobenzene (surr.)	1	%	66	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	0.2	0.1	0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.5	0.5	0.3	0.2
Benzo(a)pyrene	0.1	mg/kg	0.7	0.5	0.3	0.2
Benzo(b)fluoranthene	0.1	mg/kg	0.5	0.4	0.3	0.2
Benzo(g.h.i)perylene	0.1	mg/kg	0.4	0.2	0.2	0.2
Benzo(k)fluoranthene	0.1	mg/kg	0.6	0.4	0.3	0.2
Chrysene	0.1	mg/kg	0.5	0.5	0.3	0.2
Dibenz(a.h)anthracene	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	1.3	1.0	0.7	0.4
Fluorene	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	0.3	0.2	0.2	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	1.2	0.5	0.6	0.2
Pyrene	0.1	mg/kg	1.2	1.0	0.8	0.4
Total PAH	1.6	mg/kg	8.0	5.8	4.6	2.9
Chrysene-d12 (surr.)	1	%	61	87	72	77
2-Fluorobiphenyl (surr.)	1	%	63	86	52	85

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF81-A	1RF82-A	1RF83-A	1RF84-A
	Lab Number		06-JL00288	06-JL00289	06-JL00290	06-JL00291
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	**LOR**	**Units**				
Organochlorine Pesticides						
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-	-
Chlordane	0.1	mg/kg	< 0.1	-	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.05	mg/kg	< 0.05	-	-	-
Toxophene	0.1	mg/kg	< 0.1	-	-	-
Dibutylchlorendate (surr.)	1	%	91	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	72	-	-	-
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.2	mg/kg	< 0.2	-	-	-
1.2.3-Trichlorobenzene	0.05	mg/kg	< 0.05	-	-	-
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	-	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF81-A	1RF82-A	1RF83-A	1RF84-A
	Lab Number		06-JL00288	06-JL00289	06-JL00290	06-JL00291
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	**LOR**	**Units**				
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05	-	-	-
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
1.3-Dichlorobenzene	0.2	mg/kg	< 0.2	-	-	-
1.3.5-Trichlorobenzene	0.05	mg/kg	< 0.05	-	-	-
1.4-Dichlorobenzene	0.2	mg/kg	< 0.2	-	-	-
Benzal chloride	0.05	mg/kg	< 0.05	-	-	-
Benzotrichloride	0.05	mg/kg	< 0.05	-	-	-
Benzyl chloride	0.2	mg/kg	< 0.2	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobutadiene	0.05	mg/kg	< 0.05	-	-	-
Hexachlorocyclopentadiene	0.05	mg/kg	< 0.05	-	-	-
Hexachloroethane	0.05	mg/kg	< 0.05	-	-	-
Pentachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Dibutylchlorendate (surr.)	1	%	91	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	72	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	-	-	-
Total PCB	1	mg/kg	< 1	-	-	-
Dibutylchlorendate (surr.)	1	%	91	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	72	-	-	-
Phenols						
2-Chlorophenol	0.1	mg/kg	< 0.1	-	-	-
2-Methylphenol (o-Cresol)	0.1	mg/kg	< 0.1	-	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF81-A	1RF82-A	1RF83-A	1RF84-A
	Lab Number		06-JL00288	06-JL00289	06-JL00290	06-JL00291
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	**LOR**	**Units**				
2-Nitrophenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dichlorophenol	0.1	mg/kg	< 0.1	-	-	-
2.4-Dimethylphenol	0.1	mg/kg	< 0.1	-	-	-
2.4.6-Trichlorophenol	0.1	mg/kg	< 0.1	-	-	-
2.6-Dichlorophenol	0.1	mg/kg	< 0.1	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	< 0.2	-	-	-
4-Chloro-3-methylphenol	0.1	mg/kg	< 0.1	-	-	-
Pentachlorophenol	0.5	mg/kg	< 0.5	-	-	-
Phenol	0.1	mg/kg	< 0.1	-	-	-
Phenol-d6 (surr.)	1	%	82	-	-	-
% Moisture	0.1	%	17	21	21	16
Cyanide (total)	5	mg/kg	< 5	-	-	-
pH (1:5 Aqueous extract)	0.1	units	8.9	9.1	9.0	8.9
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	4.0	5.1	4.6	3.6
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	19	22	19	20
Cobalt	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	31	22	18	29
Lead	5	mg/kg	86	54	29	50
Mercury	0.1	mg/kg	0.1	< 0.1	0.1	0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	7.8	8.1	7.7	8.3
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	11	16	13	10
Vanadium	10	mg/kg	30	43	39	30

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF81-A	1RF82-A	1RF83-A	1RF84-A
	Lab Number		06-JL00288	06-JL00289	06-JL00290	06-JL00291
	Matrix		Soil	Soil	Soil	Soil
	Sample Date		Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	**LOR**	**Units**				
Zinc	5	mg/kg	48	120	38	64

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1RF85-A	1RF86-A	1RF87-A	1RF88-A
71 Belair Rd	Lab Number		06-JL00292	06-JL00293	06-JL00294	06-JL00295
Kingswood	Matrix		Soil	Soil	Soil	Soil
South Australia 5062	Sample Date		Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	**LOR**	**Units**				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Benz(a)anthracene	0.1	mg/kg	0.2	0.4	0.1	0.1
Benzo(a)pyrene	0.1	mg/kg	0.3	0.5	0.2	0.2
Benzo(b)fluoranthene	0.1	mg/kg	0.2	0.3	0.2	0.1
Benzo(g.h.i)perylene	0.1	mg/kg	0.2	0.2	0.1	< 0.1
Benzo(k)fluoranthene	0.1	mg/kg	0.2	0.4	0.2	0.2
Chrysene	0.1	mg/kg	0.2	0.4	0.1	0.1
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.4	0.7	0.2	0.2
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	0.1	0.2	< 0.1	< 0.1
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	0.2	0.3	< 0.1	< 0.1
Pyrene	0.1	mg/kg	0.4	0.7	0.2	0.2
Total PAH	1.6	mg/kg	3.0	4.7	2.1	2.0
Chrysene-d12 (surr.)	1	%	82	81	75	85
2-Fluorobiphenyl (surr.)	1	%	80	77	90	96
% Moisture	0.1	%	14	17	13	13
pH (1:5 Aqueous extract)	0.1	units	9.2	9.0	8.9	8.8
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	4.0	4.5	3.2	3.7
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	16	18	16	18
Cobalt	5	mg/kg	< 5	6.5	< 5	< 5
Copper	5	mg/kg	13	13	11	13

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF85-A**	**1RF86-A**	**1RF87-A**	**1RF88-A**
	Lab Number		**06-JL00292**	**06-JL00293**	**06-JL00294**	**06-JL00295**
	Matrix		**Soil**	**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 30, 2006**	**Jun 30, 2006**	**Jun 30, 2006**	**Jun 30, 2006**
Analysis Type	**LOR**	**Units**				
Lead	5	mg/kg	15	19	18	20
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10	< 10
Nickel	5	mg/kg	7.0	7.5	7.0	7.4
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Vanadium	10	mg/kg	31	36	29	32
Zinc	5	mg/kg	55	31	26	28

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	Client Sample ID		1RF89-A	1RF90-A	1RF81-X
71 Belair Rd	Lab Number		06-JL00296	06-JL00297	06-JL00298
Kingswood	Matrix		Soil	Soil	Soil
South Australia 5062	Sample Date		Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	**LOR**	**Units**			
Total Recoverable Hydrocarbons					
TRH C6-C9 Fraction by GC	20	mg/kg	-	-	< 20
TRH C10-C14 Fraction by GC	50	mg/kg	-	-	< 50
TRH C15-C28 Fraction by GC	100	mg/kg	-	-	< 100
TRH C29-C36 Fraction by GC	100	mg/kg	-	-	< 100
Monocyclic Aromatic Hydrocarbons					
Benzene	0.05	mg/kg	-	-	< 0.05
Toluene	0.05	mg/kg	-	-	< 0.05
Ethylbenzene	0.05	mg/kg	-	-	< 0.05
Xylenes(ortho.meta and para)	0.05	mg/kg	-	-	< 0.05
Fluorobenzene (surr.)	1	%	-	-	80
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Acenaphthylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Anthracene	0.1	mg/kg	< 0.1	< 0.1	0.1
Benz(a)anthracene	0.1	mg/kg	0.1	0.2	0.3
Benzo(a)pyrene	0.1	mg/kg	0.2	0.2	0.4
Benzo(b)fluoranthene	0.1	mg/kg	0.1	0.2	0.3
Benzo(g.h.i)perylene	0.1	mg/kg	< 0.1	0.1	0.2
Benzo(k)fluoranthene	0.1	mg/kg	0.1	0.2	0.2
Chrysene	0.1	mg/kg	0.1	0.2	0.3
Dibenz(a.h)anthracene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Fluoranthene	0.1	mg/kg	0.2	0.5	0.7
Fluorene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Indeno(1.2.3-cd)pyrene	0.1	mg/kg	< 0.1	< 0.1	0.2
Naphthalene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Phenanthrene	0.1	mg/kg	< 0.1	0.3	0.3
Pyrene	0.1	mg/kg	0.2	0.4	0.7
Total PAH	1.6	mg/kg	1.9	3.0	4.2
Chrysene-d12 (surr.)	1	%	79	79	79
2-Fluorobiphenyl (surr.)	1	%	88	98	92

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF89-A	1RF90-A	1RF81-X
	Lab Number		06-JL00296	06-JL00297	06-JL00298
	Matrix		Soil	Soil	Soil
	Sample Date		Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	**LOR**	**Units**			
Organochlorine Pesticides					
4.4'-DDD	0.05	mg/kg	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	< 0.05
a-BHC	0.05	mg/kg	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05
b-BHC	0.05	mg/kg	-	-	< 0.05
Chlordane	0.1	mg/kg	-	-	< 0.1
d-BHC	0.05	mg/kg	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	< 0.05
Toxophene	0.1	mg/kg	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	95
Tetrachloro-m-xylene (surr.)	1	%	-	-	100
Chlorinated Hydrocarbons					
1.2-Dichlorobenzene	0.2	mg/kg	-	-	< 0.2
1.2.3-Trichlorobenzene	0.05	mg/kg	-	-	< 0.05
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	-	-	< 0.05
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	-	-	< 0.05

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID		1RF89-A	1RF90-A	1RF81-X
	Lab Number		06-JL00296	06-JL00297	06-JL00298
	Matrix		Soil	Soil	Soil
	Sample Date		Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	**LOR**	**Units**			
1.2.4-Trichlorobenzene	0.05	mg/kg	-	-	< 0.05
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	-	-	< 0.05
1.3-Dichlorobenzene	0.2	mg/kg	-	-	< 0.2
1.3.5-Trichlorobenzene	0.05	mg/kg	-	-	< 0.05
1.4-Dichlorobenzene	0.2	mg/kg	-	-	< 0.2
Benzal chloride	0.05	mg/kg	-	-	< 0.05
Benzotrichloride	0.05	mg/kg	-	-	< 0.05
Benzyl chloride	0.2	mg/kg	-	-	< 0.2
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05
Hexachlorobutadiene	0.05	mg/kg	-	-	< 0.05
Hexachlorocyclopentadiene	0.05	mg/kg	-	-	< 0.05
Hexachloroethane	0.05	mg/kg	-	-	< 0.05
Pentachlorobenzene	0.05	mg/kg	-	-	< 0.05
Dibutylchlorendate (surr.)	1	%	-	-	95
Tetrachloro-m-xylene (surr.)	1	%	-	-	100
Polychlorinated Biphenyls					
Aroclor-1016	0.1	mg/kg	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	< 0.1
Total PCB	1	mg/kg	-	-	< 1
Dibutylchlorendate (surr.)	1	%	-	-	95
Tetrachloro-m-xylene (surr.)	1	%	-	-	100
Phenols					
2-Chlorophenol	0.1	mg/kg	-	-	< 0.1
2-Methylphenol (o-Cresol)	0.1	mg/kg	-	-	< 0.1

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd **71 Belair Rd** **Kingswood** **South Australia 5062**	**Client Sample ID**		**1RF89-A**	**1RF90-A**	**1RF81-X**
	Lab Number		**06-JL00296**	**06-JL00297**	**06-JL00298**
	Matrix		**Soil**	**Soil**	**Soil**
	Sample Date		**Jun 30, 2006**	**Jun 30, 2006**	**Jun 30, 2006**
Analysis Type	**LOR**	**Units**			
2-Nitrophenol	0.5	mg/kg	-	-	< 0.5
2.4-Dichlorophenol	0.1	mg/kg	-	-	< 0.1
2.4-Dimethylphenol	0.1	mg/kg	-	-	< 0.1
2.4.6-Trichlorophenol	0.1	mg/kg	-	-	< 0.1
2.6-Dichlorophenol	0.1	mg/kg	-	-	< 0.1
3&4-Methylphenol (m&p-Cresol)	0.2	mg/kg	-	-	< 0.2
4-Chloro-3-methylphenol	0.1	mg/kg	-	-	< 0.1
Pentachlorophenol	0.5	mg/kg	-	-	< 0.5
Phenol	0.1	mg/kg	-	-	< 0.1
Phenol-d6 (surr.)	1	%	-	-	96
% Moisture	0.1	%	13	16	18
Cyanide (total)	5	mg/kg	-	-	<5
pH (1:5 Aqueous extract)	0.1	units	9.0	9.0	8.9
Heavy Metals					
Antimony	10	mg/kg	< 10	< 10	< 10
Arsenic	2	mg/kg	3.4	3.2	4.4
Beryllium	2	mg/kg	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	17	13	21
Cobalt	5	mg/kg	< 5	< 5	< 5
Copper	5	mg/kg	13	9.3	29
Lead	5	mg/kg	17	8.9	38
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Molybdenum	10	mg/kg	< 10	< 10	< 10
Nickel	5	mg/kg	7.0	5.8	8.0
Selenium	2	mg/kg	< 2	< 2	< 2
Tin	10	mg/kg	< 10	< 10	15
Vanadium	10	mg/kg	29	26	35

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd	**Client Sample ID**		**1RF89-A**	**1RF90-A**	**1RF81-X**
71 Belair Rd	**Lab Number**		**06-JL00296**	**06-JL00297**	**06-JL00298**
Kingswood	**Matrix**		**Soil**	**Soil**	**Soil**
South Australia 5062	**Sample Date**		**Jun 30, 2006**	**Jun 30, 2006**	**Jun 30, 2006**
Analysis Type	**LOR**	**Units**			
Zinc	5	mg/kg	33	15	51

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1RF69-A	1RF69-A	1RF69-A	1RF69-A	Method blank
	Lab Number	06-JL00276	06-JL00276	06-JL00276	06-JL00276	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
pH (1:5 Aqueous extract)		9.1	9.0	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene		< 0.1	< 0.1	<1	-	< 0.001
Acenaphthylene		< 0.1	< 0.1	<1	-	< 0.001
Anthracene		< 0.1	< 0.1	<1	-	< 0.001
Benz(a)anthracene		< 0.1	< 0.1	<1	-	< 0.001
Benzo(a)pyrene		< 0.1	< 0.1	<1	-	< 0.001
Benzo(b)fluoranthene		< 0.1	< 0.1	<1	-	< 0.001
Benzo(g.h.i)perylene		< 0.1	< 0.1	<1	-	< 0.001
Benzo(k)fluoranthene		< 0.1	< 0.1	<1	-	< 0.001
Chrysene		< 0.1	< 0.1	<1	-	< 0.001
Dibenz(a.h)anthracene		< 0.1	< 0.1	<1	-	< 0.001
Fluoranthene		< 0.1	< 0.1	<1	-	< 0.001
Fluorene		< 0.1	< 0.1	<1	-	< 0.001
Indeno(1.2.3-cd)pyrene		< 0.1	< 0.1	<1	-	< 0.001
Naphthalene		< 0.1	< 0.1	<1	-	< 0.001
Phenanthrene		< 0.1	< 0.1	<1	-	< 0.001
Pyrene		< 0.1	< 0.1	<1	-	< 0.001
Total PAH		< 1.6	< 1.6	-	-	< 0.016
Chrysene-d12 (surr.)		80	84	-	-	93
2-Fluorobiphenyl (surr.)		100	96	-	-	79
Phenols						
2-Chlorophenol		-	-	<1	-	-
2-Methylphenol (o-Cresol)		-	-	<1	-	-
2-Nitrophenol		-	-	<1	-	-
2.4-Dichlorophenol		-	-	<1	-	-
2.4-Dimethylphenol		-	-	<1	-	-
2.4.6-Trichlorophenol		-	-	<1	-	-
2.6-Dichlorophenol		-	-	<1	-	-

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	1RF69-A	1RF69-A	1RF69-A	1RF69-A	Method blank
Lab Number	06-JL00276	06-JL00276	06-JL00276	06-JL00276	Batch
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
Phenols						
3&4-Methylphenol (m&p-Cresol)		-	-	<1	-	-
4-Chloro-3-methylphenol		-	-	<1	-	-
Pentachlorophenol		-	-	<1	-	-
Phenol		-	-	<1	-	-
Heavy Metals						
Mercury		-	-	-	-	< 0.005

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1RF71-A	1RF71-A	1RF71-A	1RF71-A	Method blank
	Lab Number	06-JL00278	06-JL00278	06-JL00278	06-JL00278	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
Cyanide (total)		< 5	< 5	<1	77	< 0.5
Total Recoverable Hydrocarbons						
TRH C6-C9 Fraction by GC		< 20	< 20	<1	82	< 0.02
TRH C10-C14 Fraction by GC		< 50	< 50	<1	95	< 0.05
TRH C15-C28 Fraction by GC		< 100	< 100	<1	-	< 0.1
TRH C29-C36 Fraction by GC		< 100	< 100	<1	-	< 0.1
Monocyclic Aromatic Hydrocarbons						
Benzene		< 0.05	< 0.05	<1	100	< 0.005
Toluene		< 0.05	< 0.05	<1	84	< 0.005
Ethylbenzene		< 0.05	< 0.05	<1	75	< 0.005
Xylenes(ortho.meta and para)		< 0.05	< 0.05	<1	84	< 0.005
Fluorobenzene (surr.)		78	89	-	99	95
Organochlorine Pesticides						
4.4'-DDD		< 0.05	< 0.05	<1	88	< 0.005
4.4'-DDE		< 0.05	< 0.05	<1	105	< 0.005
4.4'-DDT		< 0.05	< 0.05	<1	104	< 0.005
a-BHC		< 0.05	< 0.05	<1	126	< 0.005
Aldrin		< 0.05	< 0.05	<1	130	< 0.005
b-BHC		< 0.05	< 0.05	<1	77	< 0.005
Chlordane		< 0.1	< 0.1	<1	119	< 0.01
d-BHC		< 0.05	< 0.05	<1	105	< 0.005
Dieldrin		< 0.05	< 0.05	<1	121	< 0.005
Endosulfan I		< 0.05	< 0.05	<1	123	< 0.005
Endosulfan II		< 0.05	< 0.05	<1	104	< 0.005
Endosulfan sulphate		< 0.05	< 0.05	<1	97	< 0.005
Endrin		< 0.05	< 0.05	<1	83	< 0.005
Endrin aldehyde		< 0.05	< 0.05	<1	110	< 0.005
Endrin ketone		< 0.05	< 0.05	<1	100	< 0.005
g-BHC (Lindane)		< 0.05	< 0.05	<1	120	< 0.005

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	1RF71-A	1RF71-A	1RF71-A	1RF71-A	Method blank
Lab Number	06-JL00278	06-JL00278	06-JL00278	06-JL00278	Batch
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
Organochlorine Pesticides						
Heptachlor		< 0.05	< 0.05	<1	117	< 0.005
Heptachlor epoxide		< 0.05	< 0.05	<1	128	< 0.005
Methoxychlor		< 0.05	< 0.05	<1	126	< 0.005
Toxophene		< 0.1	< 0.1	<1	-	< 0.01
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene		< 0.2	< 0.2	<1	87	< 0.02
1.2.3-Trichlorobenzene		< 0.05	< 0.05	<1	104	< 0.005
1.2.3.4-Tetrachlorobenzene		< 0.05	< 0.05	<1	85	< 0.005
1.2.3.5-Tetrachlorobenzene		< 0.05	< 0.05	<1	-	< 0.005
1.2.4-Trichlorobenzene		< 0.05	< 0.05	<1	91	< 0.005
1.2.4.5-Tetrachlorobenzene		< 0.05	< 0.05	<1	106	< 0.005
1.3-Dichlorobenzene		< 0.2	< 0.2	<1	97	< 0.02
1.3.5-Trichlorobenzene		< 0.05	< 0.05	<1	111	< 0.005
1.4-Dichlorobenzene		< 0.2	< 0.2	<1	98	< 0.02
Benzal chloride		< 0.05	< 0.05	<1	96	< 0.005
Benzotrichloride		< 0.05	< 0.05	<1	117	< 0.005
Benzyl chloride		< 0.2	< 0.2	<1	-	< 0.02
Hexachlorobenzene		< 0.05	< 0.05	<1	94	< 0.005
Hexachlorobutadiene		< 0.05	< 0.05	<1	79	< 0.005
Hexachlorocyclopentadiene		< 0.05	< 0.05	<1	100	< 0.005
Hexachloroethane		< 0.05	< 0.05	<1	85	< 0.005
Pentachlorobenzene		< 0.05	< 0.05	<1	77	< 0.005
Polychlorinated Biphenyls						
Aroclor-1016		< 0.1	< 0.1	<1	95	< 0.01
Aroclor-1221		< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1232		< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1242		< 0.1	< 0.1	<1	105	< 0.01
Aroclor-1248		< 0.1	< 0.1	<1	-	< 0.01

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	1RF71-A	1RF71-A	1RF71-A	1RF71-A	Method blank
Lab Number	06-JL00278	06-JL00278	06-JL00278	06-JL00278	Batch
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	Units		% RPD	% Recovery	mg/L
Polychlorinated Biphenyls					
Aroclor-1254	< 0.1	< 0.1	<1	-	< 0.01
Aroclor-1260	< 0.1	< 0.1	<1	116	< 0.01
Total PCB	< 1	< 1	<1	105	< 0.1
Dibutylchlorendate (surr.)	87	70	-	122	110
Tetrachloro-m-xylene (surr.)	76	68	-	80	91

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1RF79-A	1RF79-A	1RF79-A	1RF79-A
	Lab Number	06-JL00286	06-JL00286	06-JL00286	06-JL00286
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
	Matrix	Soil	Soil	Soil	Soil
	Sample Date	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	Units			% RPD	% Recovery
pH (1:5 Aqueous extract)		9.0	9.0	-	-
Polycyclic Aromatic Hydrocarbons					
Acenaphthene		< 0.1	< 0.1	<1	92
Acenaphthylene		< 0.1	0.1	<1	99
Anthracene		0.3	0.3	10	110
Benz(a)anthracene		0.7	0.7	4.6	111
Benzo(a)pyrene		0.6	0.6	8.0	109
Benzo(b)fluoranthene		0.6	0.6	4.9	99
Benzo(g.h.i)perylene		0.3	0.4	21	90
Benzo(k)fluoranthene		0.4	0.5	13	112
Chrysene		0.7	0.7	6.2	101
Dibenz(a.h)anthracene		< 0.1	< 0.1	<1	93
Fluoranthene		1.7	1.8	7.7	90
Fluorene		< 0.1	0.1	<1	103
Indeno(1.2.3-cd)pyrene		0.3	0.3	13	85
Naphthalene		< 0.1	< 0.1	<1	113
Phenanthrene		1.0	1.2	15	99
Pyrene		1.8	1.9	2.5	90
Total PAH		8.9	9.2	-	-
Chrysene-d12 (surr.)		91	89	-	109
2-Fluorobiphenyl (surr.)		96	110	-	119
Phenols					
2-Chlorophenol		-	-	<1	100
2-Methylphenol (o-Cresol)		-	-	<1	103
2-Nitrophenol		-	-	<1	108
2.4-Dichlorophenol		-	-	<1	88
2.4-Dimethylphenol		-	-	<1	108
2.4.6-Trichlorophenol		-	-	<1	85
2.6-Dichlorophenol		-	-	<1	99

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	1RF79-A	1RF79-A	1RF79-A	1RF79-A
Lab Number	06-JL00286	06-JL00286	06-JL00286	06-JL00286
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery
Matrix	Soil	Soil	Soil	Soil
Sample Date	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	Units		% RPD	% Recovery
Phenols				
3&4-Methylphenol (m&p-Cresol)		-	-	<1	110
4-Chloro-3-methylphenol		-	-	<1	104
Pentachlorophenol		-	-	<1	96
Phenol		-	-	<1	107
Phenol-d6 (surr.)		-	-	-	110
Heavy Metals					
Antimony		< 10	< 10	<1	88
Arsenic		3.0	3.7	23	87
Beryllium		< 2	< 2	<1	80
Cadmium		< 0.5	< 0.5	<1	83
Chromium		17	19	8.2	90
Cobalt		< 5	< 5	<1	80
Copper		11	11	<1	78
Lead		17	20	21	80
Mercury		< 0.1	< 0.1	<1	77
Molybdenum		< 10	< 10	<1	85
Nickel		7.4	8.3	12	77
Selenium		< 2	< 2	<1	84
Tin		< 10	< 10	<1	81
Vanadium		26	30	11	79
Zinc		19	18	5.1	75

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd 71 Belair Rd Kingswood South Australia 5062	Client Sample ID	1RF89-A	1RF89-A	1RF89-A	1RF89-A	Method blank
	Lab Number	06-JL00296	06-JL00296	06-JL00296	06-JL00296	Batch
	QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
	Matrix	Soil	Soil	Soil	Soil	Soil
	Sample Date	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	Units			% RPD	% Recovery	mg/L
pH (1:5 Aqueous extract)		9.0	9.0	-	-	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene		< 0.1	< 0.1	<1	96	-
Acenaphthylene		< 0.1	< 0.1	<1	89	-
Anthracene		< 0.1	< 0.1	<1	97	-
Benz(a)anthracene		0.1	0.1	15	83	-
Benzo(a)pyrene		0.2	0.2	13	96	-
Benzo(b)fluoranthene		0.1	0.1	11	86	-
Benzo(g.h.i)perylene		< 0.1	< 0.1	<1	85	-
Benzo(k)fluoranthene		0.1	0.2	15	104	-
Chrysene		0.1	0.1	18	94	-
Dibenz(a.h)anthracene		< 0.1	< 0.1	<1	112	-
Fluoranthene		0.2	0.2	12	100	-
Fluorene		< 0.1	< 0.1	<1	92	-
Indeno(1.2.3-cd)pyrene		< 0.1	< 0.1	<1	81	-
Naphthalene		< 0.1	< 0.1	<1	96	-
Phenanthrene		< 0.1	< 0.1	<1	98	-
Pyrene		0.2	0.2	11	100	-
Total PAH		1.9	< 1.6	-	-	-
Chrysene-d12 (surr.)		79	80	-	75	-
2-Fluorobiphenyl (surr.)		88	100	-	79	-
Phenols						
2-Chlorophenol		-	-	<1	100	< 0.01
2-Methylphenol (o-Cresol)		-	-	<1	104	< 0.01
2-Nitrophenol		-	-	<1	-	< 0.05
2.4-Dichlorophenol		-	-	<1	95	< 0.01
2.4-Dimethylphenol		-	-	<1	102	< 0.01
2.4.6-Trichlorophenol		-	-	<1	78	< 0.01
2.6-Dichlorophenol		-	-	<1	96	< 0.01

COMMENTS:

3 Kingston Town Close, Oakleigh, Victoria 3166, Australia
Postal address: P. O. Box 276, Oakleigh, Victoria 3166, Australia
Telephone: (03) 9564 7055
Fax: (03) 9564 7190
Email: mgt@mgtenv.com.au

Tierra Environmental Pty Ltd
71 Belair Rd
Kingswood

South Australia 5062

Client Sample	1RF89-A	1RF89-A	1RF89-A	1RF89-A	Method blank
Lab Number	06-JL00296	06-JL00296	06-JL00296	06-JL00296	Batch
QA Description		Duplicate	Duplicate % RPD	Spike % Recovery	
Matrix	Soil	Soil	Soil	Soil	Soil
Sample Date	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006	Jun 30, 2006
Analysis Type	Units		% RPD	% Recovery	mg/L
Phenols					
3&4-Methylphenol (m&p-Cresol)	-	-	<1	100	< 0.02
4-Chloro-3-methylphenol	-	-	<1	88	< 0.01
Pentachlorophenol	-	-	<1	-	< 0.05
Phenol	-	-	<1	106	< 0.01
Phenol-d6 (surr.)	-	-	-	100	77
Heavy Metals					
Antimony	< 10	< 10	<1	97	< 0.5
Arsenic	3.4	3.7	7.1	79	< 0.02
Beryllium	< 2	< 2	<1	76	< 0.02
Cadmium	< 0.5	< 0.5	<1	79	< 0.02
Chromium	17	18	5.8	77	< 0.05
Cobalt	< 5	< 5	<1	77	< 0.05
Copper	13	16	22	81	< 0.05
Lead	17	20	16	90	< 0.05
Mercury	< 0.1	< 0.1	<1	80	-
Molybdenum	< 10	< 10	<1	89	< 0.5
Nickel	7.0	7.7	8.5	83	< 0.05
Selenium	< 2	< 2	<1	89	< 0.02
Tin	< 10	< 10	<1	89	< 0.5
Vanadium	29	30	2.5	80	< 0.5
Zinc	33	41	21	76	< 0.05

COMMENTS:

Chain of Custody

COC No: S0158
Page 1 of 3

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: **Scott Slater**	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: **Rhonda Chouman**	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals Screen	Hg	PAH	Vic EPA Screen	pH	TCLP of Metals + Hg	TCLP of PAH
1RF69-A			30-6-06	Soil	1 Jar	X	X	X		X		
1RF70-A			30-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF71-A			30-6-06	Soil	1 Jar				X	X		
1RF72-A			30-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF73-A			30-6-06	Soil	1 Jar	X	X	X		X		
1RF74-A			30-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF75-A			30-6-06	Soil	1 Jar	X	X	X		X		
1RF76-A			30-6-06	Soil	1 Jar	X	X	X		X	X	X
1RF77-A			30-6-06	Soil	1 Jar	X	X	X		X		

COMMENTS: **TCLPs to be undertaken at pH of 9.0 and then repeated at pH of 7.0. So each sample selected is tested twice.**

Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT Courier	DATE/TIME: 4:30pm 3/7/06	PREPARED BY (signature)
RECEIVED BY: (signature) 195814 - 16	DATE/TIME: 4/7/06	CHECKED BY: (signature)

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA_05_002\02\Samples\COCS0158.doc

Chain of Custody

COC No: S0158
Page 2 of 3

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals Screen	Hg	PAH	Vic EPA Screen	pH	TCLP of Metals + Hg	TCLP of PAH
1RF78-A			1-7-06	Soil	1 Jar	X	X	X		X	X	X
1RF79-A			1-7-06	Soil	1 Jar	X	X	X		X		
1RF80-A			1-7-06	Soil	1 Jar	X	X	X		X	X	X
1RF81-A			1-7-06	Soil	1 Jar				X	X		
1RF82-A			1-7-06	Soil	1 Jar	X	X	X		X	X	X
1RF83-A			1-7-06	Soil	1 Jar	X	X	X		X		
1RF84-A			3-7-06	Soil	1 Jar	X	X	X		X	X	X
1RF85-A			3-7-06	Soil	1 Jar	X	X	X		X		
1RF86-A			3-7-06	Soil	1 Jar	X	X	X		X	X	X

COMMENTS: **TCLPs to be undertaken at pH of 9.0 and then repeated at pH of 7.0. So each sample selected is tested twice.**

Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT Courier	DATE/TIME: 4:30pm 3/7/06	PREPARED BY (signature):
RECEIVED BY: (signature) 195814 - 16	DATE/TIME: 4/7/06	CHECKED BY: (signature)

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2515
J:\05\AAA_05_002\02\Samples\COCS0156.doc

Chain of Custody

COC No: S0158
Page 3 of 3

PROJECT NAME: Bus Station Redevelopment	PROJECT NO: AAA 05 002.02	CONTACT PERSON: Scott Slater	CONTACT NO: 08 8340 9513
LABORATORY: MGT	LAB. CONTACT: Rhonda Chouman	LAB QUOTE NO.:	LAB PROJECT NO:

SAMPLE NO:	Note	LAB ID (Optional)	SAMPLE DATE	SAMPLE TYPE	QTY	ANALYSIS REQUIRED: Metals Screen	Hg	PAH	Vic EPA Screen	pH	TCLP of Metals + Hg	TCLP of PAH
1RF87-A			3-7-06	Soil	1 Jar	X	X	X		X		
1RF88-A			3-7-06	Soil	1 Jar	X	X	X		X	X	X
1RF89-A			3-7-06	Soil	1 Jar	X	X	X		X		
1RF90-A			3-7-06	Soil	1 Jar	X	X	X		X	X	X
1RF81-X			1-7-06	Soil	1 Jar				X	X		

COMMENTS: **TCLPs to be undertaken at pH of 9.0 and then repeated at pH of 7.0. So each sample selected is tested twice.**

Return COC to be faxed to Brompton Site Office (08) 8346 5478

DESPATCH METHOD: MGT / Courier	DATE/TIME: 4:30pm 3/7/06	PREPARED BY (signature):
RECEIVED BY: (signature) 195814-16	DATE/TIME: 4/7/06	CHECKED BY: (signature)

Tierra Environment Pty Ltd
ABN 84 111 615 680
71 Belair Road Kingswood SA 5062
Phone (08) 8373 2512
Fax (08) 8373 2510
I:\05\AAA_05_002\Admin\[illegible]

XI:21653

Your Ref: **Bus Station Redevelopment**

14 July 2006

Tierra Environment Pty Ltd
71 Belair Road
KINGSWOOD SA 5062

Date Received: 13/06/2006

Date Sampled: 7/06/2006

Attention: **Mr. Scott Slater**

Certificate of Analysis

WSL Report Number: **952164**

The sample(s) referred to in this report were analysed by the following method(s):

Analyte(s)	Method
Cyanide	APHA 4120 B
Fluoride	WSL 077
Metals	WSL-032
OCs	WSL8000
PAHs	WSL8000
PCBs	WSL8000
pH	WSL 062
Total Phenolics	APHA 4120 B
TPH	WSL030
Volatiles	WSL3810A

Results pertain to samples as received

Details of this report were e-mailed on: 14/07/2006

Yours faithfully
WSL Consultants Pty Ltd

Victor Willms
Manager Chemistry Services

This laboratory is accredited by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its scope of accreditation. This document shall not be reproduced except in full. Accreditation No 1205

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au Web Page: www.ecowise.com.au

A NATA Accredited Laboratory
An Approved EPA Auditor & Analyst

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 14-Jul-2006
Ecowise Report No: 952164
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	pH (pH Units)	As	Cd	Co	Cr	Cu	Hg	Mo	Ni	Pb	Se	Sn	Zn
952164	13-Jun-2006	1RF1-Y	9.6	16	0.3	8	27	22	0.26	<5	12	190	<5	7	170

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 14-Jul-2006
Ecowise Report No: 952164
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	TPH C6-C9	TPH C10-C14	TPH C15-C28	TPH C29-C36	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES	STYRENE	CUMENE	1 2 4-TRI-METHYL BENZENE	TOTAL PHENOLS	SOLUBLE FLUORIDE	CYANIDE
952164	13-Jun-2006	1RF1-Y	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<5	<5

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 14-Jul-2006
Ecowise Report No: 952164
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	NAP	ACY	ACE	FLU	PHE	ANT	FLA	PYR	BAA	CHR	BBF	BKF	BAP	DBA	BGP	IPY	TOTAL* PAH
952164	13-Jun-2006	1RF1-Y	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	1.0	1.1	0.7	0.6	0.5	0.7	0.7	<0.1	0.6	0.6	6.6

ND = None detected at a concentration greater than the reporting limits specified above.

**** Total PAH's refers only to the sum of the positive individual PAH's tested above.***

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 14-Jul-2006
Ecowise Report No: 952164
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	HCB	a-BHC	LINDANE	HEPTACHLOR	ALDRIN	b-BHC	d-BHC	HEPTACHLOR-EPOXIDE	DDE	DIELDRIN
952164	13-Jun-2006	1RF1-Y	<0.05	<0.05	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 14-Jul-2006
Ecowise Report No: 952164
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	DDD	DDT	ENDRIN	METHOXYCHLOR	CHLORDANE	a-ENDO-SULPHAN	b-ENDO-SULPHAN	ENDOSULPHAN SULPHATE	ENDRIN ALDEHYDE
952164	13-Jun-2006	1RF1-Y	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 14-Jul-2006
Ecowise Report No: 952164
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	AROCLOR® 1016	AROCLOR® 1221	AROCLOR® 1232	AROCLOR® 1242	AROCLOR® 1248	AROCLOR® 1254	AROCLOR® 1260	TOTAL* PCBs
952164	13-Jun-2006	1RF1-Y	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ND

ND = None detected at a concentration greater than the reporting limit specified above.

**** Total PCB's refers only to the sum of the positive individual Aroclors® tested above.***

A blank space indicates no test performed

Results expressed as mg/kg dry weight

XI:21653

Your Ref: **Bus Station Redevelopment**

21 June 2006

Tierra Environment Pty Ltd
71 Belair Road
KINGSWOOD SA 5062

Date Received: 14/06/2006

Date Sampled: 9/06/2006

Attention: **Mr. Daryl Burrows**

Certificate of Analysis

WSL Report Number: **952732**

The sample(s) referred to in this report were analysed by the following method(s):

Analyte(s)	Method
Cyanide	APHA 4120 B
Fluoride	WSL 077
Metals	WSL-032
OCs	WSL8000
PAHs	WSL8000
PCBs	WSL8000
pH	WSL 062
Total Phenolics	APHA 4120 B
TPH	WSL030
Volatiles	WSL3810A

Results pertain to samples as received

Details of this report were e-mailed on: 21/06/2006

Yours faithfully
WSL Consultants Pty Ltd

Victor Willms
Manager Chemistry Services

This laboratory is accredited by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its scope of accreditation. This document shall not be reproduced except in full. Accreditation No 1205

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au Web Page: www.ecowise.com.au

A NATA Accredited Laboratory
An Approved EPA Auditor & Analyst

XI:21653

Your Ref: **Bus Station Redevelopment**

21 June 2006

Tierra Environment Pty Ltd
71 Belair Road
KINGSWOOD SA 5062

Date Received: 14/06/2006

Date Sampled: 9/06/2006

Attention: **Mr. Daryl Burrows**

Certificate of Analysis

WSL Report Number: **952732**

The sample(s) referred to in this report were analysed by the following method(s):

Analyte(s)	Method
Cyanide	APHA 4120 B
Fluoride	WSL 077
Metals	WSL-032
OCs	WSL8000
PAHs	WSL8000
PCBs	WSL8000
pH	WSL 062
Total Phenolics	APHA 4120 B
TPH	WSL030
Volatiles	WSL3810A

Results pertain to samples as received

Details of this report were e-mailed on: 21/06/2006

Yours faithfully
WSL Consultants Pty Ltd

Victor Willms
Manager Chemistry Services

This laboratory is accredited by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its scope of accreditation. This document shall not be reproduced except in full. Accreditation No 1205

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au Web Page: www.ecowise.com.au

A NATA Accredited Laboratory
An Approved EPA Auditor & Analyst

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 21-Jun-2006
Ecowise Report No: 952732
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	pH (pH Units)	As	Cd	Co	Cr	Cu	Hg	Mo	Ni	Pb	Se	Sn	Zn
952732	14-Jun-2006	1RF21-Y	8.3	6	<0.2	6	17	12	0.08	<5	10	50	<5	<5	86

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 21-Jun-2006
Ecowise Report No: 952732
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	TPH C6-C9	TPH C10-C14	TPH C15-C28	TPH C29-C36	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES	STYRENE	CUMENE	1 2 4-TRI-METHYL BENZENE	TOTAL PHENOLS	SOLUBLE FLUORIDE	CYANIDE
952732	14-Jun-2006	1RF21-Y	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<5	<5

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 21-Jun-2006
Ecowise Report No: 952732
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	NAP	ACY	ACE	FLU	PHE	ANT	FLA	PYR	BAA	CHR	BBF	BKF	BAP	DBA	BGP	IPY	TOTAL* PAH
952732	14-Jun-2006	1RF21-Y	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	0.3	0.2	0.1	0.2	0.2	0.2	<0.1	0.2	0.1	1.7

ND = None detected at a concentration greater than the reporting limits specified above.

**** Total PAH's refers only to the sum of the positive individual PAH's tested above.***

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 21-Jun-2006
Ecowise Report No: 952732
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	HCB	a-BHC	LINDANE	HEPTACHLOR	ALDRIN	b-BHC	d-BHC	HEPTACHLOR-EPOXIDE	DDE	DIELDRIN
952732	14-Jun-2006	1RF21-Y	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 21-Jun-2006
Ecowise Report No: 952732
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	DDD	DDT	ENDRIN	METHOXYCHLOR	CHLORDANE	a-ENDO-SULPHAN	b-ENDO-SULPHAN	ENDOSULPHAN SULPHATE	ENDRIN ALDEHYDE
952732	14-Jun-2006	1RF21-Y	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 21-Jun-2006
Ecowise Report No: 952732
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	AROCLOR® 1016	AROCLOR® 1221	AROCLOR® 1232	AROCLOR® 1242	AROCLOR® 1248	AROCLOR® 1254	AROCLOR® 1260	TOTAL* PCBs
952732	14-Jun-2006	1RF21-Y	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ND

ND = None detected at a concentration greater than the reporting limit specified above.

**** Total PCB's refers only to the sum of the positive individual Aroclors® tested above.***

A blank space indicates no test performed

Results expressed as mg/kg dry weight

TN:21653

Your Ref: **Bus Station Redevelopment**

26 June 2006

Tierra Environment Pty Ltd
71 Belair Road
KINGSWOOD SA 5062

Date Received: 20/06/2006

Date Sampled: 16/06/2006

Attention: **Mr. Daryl Burrows**

Certificate of Analysis

WSL Report Number: **954448**

The sample(s) referred to in this report were analysed by the following method(s):

Analyte(s)	Method
Cyanide	APHA 4120
Fluoride	WSL 077
Metals	WSL-032
OCs	WSL8000
PAHs	WSL8000
PCBs	WSL8000
pH	WSL 062
Total Phenolics	APHA 4120
TPH	WSL030
Volatiles	WSL3810A

Results pertain to samples as received

Details of this report were e-mailed on: 26/06/2006

Yours faithfully
WSL Consultants Pty Ltd

Victor Willms
Manager Chemistry Services

NATA

This laboratory is accredited by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its scope of accreditation. This document shall not be reproduced except in full. Accreditation No 1205

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au Web Page: www.ecowise.com.au

A NATA Accredited Laboratory
An Approved EPA Auditor & Analyst

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 26-Jun-2006
Ecowise Report No: 954448
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	pH (pH Units)	As	Cd	Co	Cr	Cu	Hg	Mo	Ni	Pb	Se	Sn	Zn
954448	20-Jun-2006	1RF41-Y	8.7	<5	<0.2	5	16	17	0.09	<5	9	55	<5	<5	73

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 26-Jun-2006
Ecowise Report No: 954448
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	TPH C6-C9	TPH C10-C14	TPH C15-C28	TPH C29-C36	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES	STYRENE	CUMENE	1 2 4-TRI-METHYL BENZENE	TOTAL PHENOLS	SOLUBLE FLUORIDE	CYANIDE
954448	20-Jun-2006	1RF41-Y	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	7	<5

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 26-Jun-2006
Ecowise Report No: 954448
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	NAP	ACY	ACE	FLU	PHE	ANT	FLA	PYR	BAA	CHR	BBF	BKF	BAP	DBA	BGP	IPY	TOTAL* PAH
954448	20-Jun-2006	1RF41-Y	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.8	0.9	0.5	0.4	0.3	0.5	0.5	<0.1	0.5	0.4	5.0

ND = None detected at a concentration greater than the reporting limits specified above.

**** Total PAH's refers only to the sum of the positive individual PAH's tested above.***

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 26-Jun-2006
Ecowise Report No: 954448
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	HCB	a-BHC	LINDANE	HEPTACHLOR	ALDRIN	b-BHC	d-BHC	HEPTACHLOR-EPOXIDE	DDE	DIELDRIN
954448	20-Jun-2006	1RF41-Y	<0.05	<0.05	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 26-Jun-2006
Ecowise Report No: 954448
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	DDD	DDT	ENDRIN	METHOXYCHLOR	CHLORDANE	a-ENDO-SULPHAN	b-ENDO-SULPHAN	ENDOSULPHAN SULPHATE	ENDRIN ALDEHYDE
954448	20-Jun-2006	1RF41-Y	<0.05	<0.05	<0.05	<0.05	0.52	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 26-Jun-2006
Ecowise Report No: 954448
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	AROCLOR® 1016	AROCLOR® 1221	AROCLOR® 1232	AROCLOR® 1242	AROCLOR® 1248	AROCLOR® 1254	AROCLOR® 1260	TOTAL* PCBs
954448	20-Jun-2006	1RF41-Y	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ND

ND = None detected at a concentration greater than the reporting limit specified above.

**** Total PCB's refers only to the sum of the positive individual Aroclors® tested above.***

A blank space indicates no test performed

Results expressed as mg/kg dry weight

XI:21653

Your Ref: **Bus Station Redevelopment**

12 July 2006

Tierra Environment Pty Ltd
71 Belair Road
KINGSWOOD SA 5062

Date Received: 29/06/2006

Date Sampled: 28/06/2006

Attention: **Mr. Daryl Burrows**

Certificate of Analysis

WSL Report Number: **957762**

The sample(s) referred to in this report were analysed by the following method(s):

Analyte(s)	Method
Cyanide	APHA 4120 B
Fluoride	WSL 077
Metals	WSL-032
OCs	WSL8000
PAHs	WSL8000
PCBs	WSL8000
pH	WSL 062
Total Phenolics	APHA 4120 B
TPH	WSL030
Volatiles	WSL3810A

Results pertain to samples as received

Details of this report were e-mailed on: 12/07/2006

Yours faithfully
WSL Consultants Pty Ltd

Victor Willms
Manager Chemistry Services

This laboratory is accredited by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its scope of accreditation. This document shall not be reproduced except in full. Accreditation No 1205

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au Web Page: www.ecowise.com.au

A NATA Accredited Laboratory
An Approved EPA Auditor & Analyst

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 12-Jul-2006
Ecowise Report No: 957762
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

Received	Sample	pH (pH Units)	As	Cd	Co	Cr	Cu	Hg	Mo	Ni	Pb	Se	Sn	Zn
29-Jun-2006	1RF61-Y	9.3	<5	<0.2	7	27	14	0.11	<5	13	32	<5	<5	37

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 12-Jul-2006
Ecowise Report No: 957762
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	TPH C6-C9	TPH C10-C14	TPH C15-C28	TPH C29-C36	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES	STYRENE	CUMENE	1 2 4-TRI-METHYL BENZENE	TOTAL PHENOLS	SOLUBLE FLUORIDE	CYANIDE
957762	29-Jun-2006	1RF61-Y	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	5	<5

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 12-Jul-2006
Ecowise Report No: 957762
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	NAP	ACY	ACE	FLU	PHE	ANT	FLA	PYR	BAA	CHR	BBF	BKF	BAP	DBA	BGP	IPY	TOTAL* PAH
957762	29-Jun-2006	1RF61-Y	<0.1	0.1	<0.1	<0.1	2.4	0.5	3.2	2.8	1.7	1.0	1.0	1.0	1.3	0.1	0.6	0.6	16

ND = None detected at a concentration greater than the reporting limits specified above.

**** Total PAH's refers only to the sum of the positive individual PAH's tested above.***

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 12-Jul-2006
Ecowise Report No: 957762
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	HCB	a-BHC	LINDANE	HEPTACHLOR	ALDRIN	b-BHC	d-BHC	HEPTACHLOR-EPOXIDE	DDE	DIELDRIN
957762	29-Jun-2006	1RF61-Y	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 12-Jul-2006
Ecowise Report No: 957762
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	DDD	DDT	ENDRIN	METHOXYCHLOR	CHLORDANE	a-ENDO-SULPHAN	b-ENDO-SULPHAN	ENDOSULPHAN SULPHATE	ENDRIN ALDEHYDE
957762	29-Jun-2006	1RF61-Y	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 12-Jul-2006
Ecowise Report No: 957762
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	AROCLOR® 1016	AROCLOR® 1221	AROCLOR® 1232	AROCLOR® 1242	AROCLOR® 1248	AROCLOR® 1254	AROCLOR® 1260	TOTAL* PCBs
957762	29-Jun-2006	1RF61-Y	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ND

ND = None detected at a concentration greater than the reporting limit specified above.

**** Total PCB's refers only to the sum of the positive individual Aroclors® tested above.***

A blank space indicates no test performed

Results expressed as mg/kg dry weight

LT:21653

Your Ref: **Bus Station Redevelopment**

11 July 2006

Tierra Environment Pty Ltd
71 Belair Road
KINGSWOOD SA 5062

Date Received: 4/07/2006

Date Sampled: 1/07/2006

Attention: **Mr. Daryl Burrows**

Certificate of Analysis

WSL Report Number: **959205**

The sample(s) referred to in this report were analysed by the following method(s):

Analyte(s)	Method
Cyanide	APHA 4120
Fluoride	WSL 077
Metals	WSL-032
OCs	WSL8000
PAHs	WSL8000
PCBs	WSL8000
pH	WSL 062
Total Phenolics	APHA 4120
TPH	WSL030
Volatiles	WSL3810A

Results pertain to samples as received

Details of this report were e-mailed on: 11/07/2006

Yours faithfully
WSL Consultants Pty Ltd

Victor Willms
Manager Chemistry Services

This laboratory is accredited by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its scope of accreditation. This document shall not be reproduced except in full. Accreditation No 1205

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au Web Page: www.ecowise.com.au

A NATA Accredited Laboratory
An Approved EPA Auditor & Analyst

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 11-Jul-2006
Ecowise Report No: 959205
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	pH (pH Units)	As	Cd	Co	Cr	Cu	Hg	Mo	Ni	Pb	Se	Sn	Zn
959205	4-Jul-2006	1RF81-Y	8.7	<5	<0.2	8	27	28	2.7	<5	12	100	<5	5	82

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 11-Jul-2006
Ecowise Report No: 959205
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	TPH C6-C9	TPH C10-C14	TPH C15-C28	TPH C29-C36	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES	STYRENE	CUMENE	1 2 4-TRI-METHYL BENZENE	TOTAL PHENOLS	SOLUBLE FLUORIDE	CYANIDE
959205	4-Jul-2006	1RF81-Y	<20	<20	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<5	<5

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 11-Jul-2006
Ecowise Report No: 959205
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	NAP	ACY	ACE	FLU	PHE	ANT	FLA	PYR	BAA	CHR	BBF	BKF	BAP	DBA	BGP	IPY	TOTAL* PAH
959205	4-Jul-2006	1RF81-Y	<0.1	<0.1	<0.1	<0.1	0.3	0.1	0.7	0.7	0.4	0.3	0.2	0.3	0.4	<0.1	0.2	0.2	4.0

ND = None detected at a concentration greater than the reporting limits specified above.

**** Total PAH's refers only to the sum of the positive individual PAH's tested above.***

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 11-Jul-2006
Ecowise Report No: 959205
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	HCB	a-BHC	LINDANE	HEPTACHLOR	ALDRIN	b-BHC	d-BHC	HEPTACHLOR-EPOXIDE	DDE	DIELDRIN
959205	4-Jul-2006	1RF81-Y	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 11-Jul-2006
Ecowise Report No: 959205
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	DDD	DDT	ENDRIN	METHOXYCHLOR	CHLORDANE	a-ENDO-SULPHAN	b-ENDO-SULPHAN	ENDOSULPHAN SULPHATE	ENDRIN ALDEHYDE
959205	4-Jul-2006	1RF81-Y	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

A blank space indicates no test performed

Results expressed as mg/kg dry weight

WSL Consultants Pty. Ltd. trading as Ecowise Environmental
ABN 49 004 752 676
2-8 Harvey Street Richmond, Victoria 3121, Australia
Telephone: +61 3 9429 4666 Facsimile: +61 3 9429 2294
Email: melbourne@ecowise.com.au
Web Page: www.ecowise.com.au

Date : 11-Jul-2006
Ecowise Report No: 959205
Ecowise JobNumber: 21653 Client: Tierra Environment Pty Ltd Job Reference: Bus Station Redevelopment

LAB NUM	Received	Sample	AROCLOR® 1016	AROCLOR® 1221	AROCLOR® 1232	AROCLOR® 1242	AROCLOR® 1248	AROCLOR® 1254	AROCLOR® 1260	TOTAL* PCBs
959205	4-Jul-2006	1RF81-Y	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ND

ND = None detected at a concentration greater than the reporting limit specified above.

**** Total PCB's refers only to the sum of the positive individual Aroclors® tested above.***

A blank space indicates no test performed

Results expressed as mg/kg dry weight

APPENDIX 8 – SOIL TRACKING FORMS

08 83470150 RECEIVED 25 MAY 2006

TERRA

Section A To be completed by a representative of the soil source company	Source company	P.D. EXCAVATIONS P/L
	Address of source company	29 PAMBULA ST, REGENCY PARK. 5010
	Contact	GEORGE DOHNALEK
	Telephone number	8347 0055
	Type of soil	QUARRY RUBBLE
	Quantity of soil (attach weighbridge docket or estimate)	1500 CUBIC MTRS
	Signature	
Section B To be completed by a representative of the transport company	Vehicle registration no	VMF654 - UX0114-USX046
	Signature	
Section C To be completed by a representative of the company receiving the soil	Site name	KALBEEBA RD.
	Address of receiving company	PD EXCAVATIONS P/L
	Contact	GEORGE DOHNALEK
	Telephone number	83470055
	Type of soil	QUARRY RUBBLE
	Signature	

The forms will be provided to the Contractor once appropriate testing results have been received and approved by the Superintendent.

The operator of the source site will fill in Part A of the form, the transporter will fill in Part B of the form, and the operator of the receiving site will fill in Part C of the form upon receipt and inspection of the materials on site. Where possible the form shall be accompanied by a relevant weighbridge docket. A copy of the form and the relevant weighbridge docket will be provided to Tierra within 24 hours of materials being received at the site.

J:\06\AAA_06_002\02\Soil\trackingform.doc V12/05

excavations pty. ltd.

ABN 43 088 425 245

civil works • bulk excavation • roadworks • drainage

SOIL TRACKING DOCUMENTATION

CLIENT HANSEN YUNCKEN

PROJECT CITY BUS DEPOT

VEHICLE REGISTRATION MACK TRUCK TARE EMPTY.....

DRIVER IAN WALDEN TRUCK TARE LOADED.....

SUPERVISOR CERTIFICATION.....

Date	Time	Loading Point	Delivered to:	Material Carted	Quantity	Driver Signature
17/8/06	11·45	FRANKLIN	GARDEN ISL.	CLAY	24t	
				TO		

W R W M A
GARDEN ISLAND

Customer
CASUAL

Date 17-08-2006
Time Out 12:30
Docket Number 1780
Truck 2 Rego. SEMI

Material :- Clean Fill

Gross 40.16
Tare 16.00
Net 24.16

Received by .....

TARE ACQUIRED 19-04-2006

29 Pambula St.
Regency Park 5010
Phone 8347 0055
Fax 8347 0150

Bus Station Redevelopment

Soil Tracking Form

TIERRA ENVIRONMENT

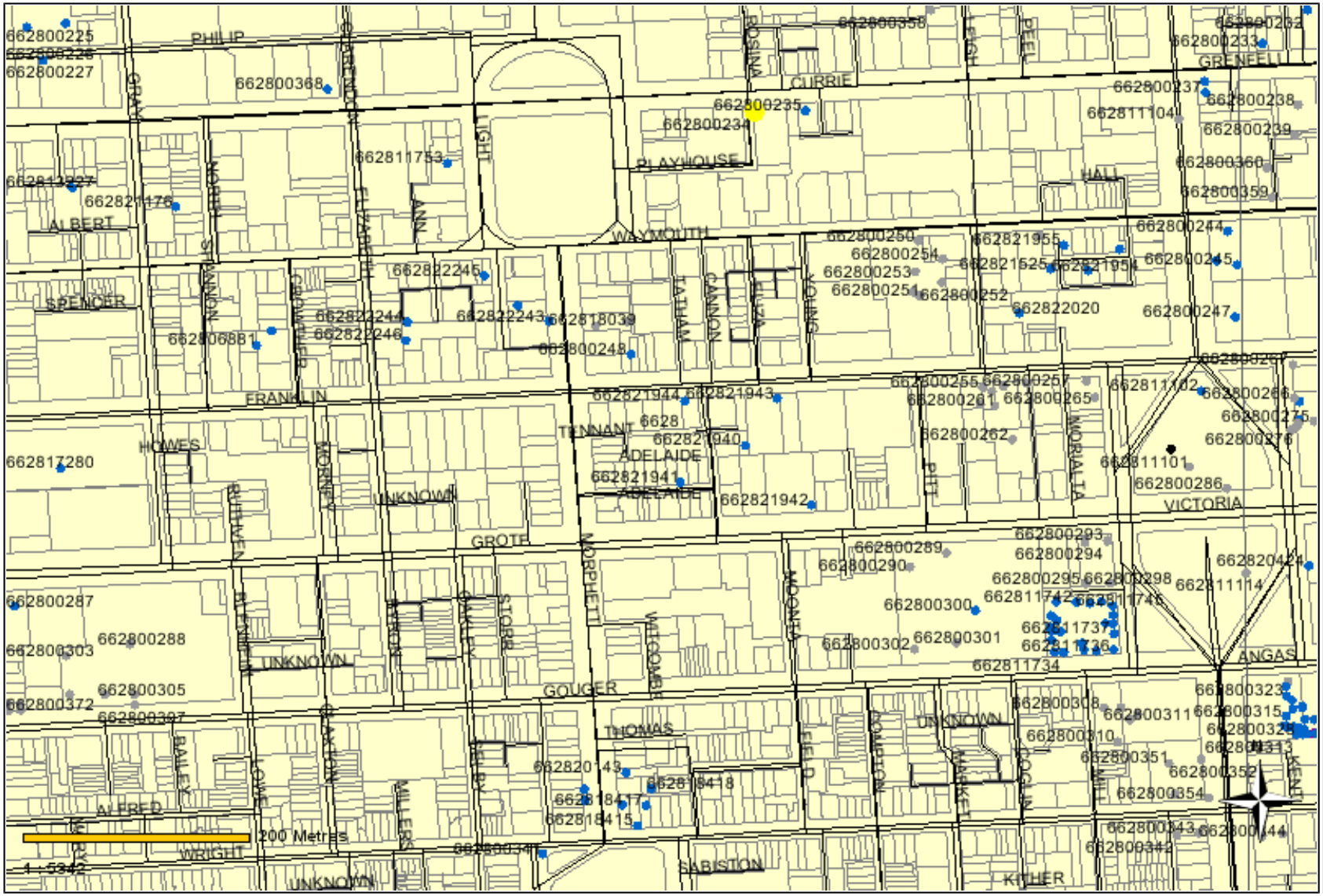
Section A **To be completed by a representative of the soil source company**	**Source company**	P.D. EXCAVATIONS P/L
	Address of source company	29 PAMBULA ST. REGENCY PARK 5010
	Contact	GEORGE DOHNALEK
	Telephone number	8347 0055
	Type of soil	WASTE FILL FROM SITE
	Quantity of soil (attach weighbridge docket or estimate)	APPROX. 3600 m^3
	Signature	
Section B **To be completed by a representative of the transport company**	**Vehicle registration no**	VARIOUS
	Signature	
Section C **To be completed by a representative of the company receiving the soil**	**Site name**	BROMPTON SITE
	Address of receiving company	ADCIV
	Contact	WALTER
	Telephone number	0412 718 903
	Type of soil	WASTE FILL
	Signature	

The forms will be provided to the Contractor once appropriate testing results have been received and approved by the Superintendent.

The operator of the source site will fill in Part A of the form, the transporter will fill in Part B of the form, and the operator of the receiving site will fill in Part C of the form upon receipt and inspection of the materials on site. Where possible the form shall be accompanied by a relevant weighbridge docket. A copy of the form and the relevant weighbridge docket will be provided to Tierra within 24 hours of materials being received at the site.

DRILLHOLE ENQUIRY SYSTEM

Map Projection: Not Projected



Legend

Drillholes

- Engineering Well
- Mineral Well
- Petroleum Well
- Seismic Point
- Stratigraphic Well
- Water Point
- Water Well

- 1:50000 Map Sheets
- 1:100000 Map Sheets
- 1:250000 Map Sheets
- Major Towns
- Localities
- 1:1 million Map

Government of South Australia
Department of Water, Land and Biodiversity Conservation

Unit_No	drillhole name	orig drill depth	orig drill date	max drill depth	max drill date	cased to	case min diam	purpose	late status	late status date	SWL	RSWL	water level date	TDS	EC	salinity date	pH	pH date	yield	yield date	mga easting	mga northing	mga zone
6628-230			01-01-05	83.82	16/11/1914						17.98		16/11/1914	1856	3343	16/11/1914			3.16	16/11/1914	280248.81	6132776.33	54
6628-234		12.95	11-01-61	12.95	11-01-61																280369.76	6132658.37	54
6628-235		27.43	19/06/1914	27.43	19/06/1914						21.34		19/06/1914	1456	2629	19/06/1914			1.52	19/06/1914	280414.69	6132660.34	54
6628-243	ADVERTIZER BUILDING	13.72	04-12-62	13.72	04-12-62				BKF	07-05-06	10.97		04-12-62								280624.66	6132531.31	54
6628-244				21.03				DRN			19.51	25.49		882	1600	06-01-02			1.01		280790.82	6132540.18	54
6628-245				22.1				DRN			19.05	25.95							3.41		280799.82	6132504.33	54
6628-247				22.86				DRN			20.12	24.88							3.03		280799.61	6132448.27	54
6628-248		21.95	24/03/1960	21.95	24/03/1960			DRN													280266.67	6132395.39	54
6628-249	PHONE EXCHANGE 1	45.72	20/08/1965	45.72	20/08/1965				UKN	20/08/1965											280514.75	6132468.18	54
6628-250	PHONE EXCHANGE 2	15.24	25/08/1965	23.01	09-07-65				UKN	25/08/1965											280517.72	6132523.19	54
6628-251	PHONE EXCHANGE 3	24.38	04-06-68	24.38	04-06-68				UKN	04-06-68											280520.69	6132464.32	54
6628-252	PHONE EXCHANGE 4	26.21	18/03/1968	26.21	18/03/1968				UKN	18/03/1968											280539.62	6132479.32	54
6628-253	PHONE EXCHANGE 5	25.5	19/03/1968	25.5	19/03/1968				UKN	19/03/1968											280515.77	6132490.18	54
6628-254	PHONE EXCHANGE 6	27.2	21/03/1967	27.2	21/03/1967				UKN	21/03/1967											280539.75	6132504.29	54
6628-255	CIC 4	12.8	29/01/1957	12.8	29/01/1957				UKN	29/01/1957											280578.6	6132367.37	54
6628-257	CIC 5	12.8	29/01/1957	12.8	29/01/1957				UKN	29/01/1957											280596.83	6132369.37	54
6628-258	CIC 3	12.8	25/01/1957	12.8	25/01/1957				UKN	25/01/1957											280586.83	6132363.24	54
6628-260	CIC 2	12.8	24/01/1957	12.8	24/01/1957				UKN	24/01/1957											280576.75	6132349.13	54
6628-261	CIC 1	12.8	23/01/1957	12.8	23/01/1957				UKN	23/01/1957											280589.75	6132348.22	54
6628-262		15.47	01-12-71	15.47	01-12-71																280605.88	6132312.2	54
6628-263		7.62	13/01/1971	7.62	13/01/1971																280616.85	6132373.29	54
6628-264		22.86	08-05-54	22.86	08-05-54																280669.79	6132376.34	54
6628-265		22.86	10-07-54	22.86	10-07-54						18.29		10-07-54								280677.88	6132359.33	54
6628-266	RESERVE BANK 2	25.6	23/05/1960	25.6	23/05/1960				UKN	23/05/1960	17.22		23/05/1960	1230	2225	20/05/1960					280853.78	6132362.33	54
6628-267	RESERVE BANK 1	25.22	05-12-60	25.22	05-12-60				UKN	05-12-60	16.76		05-12-60	1200	2172	05-10-60					280851.81	6132398.35	54
6628-276	PUB. BLDGS. DEPT	60.96	17/12/1963	60.96	17/12/1963						19.81		25/02/1964								280856.79	6132332.1	54
6628-278		24.38	11-04-66	24.38	11-04-66	21.34	203	DRN			16.15	28.85	11-04-66						0.51	11-04-66	280858.6	6132359.34	54
6628-280		24.38	25/10/1966	24.38	25/10/1966	20.73	254	DRN			18.59	26.41	25/10/1966						0.57	25/10/1966	280858.9	6132339.25	54
6628-281		10.67	13/12/1966	10.67	13/12/1966						7.19		13/12/1966								280858.7	6132336.14	54
6628-286	PUB. BLDGS. DEPT	9.14	30/07/1965	9.14	30/07/1965	9.04	102														280796.71	6132264.39	54
6628-289	CENTRAL MARKET 1	18.29	04-09-64	18.29	04-09-64				UKN	04-09-64											280550.61	6132189.11	54
6628-290	CENTRAL MARKET 2	27.43	04-03-64	27.43	04-03-64				UKN	04-03-64											280518.82	6132173.25	54
6628-291	GOVT OFFICE WEST 1	24.08	03-10-70	36.42	04-01-70	29.26	102	DRN	WWT	03-10-70											280672.62	6132205.36	54
6628-292	GOVT OFFICE OBS 1	4.57	04-02-70	4.57	04-02-70	4.57	51		UKN	04-02-70											280672.67	6132203.14	54
6628-293	GOVT OFFICE WEST 2	24.13	03-07-70	30.18	16/03/1970	28.35	102		WWT	03-07-70				1130	2045	16/03/1970	7.5	16/03/1970			280692.71	6132206.4	54
6628-294	GOVT OFFICE OBS 2	4.57	16/03/1970	4.57	16/03/1970	4.57	51		UKN	16/03/1970											280692.74	6132205.18	54
6628-295	GOVT OFFICE WEST 4	24.69	20/02/1970	24.69	20/02/1970	22.25	102		WWT	20/02/1970				2001	3600	03-05-70	7.5	03-05-70			280673.72	6132159.44	54
6628-296	GOVT OFFICE OBS 4	4.57	03-06-70	4.57	03-06-70	4.57	51		UKN	03-06-70											280674.74	6132159.13	54
6628-297	GOVT OFFICE WEST 3	23.77	23/02/1970	29.87	03-11-70	29.26	102		WWT	23/02/1970				1832	3300	03-11-70	7.5	03-11-70			280695.8	6132160.2	54
6628-298	GOVT OFFICE OBS 3	4.57	03-11-70	4.57	03-11-70	4.57	51		UKN	03-11-70											280695.8	6132160.2	54
6628-300		23.09	10-03-34	23.09	10-03-34									1014	1837	06-06-06			0.51	10-03-34	280577.76	6132128.16	54
6628-301	CENTRAL MARKET 3	27.49	14/04/1964	27.49	14/04/1964				UKN	14/04/1964											280561.88	6132093.15	54
6628-302	CENTRAL MARKET 4	19.2	20/04/1964	19.2	20/04/1964				UKN	20/04/1964	14.63	29.26	20/04/1964								280524.68	6132085.26	54
6628-308	WESTERN COURTS 2	25.8	07-11-72	25.8	07-11-72				UKN	07-11-72				1957	3520	13/07/1972	6.5	13/07/1972	0.25	13/07/1972	280693.74	6132026.39	54
6628-309	WESTERN COURTS 3	57	23/08/1972	57	23/08/1972				UKN	23/08/1972	21		24/08/1972	1130	2045	24/08/1972	6.5	24/08/1972	0.63	24/08/1972	280708.71	6132027.31	54
6628-310	WESTERN COURTS 1	34	07-05-72	34	07-05-72				UKN	07-05-72				10601	18029	14/08/1972					280706.76	6131990.3	54
6628-311	SUPREME COURT 2	14.1	08-03-56	14.1	08-03-56				UKN	08-03-56											280716.88	6132014.3	54
6628-312	SUPREME COURT 1	30.48	20/07/1956	30.48	20/07/1956				UKN	20/07/1956											280723.77	6132020.35	54
6628-341				33.53																	280201.71	6131858.28	54
6628-358																					280522.73	6132771.16	54
6628-5552	PUB. BLDGS. DEPT	25.91	02-03-64	25.91	02-03-64			INV													280851.76	6132328.32	54
6628-6881		60	28/03/1978	100	17/07/1978	63.8	114		BKF	17/07/1978	18		28/03/1978	2404	4310	28/03/1978	7.8	28/03/1978	0.38	28/03/1978	279935.71	6132397.3	54
6628-11101	GH 155	15.06	14/08/1979	15.06	14/08/1979			INV,OBS	ABD	14/08/1979	11.04	33.99	03-01-80								280762.63	6132286.44	54
6628-11102	DEPT OF TRASIT	19.8	13/09/1979	19.8	13/09/1979			OBS			18.05	27.07	03-01-80								280771.82	6132368.35	54
6628-11103	DEPT OF TRANS	30	13/09/1979	30	13/09/1979			OBS			17.92	27.39	01-06-84								280781.71	6132508.22	54
6628-11114	KW 14	16.75	09-03-79	16.75	09-03-79				UKN	09-03-79											280815.88	6132174.17	54

Unit_No	drillhole name	orig drill depth	orig drill date	max drill depth	max drill date	cased to	case min diam	purpose	late status	late status date	SWL	RSWL	water level date	TDS	EC	salinity date	pH	pH date	yield	yield date	mga easting	mga northing	mga zone
6628-11726		17.5	05-11-81	17.5	05-11-81	17.5	150	DRN	OPR		15		05-11-81	1804	3250	05-11-81	7.6	05-11-81			280645.8	6132108.15	54
6628-11727		17	13/05/1981	17	13/05/1981	17	150	DRN	OPR		14.5		13/05/1981	1810	3260	05-12-81	7.5	05-12-81			280653.68	6132107.12	54
6628-11728		16	13/05/1981	16	13/05/1981	16	150	DRN	OPR		13.5		13/05/1981	1832	3300	05-12-81	7.7	05-12-81			280648.88	6132139.42	54
6628-11729		16.5	13/05/1981	16.5	13/05/1981	16.5	150	DRN	OPR		14		13/05/1981	1832	3300	13/05/1981	7.6	13/05/1981			280644.68	6132124.22	54
6628-11730		16	13/05/1981	16	13/05/1981	16	150	DRN	OPR		13.5		13/05/1981	1832	3300	05-12-81	7.6	05-12-81			280644.7	6132112.12	54
6628-11731		18	05-12-81	18	05-12-81	18	150	DRN	OPR		15.5		05-12-81	1832	3300	05-12-81	7.8	05-12-81			280699.69	6132117.22	54
6628-11732		19	13/05/1981	19	13/05/1981	19	150	DRN	OPR		16.5		13/05/1981	1804	3250	13/05/1981	8.1	13/05/1981			280645.76	6132098.28	54
6628-11733		19	13/05/1981	19	13/05/1981	19	150	DRN	OPR		16.5		13/05/1981	1804	3250	13/05/1981	7.7	13/05/1981			280648.63	6132085.14	54
6628-11734		19	13/05/1981	19	13/05/1981	19	150	DRN	OPR		16.5		13/05/1981	1804	3250	13/05/1981	7.7	13/05/1981			280656.77	6132085.33	54
6628-11735		14.5	13/05/1981	14.5	13/05/1981	14.5	150	DRN	OPR		12		13/05/1981	1810	3260	13/05/1981	7.9	13/05/1981			280692.84	6132117.28	54
6628-11736		19	13/05/1981	19	13/05/1981	19	150	DRN	OPR		16.5		13/05/1981	1810	3260	13/05/1981	7.9	13/05/1981			280700.82	6132089.16	54
6628-11737		19.5	13/05/1981	19.5	13/05/1981	19.5	150	DRN	OPR		17		13/05/1981	1815	3270	13/05/1981	7.8	13/05/1981			280700.68	6132106.37	54
6628-11738		16.5	14/05/1981	16.5	14/05/1981	16.5	150	DRN	OPR		14		14/05/1981	1821	3280	14/05/1981	7.6	14/05/1981			280685.6	6132087.25	54
6628-11739		19	14/05/1981	19	14/05/1981	19	150	DRN	OPR		17.5		14/05/1981	1776	3200	14/05/1981	8.1	14/05/1981			280674.7	6132088.2	54
6628-11740		15	14/05/1981	15	14/05/1981	15	150	DRN	OPR		12.5		14/05/1981	1776	3200	14/05/1981	7.7	14/05/1981			280688.72	6132140.37	54
6628-11741		15	14/05/1981	15	14/05/1981	15	150	DRN	OPR		12.5		14/05/1981	1776	3200	14/05/1981	7.6	14/05/1981			280678.8	6132138.25	54
6628-11742		15	14/05/1981	15	14/05/1981	15	150	DRN	OPR		12.5		14/05/1981	1788	3220	14/05/1981	7.7	14/05/1981			280666.62	6132139.18	54
6628-11743		19	15/05/1981	19	15/05/1981	19	150	DRN	OPR		16.5		15/05/1981	1776	3200	15/05/1981	7.5	15/05/1981			280672.8	6132095.26	54
6628-11744		15	15/05/1981	15	15/05/1981	15	150	DRN	OPR		12.5		15/05/1981	1776	3200	15/05/1981	7.5	15/05/1981			280699.66	6132126.1	54
6628-11745		15	15/05/1981	15	15/05/1981	15	150	DRN	OPR		12.5		15/05/1981	1776	3200	15/05/1981	8	15/05/1981			280698.69	6132136.29	54
6628-11746		15.1	15/05/1981	15.1	15/05/1981	15	150	DRN	OPR		12.5		15/05/1981	1776	3200	15/05/1981	8	15/05/1981			280649.82	6132119.35	54
6628-11753				12.55	09-03-81		120		ABD		6.35		09-03-81	882	1600	09-03-81	8.5	09-03-81			280099.75	6132596.27	54
6628-13444		160	29/11/1984	160	29/11/1984	29	150				20		29/11/1985						2		279948.76	6132413.26	54
6628-18039	MBA 1	6.1	05-09-57	6.1	05-09-57				UKN	05-09-57											280234.96	6132425.37	54
6628-18040	MBA 6	6.1	14/05/1957	6.1	14/05/1957				UKN	14/05/1957											280262.72	6132430.37	54
6628-18415		3.8	08-06-96	3.8	08-06-96	3.8	50	OBS			3.32		08-06-96								280284.86	6131890.25	54
6628-18416		3.8	08-06-96	3.8	08-06-96	3.8	50	OBS			2.18		08-06-96								280270.89	6131912.23	54
6628-18417		4.5	20/03/1997	4.5	20/03/1997	4.5	50	OBS													280291.82	6131912.29	54
6628-18418		4.5	20/03/1997	4.5	20/03/1997	4.5	50	OBS													280295.87	6131930.25	54
6628-18419		4.5	20/03/1997	4.5	20/03/1997	4.5	50	OBS													280236.87	6131928.28	54
6628-18420		3.5	20/03/1997	3.5	20/03/1997	3	50	OBS													280237.88	6131916.31	54
6628-20143		10	17/05/2000	10	17/05/2000	10	50	MON			5.5		17/05/2000						0.01	17/05/2000	280273.12	6131947.04	54
6628-21525		18	19/09/2003	18	19/09/2003	15	50	MON			15.8		19/09/2003						0.01	19/09/2003	280635.46	6132495.88	54
6628-21940	MW 7	21.9	24/08/2004	21.9	24/08/2004			MON	BKF	24/07/2006	17.7		24/08/2004								280369.95	6132300.17	54
6628-21941	MW 5	20.3	23/08/2004	20.3	23/08/2004	16.4	50	MON			17.2		23/08/2004								280313.39	6132259.26	54
6628-21942	MW 9	19.2	23/08/2004	19.2	23/08/2004			MON	BKF	24/07/2006	17		23/08/2004								280430.02	6132237.85	54
6628-21943	MW 8	19.6	26/08/2004	19.6	26/08/2004			MON	BKF	24/07/2006	17.7		26/08/2004								280396.94	6132351.36	54
6628-21944	MW 6	22	28/08/2004	22	28/08/2004	16.6	50	MON			17.4		28/08/2004								280315.36	6132346.55	54
6628-21953	BH 1	22.4	24/12/2004	22.4	24/12/2004		90														280695.58	6132518.68	54
6628-21954	BH 2	22.7	23/12/2004	22.7	23/12/2004		90														280668.25	6132495.17	54
6628-21955	BH 3	26.55	23/12/2004	26.55	23/12/2004		90														280646.43	6132521.65	54
6628-22020		24.9	23/02/2005	24.9	23/02/2005	15.7	52														280608.49	6132448.08	54
6628-22243		15	18/07/2005	15	18/07/2005	12	50	MON	DRY	18/07/2005			18/07/2005								280193.53	6132429.45	54
6628-22244		21	19/07/2005	21	19/07/2005	17	50	MON			19		19/07/2005								280068.47	6132425.36	54
6628-22245		15	21/02/2005	15	21/02/2005	12	50	MON	DRY	21/02/2005			21/02/2005								280135.05	6132476.8	54
6628-22246		22	20/07/2005	22	20/07/2005	18	50	MON			19		20/07/2005								280067.44	6132405.62	54
6628-22247		22	15/07/2005	22	15/07/2005	18	50	MON			19		15/07/2005								280165.27	6132445.43	54

Central West Precinct

Site Management Plan

Bus Station Site, Stage 1 Remediation

Prepared for

Adelaide City Council

16 November 2006

Consulting Engineers and Scientists

Tierra Environment Pty. Ltd.
ABN: 84 111 615 680

71 Belair Road,
Kingswood SA 5062
T: 08 8373 2512
F: 08 8373 2515
general@tierra.com.au

Central West Precinct
Site Management Plan
Bus Station Site, Stage 1 Remediation

Prepared for
Adelaide City Council

16 November 2006

Document Status	Name	Signature	Date
Approved for Issue ☑	Prepared by Elmar Schaffeler		16/11/2006
Revision A	Reviewed by Tom Dolling		16/11/2006

1 INTRODUCTION

This Site Management Plan (the Plan) gives details of future site management measures required for two areas of the Bus Station Site – Stage 1 (the Site) due to the presence of fill materials. The Site is the subject of a Statement of Environmental Audit allowing its use for public open space, medium to high density residential and commercial/industrial activities.

The Site underwent remediation work in 2006, which were documented in a report titled "Central West Precinct, Remediation Report, Bus Station Site – Stage 1; Tierra Environment, 20 September 2006".

Adelaide City Council is responsible for ensuring that the requirements of this plan are carried out.

The locations of areas requiring management are as follows:

Area 1	the Reuse Area which contains fill materials removed from other parts of the site
Area 2	a 0.5m wide strip along the full extent of the western boundary of allotment 93 (CT5735/127)

The two locations are shown on plans provided in Appendix A to this document.

2 SITE CONDITIONS

Fill materials encountered at the bus station site generally consisted of:

- sand, clay and silt
- concrete, bricks, tiles and other construction and demolition wastes
- timber, plastic and steel
- ash and slag

In summary the contamination status of fill materials at the Bus Station site prior to remediation were summarised as follows:

- Contaminants of concern were metals and PAH. The 95% UCL of the mean complied with the clean up goals stipulated by the Environmental Auditor.
- Other chemicals were present but were not of concern when considering the clean up goals.
- Lead and investigated PAH species revealed a very low leachability.
- The potential for generation of volatiles was low based on the results of site investigations.
- The potential for the presence of significant amounts of materials containing asbestos fibres was low based on the observations made during site investigations.

As a result of implemented remediation measures the post remediation status of the site is as follows:

- Soils outside Areas 1 and 2 comply with NEPM HIL A and NEPM EIL and do not require management measures.
- Soils in Area 1 between a depth of 1.2m (1.0m in Area 1a, 0.6m below the invert of proposed stormwater pipes and sumps) and finished surface levels comply with NEPM HIL A and NEPM EIL..
- Soils in Area 1 below a depth of 1.2m (1.0m in Area 1a, 0.6m below the inverts of proposed stormwater pipes and sumps) relative to finished surface levels are characterised by the laboratory results presented in Appendix 2 to this report and will require management measures.
- Surface soils in Area 2 consist of fill materials and will require management measures.

3 SOIL PROFILES FOR AREAS SUBJECT TO SITE MANAGEMENT

3.1 Area 1

Once development is complete the reuse area will be made up of (from the top down):

- concrete paving or similar
- gravel or sand subgrade (typically 0.2m)
- clean clay backfill to depths between 1m and 1.2m (or approximately 0.6m below the inverts of stormwater infrastructure)

- a plastic marker mesh laid below the clay backfill (the elevation of the marker mesh placed on top of fill materials is provided in Appendix A)
- fill materials to a depth of approximately 8m
- natural clays below a depth of approximately 8m

The layer of clean clay backfill and the natural clays are different in colour from the fill materials:

Materials	Colour
Clean clay backfill / natural clays	Grey to olive-green
Fill materials	Brown / dark brown / black

3.2 Area 2

From the top down the 0.5m wide strip along the full extent of the western boundary of allotment 93 is made up of:

- concrete paving
- gravel or sand subgrade (typically 200mm)
- fill materials to a depth of approximately 700mm
- natural clays below a depth of approximately 700mm

The layer of fill materials is different in colour from the natural clay materials:

Materials	Colour
Fill materials	Brown / dark brown (some gravel and concrete, brick fragments)
Clean clay backfill / natural clays	Brown to grey, grey to olive green at depth

4 MAINTENANCE OF SURFACE COVER

The proposed paving surface cover shall be maintained at all times. This shall include:

- keeping the paving surfaces in good condition
- keeping the paving surfaces at currently proposed levels or above
- regular inspections of the surface cover
- repairs as necessary

5 FUTURE EXCAVATION WORKS

5.1 Area 1

Surface soils are clean and excavations in the top 1m (or to a depth of 0.6m below proposed stormwater infrastructure) can be carried out safely using normal good working practices.

Any surface soil shall be stockpiled separately and not mixed when being put back into excavations. Backfilled materials shall be compacted as required for geotechnical purposes.

A plastic marker mesh was placed at the base of the clay layer to assist in identifying the difference between surface soils and fill materials.

For excavations below the marker layer the following shall be implemented:

- Dust generation shall be avoided, e.g. by applying water to all exposed surfaces whilst avoiding the generation of run off.
- Workers shall wear appropriate protective clothing to reduce dermal contact, not eat during work and wash their hands prior to any breaks and at the end of each day.
- Materials above the marker mesh shall be stockpiled separately.

- Materials below the marker mesh shall be stockpiled separately, stockpiles shall be placed on plastic sheets or similar, stockpiles shall be covered to avoid ingress of water, stockpiles shall be inaccessible to the public.
- All excavated materials shall be placed back in the same soil layer as they came from to achieve soil strata as detailed in Section 3.
- The marker mesh shall be replaced with similar materials.
- In the event of materials not being returned to below the marker mesh, these material shall be tested by a suitably qualified environmental professional prior to its removal to an EPA licensed landfill or an alternative location determined by the environmental professional.

5.2 Area 2

For excavations in Area 2 the following shall be implemented:

- Dust generation shall be avoided.
- Workers shall wear appropriate protective clothing to reduce dermal contact, not eat during work and wash their hands prior to any breaks and at the end of each day.
- Fill materials shall be stockpiled separately, stockpiles shall be placed on plastic sheets or similar, stockpiles shall be covered to avoid ingress of water, stockpiles shall be inaccessible to the public.
- Natural soils shall be stockpiled separately.
- All excavated materials shall be placed back in the same soil layer as they came from to achieve soil strata as detailed in Section 3.
- In the event of excavated fill material not being returned to the origin soil layer, these material shall be tested by a suitably qualified and experienced environmental professional prior to its removal to an EPA licensed landfill or an alternative location determined by the environmental professional.

6 TREE PLANTING AND IRRIGATION

Prior to establishing vegetation in Area 1, advice shall be obtained from a suitably qualified and experienced horticulturalist on the appropriateness of proposed plants for the prevailing subsurface conditions. The following objectives shall be met:

- large trees shall not be planted in, or close to, Area 1
- plant roots shall not penetrate into the layer of fill materials below the marker mesh
- irrigation water or surface run off shall not penetrate into the layer of fill materials below the marker mesh

7 GROUNDWATER MONITORING

Groundwater monitoring will not be required.

8 FUTURE MODIFICATIONS

In the event of major changes being proposed, e.g. significant excavations or changes in land use, appropriate professional advice by a suitably qualified and experienced environmental professional shall be obtained to confirm that the proposed changes are compatible with fill materials situated in Areas 1 and 2, and the objectives of this Plan.

9 RESPONSIBILITIES

The following responsibilities shall rest with the Adelaide City Council:

- All parties involved in work in Areas 1 and 2 shall be provided with this Plan and be made aware of its contents.
- Parties providing professional advice related to Areas 1 and 2 shall also be provided with the Statement of Environmental Audit and Audit Report.
- All parties involved in work in Areas 1 and 2 shall adhere to the provisions of this Plan.
- Areas 1 and 2 shall be inspected regularly to ensure that areas are maintained appropriately in accordance with this Plan.

APPENDIX A – SITE AREAS

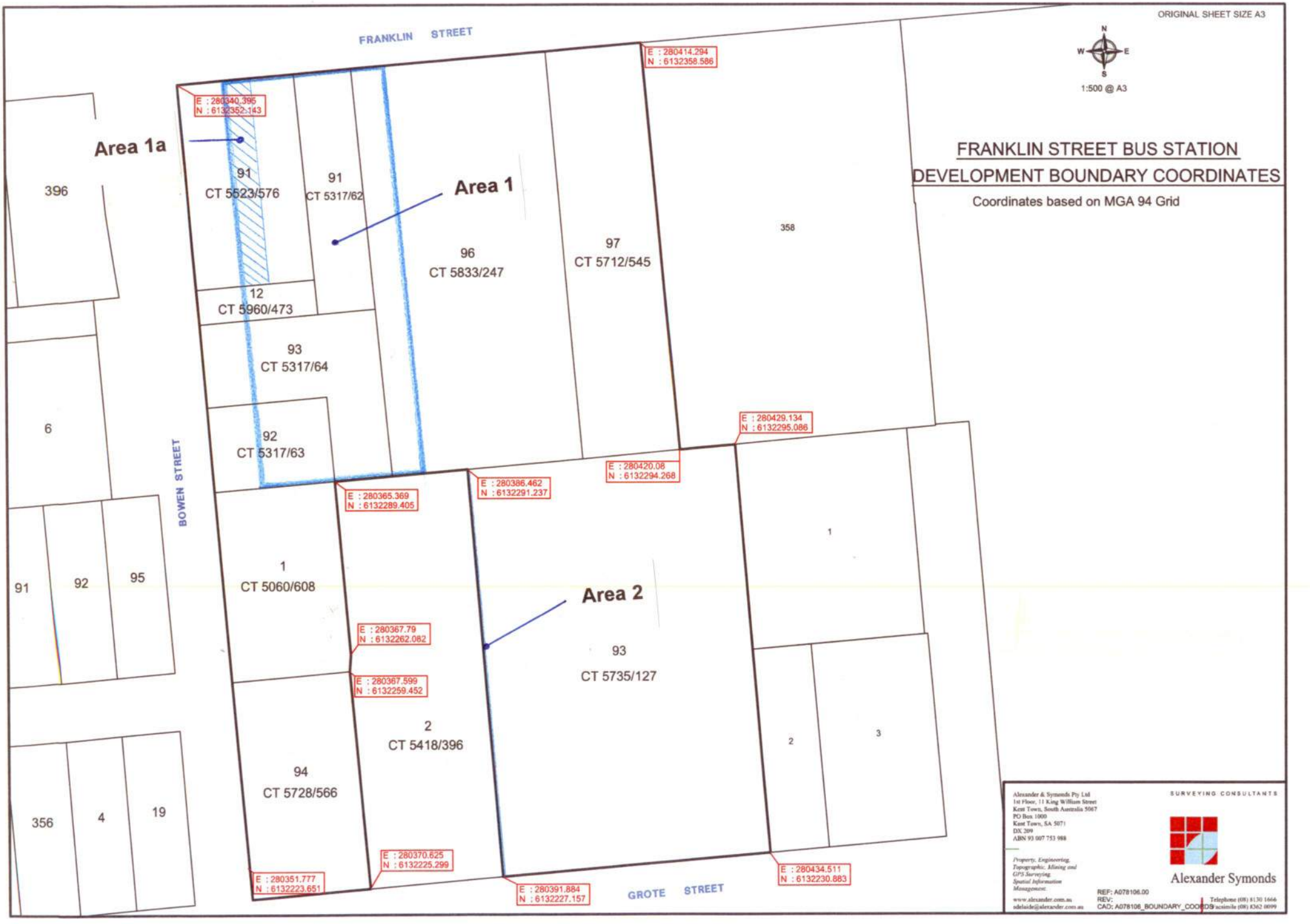
ORIGINAL SHEET SIZE A3

N
W E
S

1:500 @ A3

FRANKLIN STREET BUS STATION
DEVELOPMENT BOUNDARY COORDINATES

Coordinates based on MGA 94 Grid



Alexander & Symonds Pty Ltd
1st Floor, 11 King William Street
Kent Town, South Australia 5067
PO Box 1000
Kent Town, SA 5071
DX 209
ABN 93 007 753 988

Property, Engineering, Topographic, Mining and GPS Surveying. Spatial Information Management.

www.alexander.com.au
sdelaide@alexander.com.au

SURVEYING CONSULTANTS

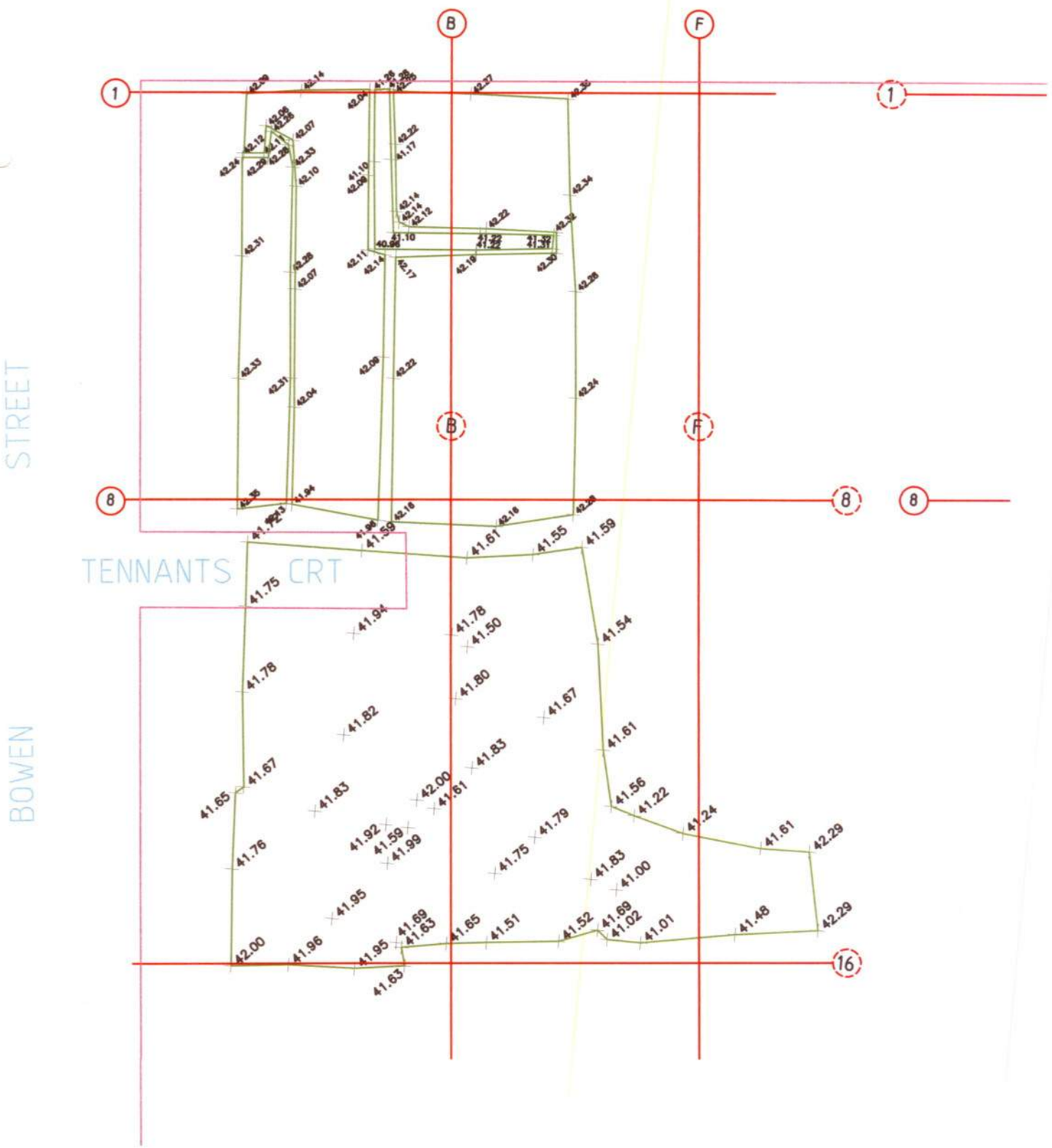
Alexander Symonds

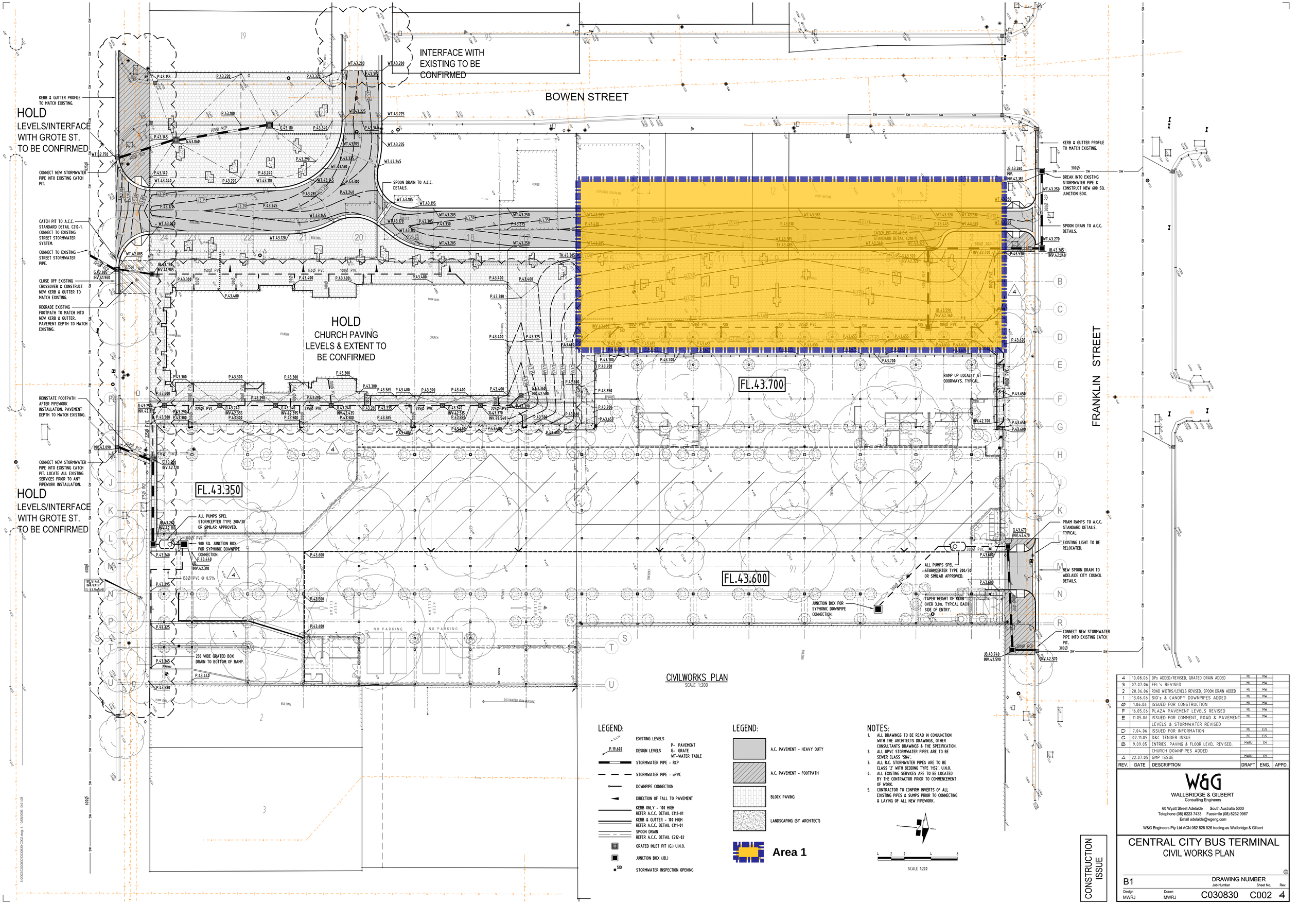
Telephone (08) 8130 1666
Facsimile (08) 8362 0099

REF: A078106.00
REV:
CAD: A078106_BOUNDARY_COORDS

ADELAIDE BUS DEPOT

SURVEY OF TOP OF CONTAMINATED FILL
SCALE 1 : 250





CIVILWORKS PLAN
SCALE 1:200

LEGEND:

- EXISTING LEVELS
- DESIGN LEVELS — P- PAVEMENT, G- GRATE, WT- WATER TABLE
- STORMWATER PIPE - RCP
- STORMWATER PIPE - uPVC
- DOWNPIPE CONNECTION
- DIRECTION OF FALL TO PAVEMENT
- KERB ONLY - 100 HIGH REFER A.C.C. DETAIL C112-01
- KERB & GUTTER - 100 HIGH REFER A.C.C. DETAIL C111-01
- SPOON DRAIN REFER A.C.C. DETAIL C212-02
- GRATED INLET PIT (G.) U.N.O.
- JUNCTION BOX (JB.)
- STORMWATER INSPECTION OPENING

LEGEND:

- A.C. PAVEMENT - HEAVY DUTY
- A.C. PAVEMENT - FOOTPATH
- BLOCK PAVING
- LANDSCAPING (BY ARCHITECT)
- **Area 1**

NOTES:

1. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE ARCHITECTS DRAWINGS, OTHER CONSULTANTS DRAWINGS & THE SPECIFICATION.
2. ALL UPVC STORMWATER PIPES ARE TO BE SEWER CLASS 'SN4'.
3. ALL R.C. STORMWATER PIPES ARE TO BE CLASS '2' WITH BEDDING TYPE 'H52'. U.N.O.
4. ALL EXISTING SERVICES ARE TO BE LOCATED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.
5. CONTRACTOR TO CONFIRM INVERTS OF ALL EXISTING PIPES & SUMPS PRIOR TO CONNECTING & LAYING OF ALL NEW PIPEWORK.

4 2 0 4 8
SCALE 1:200

CONSTRUCTION ISSUE

REV.	DATE	DESCRIPTION	DRAFT	ENG.	APPD.
4	10.08.06	DPs ADDED/REVISED, GRATED DRAIN ADDED	MJ	MW	
3	07.07.06	FFL's REVISED	MJ	MW	
2	20.06.06	ROAD WIDTHS/LEVELS REVISED, SPOON DRAIN ADDED	MJ	MW	
1	13.06.06	SIO's & CANOPY DOWNPIPES ADDED	MJ	MW	
Ø	1.06.06	ISSUED FOR CONSTRUCTION	MJ	MW	
F	16.05.06	PLAZA PAVEMENT LEVELS REVISED	MJ	MW	
E	11.05.06	ISSUED FOR COMMENT, ROAD & PAVEMENT LEVELS & STORMWATER REVISED	MJ	MW	
D	7.04.06	ISSUED FOR INFORMATION	MJ	EJS	
C	02.11.05	D&C TENDER ISSUE	FG	EJS	
B	9.09.05	ENTRIES, PAVING & FLOOR LEVEL REVISED. CHURCH DOWNPIPES ADDED	MWRJ	CH	
A	22.07.05	GMP ISSUE	MWRJ	CH	

W&G
WALLBRIDGE & GILBERT
Consulting Engineers
60 Wyatt Street Adelaide South Australia 5000
Telephone (08) 8223 7433 Facsimile (08) 8232 0967
Email adelaide@wgeng.com
W&G Engineers Pty Ltd ACN 052 528 926 trading as Wallbridge & Gilbert

CENTRAL CITY BUS TERMINAL
CIVIL WORKS PLAN

B1

DRAWING NUMBER
Job Number C030830 Sheet No. C002 Rev. 4

Design MWRJ Drawn MWRJ

APPENDIX B – ANALYTICAL RESULTS FOR MATERIALS IN REUSE AREA

Sample Number	1RF1-A	1RF2-A	1RF3-A	1RF4-A	1RF5-A	1RF6-A	1RF7-A	1RF8-A	1RF9-A	1RF10-A	1RF11-A	1RF12-A	1RF13-A	1RF14-A	1RF15-A	1RF16-A	1RF17-A	1RF18-A	1RF19-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN02460	06-JN02462	06-JN02463	06-JN02464	06-JN02465	06-JN02466	06-JN02467	06-JN02468	06-JN02469	06-JN02470	06-JN02471	06-JN02472	06-JN02473	06-JN02474	06-JN02475	06-JN03131	06-JN03132	06-JN03133	06-JN03134
MISCELLANEOUS ANALYSES																			
% Moisture	14	15	15	14	16	14	17	18	15	17	12	18	20	14	14	15	11	11	14
Cyanide (total)	< 5										< 5								
pH (units) (1:5 aqueous extract)*	9	9.2	9.4	9.4	9.3	9.3	9.4	9.5	9.3	9.2	9.1	9.3	9.4	9.2	9.2	9.5	9.6	9.5	9.5
CHLORINATED HYDROCARBONS	<LOR										<LOR								
HEAVY METALS																			
Antimony	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Arsenic	17	18	14	12	7.9	8.3	12	***1***	***1***	***1***	6.8	10	***1***	***1***	9.3	6.9	5.4	8	7.3
Beryllium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Cadmium	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***
Chromium	26	19	20	15	15	16	18	20	14	16	17	20	18	15	14	14	16	13	15
Cobalt	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	6.4	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***
Copper	30	16	16	14	31	16	18	13	15	17	16	18	19	17	15	14	13	15	14
Lead	72	47	46	31	38	30	24	16	18	39	30	48	34	24	34	29	61	34	33
Mercury	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Molybdenum	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Nickel	9.2	7.6	8.1	6.5	6.8	7.1	7.8	7	6.9	7	7.6	7.8	7.8	7.1	6.5	6.6	6.4	6.4	6.6
Selenium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Tin	15	***5***	***5***	***5***	23	***5***	***5***	***5***	***5***	16	***5***	***5***	***5***	17	***5***	10	***5***	***5***	***5***
Vanadium	45	36	36	22	26	27	66	56	24	27	26	29	28	24	30	29	45	26	28
Zinc	140	100	93	66	58	62	45	83	27	52	58	96	53	36	55	59	43	65	56
MAH's AROMATIC VOLATILE ORGANICS	<LOR										<LOR								
ORGANOCHLORINE PESTICIDES	<LOR										<LOR								
Aldrin	0.17										***0.025***								
Dieldrin	***0.025***										***0.025***								
Chlordane	0.5										0.2								
POLYNUCLEAR AROMATIC HYDROCARBONS																			
Naphthalene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.2
Acenaphthylene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.2
Acenaphthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluorene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.2
Phenanthrene	0.2	***0.05***	***0.05***	***0.05***	0.1	0.1	***0.05***	0.3	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	0.5	***0.05***	0.2	2.4
Anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	0.5
Fluoranthrene	0.9	0.3	0.3	0.1	0.3	0.3	0.2	0.6	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.7	0.2	0.4	2.7
Pyrene	0.9	0.3	0.3	0.1	0.3	0.3	0.2	0.6	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.7	0.2	0.5	2.6
Benzo(a)anthracene	0.5	0.2	0.1	***0.05***	0.1	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.1	***0.05***	0.2	0.4	***0.05***	0.3	1.3
Chrysene	0.6	0.2	0.2	0.1	0.2	0.2	***0.05***	0.3	0.1	0.1	0.1	0.1	0.1	***0.05***	0.2	0.4	0.1	0.3	1
Benzo(b)fluoranthene	0.6	0.2	0.2	***0.05***	0.2	0.1	***0.05***	0.2	***0.05***	0.1	***0.05***	0.1	0.1	0.1	0.2	0.5	0.1	0.2	0.8
Benzo(k)fluoranthene	0.3	0.1	0.2	***0.05***	0.1	0.1	***0.05***	0.1	***0.05***	***0.05***	0.1	0.1	***0.05***	***0.05***	0.2	0.3	0.1	0.2	0.7
Benzo(a)pyrene	0.7	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	***0.05***	0.1	0.2	0.4	0.2	0.3	0.8
Dibenzo(a,h)anthracene	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.2
Benzo(g,h,i)perylene	0.5	0.1	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	0.2	0.3	***0.05***	0.1	0.9
Indeno(1,2,3-cd)pyrene	0.4	0.1	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	0.2	***0.05***	0.1	0.7
Total PAH	**5.95**	**2.05**	**2.15**	**1**	**1.9**	**1.9**	**1.2**	**3**	**1.25**	**1.3**	**1.4**	**1.4**	**1.15**	**1**	**2.3**	**4.75**	**1.4**	**2.9**	**15.25**
POLYCHLORINATED BIPHENYLS (PCB's)	<LOR										<LOR								
PHENOLS & CRESOLS	<LOR										<LOR								
TOTAL RECOVERABLE HYDROCARBONS	<LOR										<LOR								

All results in mg/kg unless stated otherwise

<LOR - All results less than the limits of reporting

<LOR - All results except those listed less than the limits of reporting

* Statistics calculated are of numerical pH not absolute hydrogen ion concentration

** Consult NEPM tables for form of analyte

*** The most stringent auditor criteria was adopted for comparison purposes.

NEPM Health Based A Criteria exceeded

Waste Fill Criteria exceeded

Numbers in bold blue and Italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Sample Number	1RF20-A	1RF21-A	1RF22-A	1RF23-A	1RF24-A	1RF25-A	1RF26-A	1RF27-A	1RF28-A	1RF29-A	1RF30-A	1RF31-A	1RF32-A	1RF33-A	1RF34-A	1RF35-A	1RF36-A	1RF37-A	1RF38-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN03135	06-JN03136	06-JN03137	06-JN03138	06-JN03139	06-JN03140	06-JN03141	06-JN03142	06-JN03143	06-JN03144	06-JN03145	06-JN03146	06-JN03438	06-JN03439	06-JN03440	06-JN03441	06-JN03442	06-JN03748	06-JN03749
MISCELLANEOUS ANALYSES																			
% Moisture	13	14	11	16	15	17	12	14	10	15	14	14	13	11	11	12	8.6	9.4	9.6
Cyanide (total)		< 5						< 5				< 5							
pH (units) (1:5 aqueous extract)*	9.4	9.3	9.4	9.4	9.4	9.3	9.4	9.3	9.4	9.2	9.2	9.3	9.3	9.2	9.1	9.1	9.3	9.1	8.7
CHLORINATED HYDROCARBONS		<LOR						<LOR				<LOR							
HEAVY METALS																			
Antimony	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	11	***5***	***5***	***5***	***5***	***5***
Arsenic	4.6	7	9.7	9.2	9.3	4.1	4.4	4.2	3.7	5.1	6.5	4.7	5.9	***0.5***	***2***	5.2	***2***	3.2	3.5
Beryllium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Cadmium	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	0.5	***0.25***	***0.25***	***0.25***
Chromium	17	15	16	15	16	14	16	14	11	16	17	15	18	15	18	25	22	19	20
Cobalt	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	5.5	5.4	***2.5***	***2.5***
Copper	14	15	20	17	27	12	26	16	12	22	28	22	39	20	31	45	22	9.5	14
Lead	28	34	81	42	74	25	48	72	29	81	100	77	170	81	60	200	***2.5***	45	85
Mercury	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	0.1	***0.05***
Molybdenum	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	14	13	11	13	13	***5***	***5***
Nickel	7.6	6.6	6.9	7.1	7.5	7.3	8	6.9	5.1	8.4	7.8	6.9	8.7	7.6	8.4	11	12	6	7.9
Selenium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	11	9.9	9.3	11	8.4	***1***	***1***
Tin	***5***	***5***	12	13	42	12	11	13	***5***	14	110	14	86	40	64	94	36	***5***	11
Vanadium	30	29	30	31	26	22	31	23	17	27	28	28	18	18	10	26	22	30	34
Zinc	57	73	120	190	84	30	56	47	44	100	130	78	240	87	130	280	45	25	56
MAH's AROMATIC VOLATILE ORGANICS		<LOR						<LOR				<LOR							
ORGANOCHLORINE PESTICIDES		<LOR						<LOR				<LOR							
Aldrin		***0.025***						0.08				0.1							
Dieldrin		***0.025***						***0.025***				0.1							
Chlordane		0.2						***0.05***				***0.05***							
POLYNUCLEAR AROMATIC HYDROCARBONS																			
Naphthalene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthylene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.3
Acenaphthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluorene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Phenanthrene	***0.05***	***0.05***	0.1	***0.05***	0.2	***0.05***	***0.05***	***0.05***	0.1	0.2	0.1	***0.05***	***0.05***	***0.05***	0.2	0.2	0.2	0.1	2.1
Anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.5
Fluoranthrene	0.2	0.2	0.4	0.4	0.4	0.2	0.2	0.1	0.4	0.4	0.4	0.2	0.4	0.2	0.3	0.6	0.9	0.7	6.4
Pyrene	0.3	0.2	0.4	0.4	0.4	0.2	0.2	0.1	0.4	0.4	0.5	0.2	0.4	0.3	0.4	0.6	0.9	0.7	5.9
Benzo(a)anthracene	0.2	***0.05***	0.3	0.3	0.3	0.1	0.1	***0.05***	0.2	0.2	0.3	0.1	0.3	0.2	0.2	0.3	0.4	0.4	3.2
Chrysene	0.2	***0.05***	0.3	0.3	0.2	***0.05***	0.2	***0.05***	0.2	0.3	0.2	0.1	0.3	0.2	0.2	0.4	0.5	0.5	3
Benzo(b)fluoranthene	0.2	0.2	0.3	0.2	0.2	***0.05***	0.1	***0.05***	0.3	0.2	0.3	0.2	0.2	0.1	0.2	0.3	0.4	0.3	2.3
Benzo(k)fluoranthene	0.2	0.2	0.3	0.2	0.2	***0.05***	0.1	***0.05***	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.5	0.4	1.8
Benzo(a)pyrene	0.2	0.1	0.3	0.2	0.2	***0.05***	0.1	***0.05***	0.2	0.3	0.3	0.1	0.3	0.2	0.2	0.3	0.4	0.4	2.8
Dibenzo(a,h)anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.3
Benzo(g,h,i)perylene	***0.05***	***0.05***	0.2	0.3	0.1	***0.05***	***0.05***	***0.05***	***0.05***	0.2	0.2	***0.05***	0.3	0.1	0.2	0.3	0.3	0.2	1.5
Indeno(1,2,3-cd)pyrene	***0.05***	***0.05***	0.2	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	0.1	***0.05***	0.2	0.1	0.1	0.2	0.2	0.2	1.4
Total PAH	**1.95**	**1.45**	**3.1**	**2.85**	**2.55**	**1.15**	**1.45**	**0.9**	**2.3**	**2.8**	**2.9**	**1.45**	**2.95**	**1.95**	**2.5**	**3.8**	**5**	**4.2**	**31.65**
POLYCHLORINATED BIPHENYLS (PCB's)		<LOR						<LOR				<LOR							
PHENOLS & CRESOLS		<LOR						<LOR				<LOR							
TOTAL RECOVERABLE HYDROCARBONS		<LOR						<LOR				<LOR							

All results in mg/kg unless stated otherwise

<LOR - All results less than the limits of reporting

<LOR - All results except those listed less than the limits of reporting

* Statistics calculated are of numerical pH not absolute hydrogen ion concentration

** Consult NEPM tables for form of analyte

*** The most stringent auditor criteria was adopted for comparison purposes.

NEPM Health Based A Criteria exceeded

Waste Fill Criteria exceeded

Numbers in bold blue and Italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Sample Number	1RF39-A	1RF40-A	1RF41-A	1RF42-A	1RF43-A	1RF44-A	1RF45-A	1RF46-A	1RF47-A	1RF48-A	1RF49-A	1RF50-A	1RF51-A	1RF52-A	1RF53-A	1RF54-A	1RF55-A	1RF56-A	1RF57-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN03750	06-JN03751	06-JN04249	06-JN04251	06-JN04252	06-JN04253	06-JN05860	06-JN05861	06-JN05862	06-JN05863	06-JN05864	06-JN05865	06-JN05866	06-JN05867	06-JN05868	06-JN05869	06-JN05870	06-JN05871	06-JN05872
MISCELLANEOUS ANALYSES																			
% Moisture	13	8.1	4.2	13	2.6	12	12	11	13	25	15	14	13	16	17	17	12	11	18
Cyanide (total)			< 5										< 5						
pH (units) (1:5 aqueous extract)*	9.3	9.1	8.4	8.9	8.7	9.6	9.1	9	8.8	9.1	9.2	9	9.2	9	9.6	9.4	9.4	8.9	9.5
CHLORINATED HYDROCARBONS			<LOR										<LOR						
HEAVY METALS																			
Antimony	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Arsenic	2.5	3.3	***1***	7.8	***1***	3.1	***1***	3.8	3.9	13	5.6	4.4	3.8	5.1	6.4	4.9	4.3	3.7	5.4
Beryllium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Cadmium	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***
Chromium	17	15	***2.5***	26	***2.5***	11	11	12	13	28	18	20	14	15	16	22	13	13	27
Cobalt	***2.5***	***2.5***	***2.5***	5.6	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	15	***2.5***	5	***2.5***	***2.5***	***2.5***	5.8	***2.5***	***2.5***	5.6
Copper	11	16	***2.5***	44	***2.5***	11	22	22	94	16	15	15	18	17	14	47	23	43	17
Lead	23	32	5.1	84	6.5	18	40	33	40	36	56	26	45	30	31	47	39	49	17
Mercury	***0.05***	***0.05***	***0.05***	0.2	***0.05***	***0.05***	***0.05***	0.7	3	***0.05***	***0.05***	***0.05***	***0.05***	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Molybdenum	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Nickel	6.3	6.3	***2.5***	13	***2.5***	5.3	5.8	6.5	6	10	7.5	8.7	7	7	6.5	9.2	6.5	6.6	12
Selenium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Tin	10	11	***5***	18	***5***	11	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Vanadium	26	22	***5***	40	***5***	24	19	24	22	63	38	30	20	36	45	39	19	20	46
Zinc	23	36	8.7	140	12	28	55	47	69	47	47	41	55	44	43	58	50	55	34
MAH's AROMATIC VOLATILE ORGANICS			<LOR										<LOR						
ORGANOCHLORINE PESTICIDES			<LOR										<LOR						
Aldrin			***0.025***										***0.025***						
Dieldrin			***0.025***										***0.025***						
Chlordane			***0.05***										***0.05***						
POLYNUCLEAR AROMATIC HYDROCARBONS																			
Naphthalene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthylene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluorene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Phenanthrene	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.7	1.2	0.8	***0.05***	0.1	***0.05***	0.9	0.3	0.1	0.3	0.7	0.8	***0.05***
Anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.2	0.3	0.3	***0.05***	***0.05***	***0.05***	0.2	0.1	***0.05***	***0.05***	0.2	0.2	***0.05***
Fluoranthrene	0.8	0.4	***0.05***	0.1	***0.05***	***0.05***	1.3	2	1.6	0.2	0.2	***0.05***	1.8	0.8	0.2	0.5	1.5	1.5	***0.05***
Pyrene	0.9	0.4	***0.05***	0.2	***0.05***	***0.05***	1.3	2	1.6	0.2	0.3	0.1	2	0.8	0.2	0.4	1.1	1.7	***0.05***
Benzo(a)anthracene	0.4	0.2	***0.05***	***0.05***	***0.05***	***0.05***	0.7	1.2	1	0.1	0.1	***0.05***	1	0.4	0.1	0.2	0.6	0.9	***0.05***
Chrysene	0.5	0.2	***0.05***	***0.05***	***0.05***	***0.05***	0.7	1.2	0.9	0.2	0.1	***0.05***	1.1	0.4	0.1	0.2	0.6	0.9	***0.05***
Benzo(b)fluoranthene	0.5	0.3	***0.05***	***0.05***	***0.05***	***0.05***	0.8	1.1	0.8	0.2	0.1	***0.05***	1.3	0.3	***0.05***	0.1	0.5	1.1	***0.05***
Benzo(k)fluoranthene	0.4	0.2	***0.05***	0.1	***0.05***	***0.05***	0.6	0.7	0.8	***0.05***	***0.05***	***0.05***	1	0.3	***0.05***	0.2	0.5	0.7	***0.05***
Benzo(a)pyrene	0.6	0.3	***0.05***	***0.05***	***0.05***	***0.05***	0.9	1.7	1.5	0.2	0.2	***0.05***	1.4	0.4	***0.05***	0.2	0.7	1	***0.05***
Dibenzo(a,h)anthracene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.2	0.2	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	0.1	0.2	***0.05***
Benzo(g,h,i)perylene	0.4	0.3	***0.05***	***0.05***	***0.05***	***0.05***	0.7	1	0.9	0.1	***0.05***	***0.05***	0.8	0.2	***0.05***	***0.05***	0.6	1	***0.05***
Indeno(1,2,3-cd)pyrene	0.3	0.2	***0.05***	***0.05***	***0.05***	***0.05***	0.6	1.1	0.9	0.1	***0.05***	***0.05***	0.7	0.2	***0.05***	***0.05***	0.5	0.7	***0.05***
Total PAH	**5.3**	**2.85**	**0.8**	**1.05**	**0.8**	**0.8**	**8.9**	**13.9**	**11.4**	**1.7**	**1.55**	**0.85**	**12.5**	**4.45**	**1.25**	**2.5**	**7.8**	**10.9**	**0.8**
POLYCHLORINATED BIPHENYLS (PCB's)			<LOR										<LOR						
PHENOLS & CRESOLS			<LOR										<LOR						
TOTAL RECOVERABLE HYDROCARBONS			<LOR										<LOR						

All results in mg/kg unless stated otherwise

<LOR - All results less than the limits of reporting

<LOR - All results except those listed less than the limits of reporting

* Statistics calculated are of numerical pH not absolute hydrogen ion concentration

** Consult NEPM tables for form of analyte

*** The most stringent auditor criteria was adopted for comparison purposes.

NEPM Health Based A Criteria exceeded

Waste Fill Criteria exceeded

Numbers in bold blue and Italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Sample Number	1RF58-A	1RF59-A	1RF60-A	1RF61-A	1RF62-A	1RF63-A	1RF64-A	1RF65-A	1RF66-A	1RF67-A	1RF68-A	1RF69-A	1RF70-A	1RF71-A	1RF72-A	1RF73-A	1RF74-A	1RF75-A	1RF76-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN05873	06-JN05874	06-JN06137	06-JN06138	06-JN06139	06-JN06140	06-JN06141	06-JN06142	06-JN06626	06-JN06627	06-JN06628	06-JL00276	06-JL00277	06-JL00278	06-JL00279	06-JL00280	06-JL00281	06-JL00282	06-JL00283
MISCELLANEOUS ANALYSES																			
% Moisture	17	14	18	15	16	9.8	12	15	15	18	13	13	10	12	10	11	11	19	16
Cyanide (total)				< 5										< 5					
pH (units) (1:5 aqueous extract)*	9.3	8.6	8.9	8.7	9.1	8.9	8.8	9.3	9.1	9.1	8.8	9.1	9.2	9.3	9.2	9.1	9	9.3	9.3
CHLORINATED HYDROCARBONS				<LOR										<LOR					
HEAVY METALS																			
Antimony	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Arsenic	4.9	6	4.1	3.4	4	1.9	2	12	6.2	6	3.3	3.1	***1***	2.4	3.2	3.4	2.9	4.6	5.8
Beryllium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Cadmium	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***
Chromium	25	24	20	20	17	9.6	8.5	18	19	22	14	16	12	16	18	17	19	20	21
Cobalt	5.7	6.2	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	6
Copper	17	20	16	15	13	6.2	6.1	12	10	11	7.9	11	7.6	9.1	11	10	11	11	11
Lead	24	50	22	15	13	***2.5***	6.9	6.8	13	12	6.4	11	8.3	9.3	17	22	11	12	8.2
Mercury	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	0.3	***0.05***	***0.05***	***0.05***
Molybdenum	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***
Nickel	11	11	7.7	8.8	7.3	***2.5***	***2.5***	7.2	7.5	7.9	5.7	6.9	5.1	7.3	6.3	6.2	7.9	7.9	8
Selenium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***
Tin	***5***	12	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	67	22	11	15	***5***
Vanadium	40	44	51	36	46	14	16	86	76	89	32	28	18	18	30	31	30	52	85
Zinc	30	70	26	24	21	10	11	14	18	20	13	16	11	15	21	25	17	19	17
MAH's AROMATIC VOLATILE ORGANICS				<LOR										<LOR					
ORGANOCHLORINE PESTICIDES				<LOR										<LOR					
Aldrin				***0.025***										***0.025***					
Dieldrin				***0.025***										***0.025***					
Chlordane				***0.05***										***0.05***					
POLYNUCLEAR AROMATIC HYDROCARBONS																			
Naphthalene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthylene	***0.05***	***0.05***	***0.05***	0.9	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Acenaphthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluorene	***0.05***	***0.05***	***0.05***	0.3	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Phenanthrene	0.1	0.1	***0.05***	6	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.2	0.3
Anthracene	***0.05***	***0.05***	***0.05***	0.9	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Fluoranthrene	0.3	0.7	***0.05***	10	0.6	***0.05***	0.1	***0.05***	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	0.3	0.3
Pyrene	0.3	0.7	***0.05***	8.8	0.6	***0.05***	0.1	***0.05***	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	0.1	***0.05***	0.3	0.3
Benzo(a)anthracene	0.1	0.4	***0.05***	5.1	0.2	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Chrysene	0.2	0.6	***0.05***	3.8	0.3	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	0.1
Benzo(b)fluoranthene	0.2	0.5	***0.05***	4.4	0.2	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***
Benzo(k)fluoranthene	0.1	0.4	***0.05***	2.8	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***
Benzo(a)pyrene	0.2	0.5	***0.05***	5.9	0.3	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Dibenzo(a,h)anthracene	***0.05***	***0.05***	***0.05***	0.7	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Benzo(g,h,i)perylene	***0.05***	0.3	***0.05***	2.9	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Indeno(1,2,3-cd)pyrene	***0.05***	0.3	***0.05***	2.6	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***
Total PAH	**1.9**	**4.8**	**0.8**	**55.2**	**3.1**	**0.8**	**0.9**	**0.8**	**1.3**	**0.8**	**0.8**	**0.8**	**0.8**	**0.8**	**0.9**	**0.9**	**0.8**	**1.55**	**1.6**
POLYCHLORINATED BIPHENYLS (PCB's)				<LOR										<LOR					
PHENOLS & CRESOLS				<LOR										<LOR					
TOTAL RECOVERABLE HYDROCARBONS				<LOR										<LOR					

All results in mg/kg unless stated otherwise

<LOR - All results less than the limits of reporting

<LOR - All results except those listed less than the limits of reporting

* Statistics calculated are of numerical pH not absolute hydrogen ion concentration

** Consult NEPM tables for form of analyte

*** The most stringent auditor criteria was adopted for comparison purposes.

NEPM Health Based A Criteria exceeded

Waste Fill Criteria exceeded

Numbers in bold blue and Italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Sample Number	1RF77-A	1RF78-A	1RF79-A	1RF80-A	1RF81-A	1RF82-A	1RF83-A	1RF84-A	1RF85-A	1RF86-A	1RF87-A	1RF88-A	1RF89-A	1RF90-A	**STATISTICS**					**NEPM**		
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material								
Laboratory Number	06-JL00284	06-JL00285	06-JL00286	06-JL00287	06-JL00288	06-JL00289	06-JL00290	06-JL00291	06-JL00292	06-JL00293	06-JL00294	06-JL00295	06-JL00296	06-JL00297						HIL A	HIL D	EIL
MISCELLANEOUS ANALYSES															Count	Max	Mean	Std Dev	95% UCL			
% Moisture	18	19	16	16	17	21	21	16	14	17	13	13	13	16								
Cyanide (total)					< 5															250**	1000**	
pH (units) (1:5 aqueous extract)*	9.4	8.9	9	8.9	8.9	9.1	9	8.9	9.2	9	8.9	8.8	9	9	90	9.6	9.2	0.2	9.2			
CHLORINATED HYDROCARBONS					<LOR																	
HEAVY METALS																						
Antimony	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	90	11	5.1	0.6	5.2			
Arsenic	3.3	4.9	3	5.8	4	5.1	4.6	3.6	4	4.5	3.2	3.7	3.4	3.2	90	18	5.1	3.4	5.9	100	400	20
Beryllium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	90	1	1.0	0.0	-	20	80	
Cadmium	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	***0.25***	90	0.5	0.3	0.0	0.3	20	80	3
Chromium	21	23	17	21	19	22	19	20	16	18	16	18	17	13	90	28	17.0	4.4	17.9	100**	400**	1**
Cobalt	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	***2.5***	6.5	***2.5***	***2.5***	***2.5***	***2.5***	90	15	3.0	1.7	3.4	100	400	
Copper	11	19	11	21	31	22	18	29	13	13	11	13	13	9.3	90	94	18.2	11.9	20.7	1,000	4,000	100
Lead	12	140	17	48	86	54	29	50	15	19	18	20	17	8.9	90	200	38.7	33.7	45.7	300	1,200	600
Mercury	***0.05***	0.2	***0.05***	0.3	0.1	***0.05***	0.1	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	90	3	0.1	0.3	0.2	15**	60**	1**
Molybdenum	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	***5***	90	14	5.4	1.8	5.8			
Nickel	7.4	9.1	7.4	7.5	7.8	8.1	7.7	8.3	7	7.5	7	7.4	7	5.8	90	13	7.3	1.8	7.7	600	2,400	60
Selenium	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	***1***	90	11	1.5	2.1	1.9			
Tin	***5***	22	***5***	17	11	16	13	10	***5***	***5***	***5***	***5***	***5***	***5***	90	110	13.3	19.2	17.2			
Vanadium	39	43	26	54	30	43	39	30	31	36	29	32	29	26	90	89	32.9	15.7	36.2			50
Zinc	21	53	19	75	48	120	38	64	55	31	26	28	33	15	90	280	56.0	46.4	65.5	7,000	28,000	200
MAH's AROMATIC VOLATILE ORGANICS					<LOR																	
ORGANOCHLORINE PESTICIDES					<LOR																	
Aldrin					***0.025***										10	0.17	0.1	0.0	0.1	10	40	
Dieldrin					***0.025***										10	0.1	0.0	0.0	0.0			
Chlordane					***0.05***										10	0.5	0.1	0.1	0.2	50	200	
POLYNUCLEAR AROMATIC HYDROCARBONS																						
Naphthalene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	90	0.2	0.1	0.0	0.1			
Acenaphthylene	***0.05***	0.2	***0.05***	***0.05***	0.2	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	90	0.9	0.1	0.1	0.1			
Acenaphthene	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	90	0.05	0.0	0.0	0.0			
Fluorene	***0.05***	0.1	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	90	0.3	0.1	0.0	0.1			
Phenanthrene	***0.05***	3.6	1	0.4	1.2	0.5	0.6	0.2	0.2	0.3	***0.05***	***0.05***	***0.05***	0.3	90	6	0.3	0.8	0.5			
Anthracene	***0.05***	0.7	0.3	0.1	0.2	0.1	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	90	0.9	0.1	0.1	0.1			
Fluoranthrene	***0.05***	3.7	1.7	0.6	1.3	1	0.7	0.4	0.4	0.7	0.2	0.2	0.2	0.5	90	10	0.7	1.3	0.9			
Pyrene	***0.05***	3.6	1.8	0.6	1.2	1	0.8	0.4	0.4	0.7	0.2	0.2	0.2	0.4	90	8.8	0.6	1.2	0.9			
Benzo(a)anthracene	***0.05***	1.1	0.7	0.2	0.5	0.5	0.3	0.2	0.2	0.4	0.1	0.1	0.1	0.2	90	5.1	0.3	0.7	0.5			
Chrysene	***0.05***	1.1	0.7	0.3	0.5	0.5	0.3	0.2	0.2	0.4	0.1	0.1	0.1	0.2	90	3.8	0.3	0.5	0.4			
Benzo(b)fluoranthene	***0.05***	0.9	0.6	0.3	0.5	0.4	0.3	0.2	0.2	0.3	0.2	0.1	0.1	0.2	90	4.4	0.3	0.6	0.4			
Benzo(k)fluoranthene	***0.05***	0.8	0.4	0.2	0.6	0.4	0.3	0.2	0.2	0.4	0.2	0.2	0.1	0.2	90	2.8	0.3	0.4	0.3			
Benzo(a)pyrene	***0.05***	1	0.6	0.3	0.7	0.5	0.3	0.2	0.3	0.5	0.2	0.2	0.2	0.2	90	5.9	0.4	0.7	0.5	1	4	
Dibenzo(a,h)anthracene	***0.05***	***0.05***	***0.05***	***0.05***	0.1	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	***0.05***	90	0.7	0.1	0.1	0.1			
Benzo(g,h,i)perylene	***0.05***	0.4	0.3	***0.05***	0.4	0.2	0.2	0.2	0.2	0.2	0.1	***0.05***	***0.05***	0.1	90	2.9	0.2	0.4	0.3			
Indeno(1,2,3-cd)pyrene	***0.05***	0.4	0.3	***0.05***	0.3	0.2	0.2	***0.05***	0.1	0.2	***0.05***	***0.05***	***0.05***	***0.05***	90	2.6	0.2	0.3	0.3			
Total PAH	**0.8**	**17.75**	**8.65**	**3.35**	**7.9**	**5.55**	**4.35**	**2.55**	**2.7**	**4.4**	**1.7**	**1.55**	**1.45**	**2.65**	**90**	**55.2**	**4.1**	**7.1**	**5.5**	**20**	**80**	
POLYCHLORINATED BIPHENYLS (PCB's)					<LOR																	
PHENOLS & CRESOLS					<LOR																	
TOTAL RECOVERABLE HYDROCARBONS					<LOR																	

All results in mg/kg unless stated otherwise

<LOR - All results less than the limits of reporting

<LOR - All results except those listed less than the limits of reporting

* Statistics calculated are of numerical pH not absolute hydrogen ion concentration

** Consult NEPM tables for form of analyte

*** The most stringent auditor criteria was adopted for comparison purposes.

NEPM Health Based A Criteria exceeded

Waste Fill Criteria exceeded

Numbers in bold blue and Italics represent values which were less than the limits of reporting but have been inserted as half the reporting value for calculation of statistics

Reused Material TCLP Summary

Sample Number	1RF2-A	1RF2-A	1RF4-A	1RF4-A	1RF6-A	1RF6-A	1RF8-A	1RF8-A	1RF10-A	1RF10-A	1RF12-A	1RF12-A	1RF14-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN02476	06-JN02483	06-JN02477	06-JN02484	06-JN02478	06-JN02485	06-JN02479	06-JN02486	06-JN02480	06-JN02487	06-JN02481	06-JN02488	06-JN02482
pH at which TCLP was undertaken	7	9	7	9	7	9	7	9	7	9	7	9	7
HEAVY METALS													
Antimony	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Arsenic	0.03	0.03	0.04	0.04	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.03	0.01
Beryllium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Cobalt	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	***0.005***	***0.005***	***0.005***	0.06	0.05	0.04	0.04	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.04
Lead	***0.005***	0.01	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.02	***0.005***	***0.005***
Mercury	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Molybdenum	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tin	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	***0.025***	0.06	***0.025***	***0.025***	***0.025***	***0.025***	0.11	0.11	0.08	0.08	***0.025***	***0.025***	***0.025***
Zinc	0.03	0.06	0.01	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.04	***0.005***	0.01
POLYNUCLEAR AROMATIC HYDROCARBONS													
Naphthalene	***0.0025***	***0.0005***	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***	0.001	***0.0025***	***0.0005***	***0.0025***	***0.0005***	***0.0025***
Acenaphthylene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Acenaphthene	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***
Fluorene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Phenanthrene	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***	0.001	***0.0025***	***0.00025***	***0.0025***	***0.00025***	***0.0025***
Anthracene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Fluoranthrene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Pyrene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Benzo(a)anthracene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Chrysene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Benzo(b)fluoranthene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Benzo(k)fluoranthene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Benzo(a)pyrene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Dibenzo(a,h)anthracene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Benzo(g,h,i)perylene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Indeno(1,2,3-cd)pyrene	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005
Total PAH	**0.014**	**0.0075**	**0.014**	**0.00725**	**0.014**	**0.00725**	**0.014**	**0.00875**	**0.014**	**0.0075**	**0.014**	**0.0075**	**0.014**
All results in mg/L unless stated otherwise													
Numbers in bold blue and Italics represent values													
which were less than the limits of reporting but have													
been inserted as half the reporting value for calculation													
of statistics													

Sample Number	1RF14-A	1RF16-A	1RF16-A	1RF18-A	1RF18-A	1RF20-A	1RF20-A	1RF22-A	1RF22-A	1RF24-A	1RF24-A	1RF26-A	1RF26-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN02489	06-JN03148	06-JN03156	06-JN03149	06-JN03157	06-JN03150	06-JN03158	06-JN03151	06-JN03159	06-JN03152	06-JN03160	06-JN03153	06-JN03161
pH at which TCLP was undertaken	9	7	9	7	9	7	9	7	9	7	9	7	9
HEAVY METALS													
Antimony	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Arsenic	0.01	0.03	0.02	0.04	0.02	0.02	0.02	0.03	0.03	0.04	0.03	0.01	***0.005***
Beryllium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Cobalt	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	***0.005***	0.04	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Lead	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Mercury	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Molybdenum	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tin	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	***0.025***	0.11	***0.025***	0.06	0.05	0.06	***0.025***	0.14	***0.025***	***0.025***	***0.025***	0.06	0.06
Zinc	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
POLYNUCLEAR AROMATIC HYDROCARBONS													
Naphthalene	***0.0005***	***0.0001***	***0.0005***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0005***	***0.0005***	***0.0001***	***0.00025***	***0.0001***	***0.0005***
Acenaphthylene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Acenaphthene	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***
Fluorene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Phenanthrene	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0001***	***0.00025***
Anthracene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Fluoranthrene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Pyrene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Benzo(a)anthracene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Chrysene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Benzo(b)fluoranthene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Benzo(k)fluoranthene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Benzo(a)pyrene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Dibenzo(a,h)anthracene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Benzo(g,h,i)perylene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Indeno(1,2,3-cd)pyrene	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0005
Total PAH	**0.0075**	**0.0068**	**0.0075**	**0.0068**	**0.00725**	**0.0068**	**0.00725**	**0.0072**	**0.0075**	**0.0068**	**0.00725**	**0.0068**	**0.0075**
All results in mg/L unless stated otherwise													
Numbers in bold blue and Italics represent values													
which were less than the limits of reporting but have													
been inserted as half the reporting value for calculation													
of statistics													

Sample Number	1RF28-A	1RF28-A	1RF30-A	1RF30-A	1RF32-A	1RF32-A	1RF34-A	1RF34-A	1RF36-A	1RF36-A	1RF38-A	1RF38-A	1RF40-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN03154	06-JN03162	06-JN03155	06-JN03163	06-JN03446	06-JN03443	06-JN03447	06-JN03444	06-JN03448	06-JN03445	06-JN03754	06-JN03752	06-JN03755
pH at which TCLP was undertaken	7	9	7	9	7	9	7	9	7	9	7	9	7
HEAVY METALS													
Antimony	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Arsenic	***0.005***	***0.005***	0.02	0.01	0.01	0.02	0.02	0.01	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Beryllium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Cobalt	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.04	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Lead	***0.005***	***0.005***	0.02	0.01	0.02	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Mercury	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Molybdenum	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tin	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Zinc	***0.005***	***0.005***	0.01	0.01	0.02	***0.005***	***0.005***	0.02	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
POLYNUCLEAR AROMATIC HYDROCARBONS													
Naphthalene	***0.0001***	***0.00025***	***0.0005***	***0.00025***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0001***	***0.0005***
Acenaphthylene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Acenaphthene	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0001***	***0.0001***	***0.0001***
Fluorene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Phenanthrene	***0.0001***	***0.00025***	***0.0001***	***0.00025***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0001***	***0.0001***	***0.0001***
Anthracene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Fluoranthrene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Pyrene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Benzo(a)anthracene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Chrysene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Benzo(b)fluoranthene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Benzo(k)fluoranthene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Benzo(a)pyrene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Dibenzo(a,h)anthracene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Benzo(g,h,i)perylene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Indeno(1,2,3-cd)pyrene	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0002	< 0.0002	< 0.0002
Total PAH	**0.0068**	**0.00725**	**0.0072**	**0.00725**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.0072**	**0.0068**	**0.0072**
All results in mg/L unless stated otherwise													
Numbers in bold blue and Italics represent values													
which were less than the limits of reporting but have													
been inserted as half the reporting value for calculation													
of statistics													

Sample Number	1RF40-A	1RF42-A	1RF42-A	1RF44-A	1RF44-A	1RF46-A	1RF46-A	1RF48-A	1RF48-A	1RF50-A	1RF50-A	1RF52-A	1RF52-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN03753	06-JN04256	06-JN04254	06-JN04257	06-JN04255	06-JN05882	06-JN05875	06-JN05883	06-JN05876	06-JN05884	06-JN05877	06-JN05885	06-JN05878
pH at which TCLP was undertaken	9	7	9	7	9	7	9	7	9	7	9	7	9
HEAVY METALS													
Antimony	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Arsenic	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.02	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Beryllium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Cobalt	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Lead	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Mercury	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.002	***0.0005***	***0.0005***	***0.0005***	0.04	***0.0005***	***0.0005***
Molybdenum	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tin	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	***0.025***	***0.025***	***0.025***	0.13	0.15	***0.025***	***0.025***	0.08	***0.025***	***0.025***	***0.025***	0.05	***0.025***
Zinc	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.02	0.07	***0.005***
POLYNUCLEAR AROMATIC HYDROCARBONS													
Naphthalene	***0.0001***	***0.0001***	***0.0005***	***0.0001***	***0.0001***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.008	***0.0005***	0.011
Acenaphthylene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthene	***0.0001***	***0.0001***	***0.0001***	***0.0001***	***0.0001***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Fluorene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	***0.0001***	***0.0001***	***0.0001***	***0.0001***	***0.0001***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Anthracene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthrene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH	**0.0068**	**0.0068**	**0.0072**	**0.0068**	**0.0068**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.0155**	**0.008**	**0.0185**
All results in mg/L unless stated otherwise													
Numbers in bold blue and Italics represent values													
which were less than the limits of reporting but have													
been inserted as half the reporting value for calculation													
of statistics													

Sample Number	1RF54-A	1RF54-A	1RF56-A	1RF56-A	1RF58-A	1RF58-A	1RF60-A	1RF60-A	1RF62-A	1RF62-A	1RF64-A	1RF64-A	1RF66-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN05886	06-JN05879	06-JN05887	06-JN05880	06-JN05888	06-JN05881	06-JN06147	06-JN06144	06-JN06148	06-JN06145	06-JN06149	06-JN06146	06-JN06631
pH at which TCLP was undertaken	7	9	7	9	7	9	7	9	7	9	7	9	7
HEAVY METALS													
Antimony	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Arsenic	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Beryllium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.02	***0.005***	***0.005***
Cobalt	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Lead	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Mercury	***0.0005***	0.043	***0.0005***	***0.0005***	***0.0005***	0.051	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.0025***
Molybdenum	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tin	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	0.05	0.09	0.08	0.1	0.09	0.07	***0.025***	0.42
Zinc	***0.005***	0.01	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.02	0.03	***0.005***	***0.005***
POLYNUCLEAR AROMATIC HYDROCARBONS													
Naphthalene	0.011	***0.0005***	0.006	***0.0005***	0.003	0.013	***0.0005***	***0.0005***	0.004	***0.0005***	0.007	***0.0005***	***0.0005***
Acenaphthylene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthene	0.001	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Fluorene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH	**0.019**	**0.008**	**0.0135**	**0.008**	**0.0105**	**0.0205**	**0.008**	**0.008**	**0.0115**	**0.008**	**0.0145**	**0.008**	**0.008**
All results in mg/L unless stated otherwise													
Numbers in bold blue and Italics represent values													
which were less than the limits of reporting but have													
been inserted as half the reporting value for calculation													
of statistics													

Sample Number	1RF66-A	1RF68-A	1RF68-A	1RF70-A	1RF70-A	1RF72-A	1RF72-A	1RF74-A	1RF74-A	1RF76-A	1RF76-A	1RF78-A	1RF78-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JN06629	06-JN06632	06-JN06630	06-JL00310	06-JL00299	06-JL00311	06-JL00300	06-JL00312	06-JL00301	06-JL00313	06-JL00302	06-JL00314	06-JL00303
pH at which TCLP was undertaken	9	7	9	7	9	7	9	7	9	7	9	7	9
HEAVY METALS													
Antimony	***0.025***	***0.025***	***0.025***	***0.025***	0.15	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Arsenic	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Beryllium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Cobalt	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Lead	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Mercury	***0.0025***	***0.0025***	***0.0025***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***
Molybdenum	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tin	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	0.32	0.07	0.08	0.07	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	0.21	0.17	***0.025***	***0.025***
Zinc	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.01	0.01	0.01	***0.005***	0.01	***0.005***	0.03	***0.005***
POLYNUCLEAR AROMATIC HYDROCARBONS													
Naphthalene	***0.0005***	***0.0005***	***0.0005***	***0.0005***	0.002	***0.0005***	0.004	***0.0005***	0.001	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Acenaphthylene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthene	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Fluorene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH	**0.008**	**0.008**	**0.008**	**0.008**	**0.0095**	**0.008**	**0.0115**	**0.008**	**0.0085**	**0.008**	**0.008**	**0.008**	**0.008**
All results in mg/L unless stated otherwise													
Numbers in bold blue and Italics represent values													
which were less than the limits of reporting but have													
been inserted as half the reporting value for calculation													
of statistics													

Sample Number	1RF80-A	1RF80-A	1RF82-A	1RF82-A	1RF84-A	1RF84-A	1RF86-A	1RF86-A	1RF88-A	1RF88-A	1RF90-A	1RF90-A
Material Type	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material	Reuse Material
Laboratory Number	06-JL00315	06-JL00304	06-JL00316	06-JL00305	06-JL00317	06-JL00306	06-JL00318	06-JL00307	06-JL00319	06-JL00308	06-JL00320	06-JL00309
pH at which TCLP was undertaken	7	9	7	9	7	9	7	9	7	9	7	9
HEAVY METALS												
Antimony	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***
Arsenic	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Beryllium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Cobalt	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Copper	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Lead	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***
Mercury	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***
Molybdenum	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Selenium	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tin	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	***0.025***	0.07	0.06	***0.025***	***0.025***	***0.025***
Zinc	0.01	0.02	***0.005***	0.02	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	***0.005***	0.04
POLYNUCLEAR AROMATIC HYDROCARBONS												
Naphthalene	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Acenaphthylene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthene	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Fluorene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***	***0.0005***
Anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b)fluoranthene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibenzo(a,h)anthracene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g,h,i)perylene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1,2,3-cd)pyrene	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**
All results in mg/L unless stated otherwise												
Numbers in bold blue and Italics represent values												
which were less than the limits of reporting but have												
been inserted as half the reporting value for calculation												
of statistics												

Sample Number **Material Type** **Laboratory Number**	**STATISTICS**				
pH at which TCLP was undertaken	Count	Max	Mean	Std Dev	95% UCL
HEAVY METALS					
Antimony	90	0.15	0.03	0.0	0.0
Arsenic	90	0.04	0.01	0.01	0.01
Beryllium					-
Cadmium					
Chromium	90	0.02	0.01	0.00	0.01
Cobalt					
Copper	90	0.06	0.01	0.01	0.01
Lead	90	0.02	0.01	0.00	0.01
Mercury	90	0.051	0.00	0.01	0.01
Molybdenum					
Nickel					
Selenium					
Tin					
Vanadium	90	0.42	0.05	0.06	0.07
Zinc	90	0.07	0.01	0.01	0.01
POLYNUCLEAR AROMATIC HYDROCARBONS					
Naphthalene	90	0.013	0.0	0.0	0.0
Acenaphthylene					
Acenaphthene	90	0.0025	0.0	0.0	0.0
Fluorene					
Phenanthrene	90	0.0025	0.0	0.0	0.0
Anthracene					
Fluoranthrene					
Pyrene					
Benzo(a)anthracene					
Chrysene					
Benzo(b)fluoranthene					
Benzo(k)fluoranthene					
Benzo(a)pyrene					
Dibenzo(a,h)anthracene					
Benzo(g,h,i)perylene					
Indeno(1,2,3-cd)pyrene					
Total PAH	**90**	**0.0205**	**0.0**	**0.0**	**0.0**
All results in mg/L unless stated otherwise					
Numbers in bold blue and Italics represent values					
which were less than the limits of reporting but have					
been inserted as half the reporting value for calculation					
of statistics					

13 May 2024

State Assessment
Planning & Land Use Services
Department for Trade and Investment

DEVELOPMENT NUMBER: **22037672**
APPLICANT: **108 Franklin Pty Ltd C/- Future Urban Pty Ltd**
NATURE OF DEVELOPMENT: **Construction of a twenty-nine-level mixed-use building comprising residential apartments, tourist accommodation, shops, and offices**
ADDRESS: **108-112A FRANKLIN ST ADELAIDE SA 5000**

The application has been assessed and the development at a. approx. height of RL 145.550m Australian Height Datum (AHD) the application **will** penetrate the Adelaide Airport Obstacle Limitation surfaces (OLS) which is protected airspace for aircraft operations.

The application will require approval in accordance with the Airports Act 1996 and the Airports (Protection of Airspace) Regulations 1996 with final approval by the Department of Infrastructure, Transport, Regional Development, Communication and the Arts.

The developments will penetrate the OLS by approximately 58 metres.

The airport will not object to the development.

If the development is approved by the Department of Infrastructure, Transport, Regional Development, Communication and the Arts any associated lighting would also need to conform to the airport lighting restrictions and shielded from aircraft flight paths.

Crane operations associated with construction, if approved, will also be subject to a separate application.

Should you require any additional information or wish to discuss this matter further please contact the undersigned on 8308 9245.

Yours sincerely,

Brett Eaton
Airside Manager
Adelaide Airport Limited

Adelaide Airport

Adelaide Airport Limited
1 James Schofield Drive
Adelaide Airport
South Australia 5950

T +61 8 8308 9211
F +61 8 8308 9311
adelaideairport.com.au
ABN 78 075 176 653

Environment Protection Authority
GPO Box 2607 Adelaide SA 5001
211 Victoria Square Adelaide SA 5000
T (08) 8204 2004
Country areas 1800 623 445

EPA Reference: PDI 839

2 April 2024

Damon Huntley
State Planning Commission
GPO Box 1815
Adelaide

Damon.Huntley@sa.gov.au

Dear Damon Huntley

EPA Development Application Referral Response

Development Application Number	**23037672**
Applicant	**108 Franklin Pty Ltd C/-Future Urban Pty Ltd**
Location	**108-112a Franklin Street, Adelaide**
Proposal	**Construction of a twenty-nine-level mixed-use building comprising residential apartments, tourist accommodation, shops, and offices**

This application was referred to the Environment Protection Authority (EPA) by the State Planning Commission in accordance with section 122 of the *Planning, Development and Infrastructure Act 2016*, Schedule 9(3) (9A) of the *Planning, Development and Infrastructure (General) Regulations 2017* and Part 9.1 of the *Planning and Design Code*.

The following response is provided in accordance with section 122(5)(b)(ii) of the Planning, Development and Infrastructure Act.

PROPOSAL

The application proposes a change in the use of land to a more sensitive use as determined by the relevant authority in accordance with the *State Planning Commission Practice Direction 14 (Site Contamination Assessment) 2021* ('Practice Direction 14').

The *Site Contamination Declaration Form* (SCDF) submitted with the development application (prepared by Ashley Moule of A.M. Environmental Consulting Pty Ltd and dated 18 September 2023) identifies site contamination exists or may exist (for the purposes of planning consent) as a result of multiple potentially contaminating activities (PCAs) on and off-site. No specific PCAs were listed instead the reader is referred to Appendix 2 of the *Preliminary Site Investigation* (PSI) report as referenced below.

The EPA has undertaken a review of the following site contamination information provided with the development application referral:

- *Preliminary Site Investigation (site history, results from screening level soil and soil vapour) 108-122 Franklin Street Adelaide* dated 18 September 2023 prepared by A.M. Environmental Consulting Pty Ltd (the PSI report).

It is noted the address for the site is 108-112a Franklin Street, Adelaide and was incorrectly referenced in the title of the PSI report above.

The EPA has reviewed and considered the above report / reports taking into account the relevant guidance provided in the *National Environment Protection (Assessment of site contamination) Measure 1999* and relevant EPA guidelines.

SITE CONTAMINATION ASSESSMENT

The purpose of this referral is to ensure that an appropriate and proportionate assessment of site contamination occurs to ensure land is suitable, or can be made suitable, for the proposed use. Through the referral, the EPA provides direction to the relevant authority on whether they must consider the advice of either a site contamination consultant or a site contamination auditor regarding site suitability.

The EPA's *Site contamination referral decision-making framework* describes how the EPA makes decisions on referred development applications and outlines the preconditions which must exist for a site contamination audit ('audit').

The EPA notes the following in relation to the reviewed information:

- On the SCDF only an incorrect street address was used to reference the site, with no Certificates of Title referenced to define the site boundary.
- No specific PCAs were identified and described in detail on the SCDF or within the PSI report. Based on review of Appendix B of the PSI report, it was determined that printing works, tyre manufacture or retreading, service station, metal forging and motor vehicle repair or maintenance are considered PCAs relevant to the site, comprising both Class 1 and Class 2 PCAs in accordance with *Practice Direction 14*. The printing works appear to have occurred for the longest duration, likely operating from the 1920s to 1980s.
- Concentrations of benzo(a)pyrene have been identified in soil at the site subject to the development application in concentrations above relevant health-based criteria.
- Due to limited information provided around the relevant PCAs on-site within the PSI report some contaminates of potential concern were not analysed in soils as would be expected (i.e. per- and polyfluoroalkyl substances and a broader screen of solvents in soils). In addition, limited discussion of former site layouts and locations of occupants have resulted in insufficient assessment laterally across the site. Where an assessor is unable to reliably identify specific areas of likely contamination, systematic and grid-based sampling should be undertaken.
- No soil samples were analysed on the southeastern portion (CT 5980/624) of the site which was occupied by the publishers and a tyre retreading business (both class 1 PCAs). In addition, aerial images indicated this portion of the site was developed around 1949 with bare earth exposed at this time.
- Consideration has not been given to the extent of the proposed excavations to accommodate for the 4.5 m deep elevator pits. There are potential vapour intrusion risks associated with post-

development occupants acting as receptors and construction workers during site development which have not been assessed. Soil samples analysed extended to a maximum depth of 0.4 m below ground level. This should be addressed in future sampling programs and updated in the Conceptual Site Model.
- Although a soil vapour assessment was completed, this was only to an extent of 1 m BGL. This does not accommodate for potential vapour risks associated with the elevator shafts at a maximum depth of 4.5 m BGL. Furthermore, a raised laboratory limit of reporting was adopted for vinyl chloride which is above the Health Investigation Levels Residential A/B criteria, potentially masking any risk vinyl chloride may pose.
- Multiple inconsistencies were identified within the quality assurance and control of the data. No soil vapour duplicates were analysed, no intra-laboratory duplicate was analysed for soils, relative percentage difference calculations between the primary and inter-laboratory soil duplicate was not presented and the inter-laboratory duplicate was only sampled for a limited number of analytes when compared to its primary sample.

CONCLUSION

While it is recognised there remain inconsistencies and deviations from the national industry guidance described in the ASC NEPM and relevant EPA guidelines as highlighted above, the EPA is of the opinion that the information provides a minimum level of the required information to reasonably demonstrate the site can be made suitable for the proposed use, subject to a statement of site suitability.

Based on the available information, the EPA is reasonably satisfied it has been demonstrated the preconditions for audit have been met based on the proposed land use taking into account:

- the risk class of the PCAs identified at the site
- the multiple Class 1 PCAs identified at the site
- the length of time the PCAs have occurred on the site
- the suspected site contamination at the site
- the likelihood of realistic human health exposure pathways for the proposed sensitive use
- the likely need for remediation to mitigate exposure risk for the proposed sensitive use.

The EPA is reasonably satisfied, taking into account the known information including:
- the site's history
- the types of potentially contaminating activities undertaken on-site and adjacent to the site, and
- the nature of associated chemical substances and their behaviour in the environment,

that by undertaking and completing the site contamination audit, a site contamination auditor will be able to confirm the suitability of the site for the proposed land use in a site contamination audit report.

DIRECTION

The relevant authority is directed to attach the following conditions to any approval:

1. A certificate of occupancy must not be granted in relation to a building on the relevant site until a statement of site suitability is issued by a site contamination auditor certifying the land is suitable for the proposed use and informed by a completed site contamination audit report prepared in accordance with Part 10A of the *Environment Protection Act 1993*.

2. If a certificate of occupancy is not required pursuant to regulation 103 of the *Planning, Development and Infrastructure (General) Regulations 2017*, a person must not occupy the

building for the purpose authorised under the development approval until a statement of site suitability is issued by a site contamination auditor certifying the land is suitable for the proposed use and informed by a completed site contamination audit report prepared in accordance with Part 10A of the *Environment Protection Act 1993*.

The following note provides important information in relation to the development and is requested to be included in any approval:

- The applicant/owner/operator are reminded of its general environmental duty, as required by section 25 of the *Environment Protection Act 1993*, to take all reasonable and practicable measures to ensure that activities on the site and associated with the site (including during construction) do not pollute the environment in a way which causes or may cause environmental harm.

If you have any questions about this response, please contact Niall Stephen on 8204 2078 or Niall.stephen@sa.gov.au .

Yours faithfully

Hayley Riggs
Delegate
ENVIRONMENT PROTECTION AUTHORITY

OFFICE FOR DESIGN + ARCHITECTURE SA

File No:
2022/07980/01

Ref No:
22186660

25 September 2024

Damon Huntley
Planning Officer
Planning and Land Use Services
Department for Housing and Urban Development
Level 10, 83 Pirie Street
Adelaide SA 5000

Damon.Huntley@sa.gov.au

For the attention of the State Commission Assessment Panel

108 Franklin Street, Adelaide – re-referral

The following advice is in relation to Development Application 23037672. In my capacity as a referral body for advice, I would like to offer the following comments for your consideration. This letter supersedes the previous referral response, dated 20 May 2024.

The proposal was presented at two Design Review sessions. A two-tower scheme was presented at the first Design Review session in mid-2022. Following a pause in the process, the scheme was amended to a single-tower scheme, which was presented to the second Design Review session, and then lodged for planning application. Following completion of the original referral advice, the scheme has been amended as a two-tower scheme and re-submitted.

The proposal is for a mixed-use development comprising commercial tenancies, restaurant, residential apartments, hotel and associated functions and amenities, and above ground car parking.

A project of this scale has a responsibility to deliver an exemplary outcome in terms of public realm contribution, built form composition, architectural expression, materiality and residential amenity. In my view, the proposal would benefit from further refinement of the built form composition and articulation, and review of the street interface conditions including level transition arrangements to achieve an optimum outcome.

Site Context
The 2,112 square metre site is long and narrow with an approximately 21 metre wide frontage to Franklin Street and approximately 99 metre long frontage to Cannon and Tatham Streets. The side streets are both one-way with narrow footpaths and parallel car parking.

The site currently contains the former Publisher's Hotel and red brick warehouse buildings, which are proposed to be demolished. I understand that structural investigations have been undertaken that indicate retention of the warehouse facades is not feasible. Federation Trading, a Local Heritage Place (LHP), adjoins the site to the north fronting Waymouth Street.

Level 1
26-28 Leigh Street
Adelaide SA 5000

GPO Box 1533
Adelaide SA 5001

T- +61(0)8 7133 3235
E- odasa@sa.gov.au

Government of South Australia

OFFICE FOR DESIGN + ARCHITECTURE SA

File No:
2022/07980/01

Ref No:
22186660

A previously approved scheme from 2020 exists on the subject site for the construction of two towers above a 12 metre tall common podium, for a hotel and serviced apartments with ancillary retail and car parking (designed with a car stacker system). The approved height of the previous scheme is 68 metres (68 metre tall north tower and 66 metre tall south tower, separated by 7.65 metres).

Building Height and Built Form Composition

The proposal includes a five storey (approximately 18.5 metre) tall podium that comprises a two storey lower podium and three storey upper podium, contrasted by materiality. The southern end of the upper podium is expressed as a two storey element, with level four proposed with set back fully glazed walling to provide a clear articulation between the podium and the tower form above. The combined podium form extends to the site boundaries, with the exception of an approximately 0.8 metres setback along the Cannon Street frontage. The height of the combined podium has been reduced from seven to five storeys as part of the most recent amendments. The 17 storey north tower is set back approximately three metres from the north boundary. The angulated facade treatments of the 13 storey south tower extend beyond the Franklin Street boundary by maximum of 0.6 metres. Two towers are separated by 9.95 metres. A full height recess on the western elevation of the north tower allows for a construction crane. The overall building height is 74 metres (22 levels) for the north tower and approximately 60 metres (18 levels) for the south tower. This is a departure from the 53 metre height limit envisaged for this site, however the height has been significantly reduced from 101.8 metres (29 levels) of the originally lodged single tower scheme.

I acknowledge precedents exist for approved developments exceeding 53 metres in this locality, including a 68 metre tall previously approved development on this site. I also acknowledge the site's proximity to the unlimited height zone, and the project intent to satisfy the overheight policy provision. While I continue to find the proposed building scale challenging for the site due to the narrow laneway conditions, I support the proposed built form composition on balance, for the following reasons:

- relative consistency with the previously approved two-tower scheme, with increased separation between the towers
- reduction of the podium height to five storeys
- legible height difference between two towers.

However, I recommend review of the following aspects of the built form composition, with the view to further reduce the detrimental impacts of the bulk and massing of the proposal:

- provision of the above podium setback from the side (Cannon Street and Tatham Street) boundaries (north tower)
- improved built form articulation between the lower and upper podium sections.

Ground Plane and Public Realm

The ground floor comprises commercial tenancies, hotel waiting area and residential entry to the Franklin and Cannon Street frontages. The Cannon Street frontage is proposed to be set back by approximately 0.8 metres to increase the effective width of the footpath with the view to improving pedestrian amenity. Canopies are proposed over the Franklin Street footpath and sections of the Cannon Street frontage at approximately 4.5 metres above ground. The mid-block link between Cannon and Tatham Streets provides one-way (east to west) vehicle

Level 1
26-28 Leigh Street
Adelaide SA 5000

GPO Box 1533
Adelaide SA 5001

T- +61(0)8 7133 3235
E- odasa@sa.gov.au

Government of South Australia

OFFICE FOR DESIGN + ARCHITECTURE SA

File No:
2022/07980/01

Ref No:
22186660

access for a porte cochere and loading spaces for the hotel. Directly north of this vehicular link, a separate pedestrian link is proposed with bicycle parking spaces. The link is intended to be open 24/7 to the public and to support the hotel operations. Loading, services and the transformer are located off Tatham Street, and the car park entry is proposed at the northern end of Tatham Street.

Ground Floor Tenancies

In principle, I support the intent to activate the street frontages with glazed tenancies and the pedestrian link. I also acknowledge the intent to prioritise Cannon Street as the north-south pedestrian link over Tatham Street, including widening the effective width of the footpath. However, I remain concerned that the proposed tenancies and lobbies are yet to achieve a seamless transition from the public realm, which is critical for achieving meaningful engagement with the street. In particular, I am unconvinced by the proposed level transition arrangements for the Franklin Street tenancies (provision of ramps inside the Franklin Street entries) and residential entry foyer (stairs and platform lift protruding into the entry foyer recess). I recommend consideration of entry threshold treatments to achieve integrated outcomes that optimise tenancy functionality, engagement with the street and achieve a generous residential arrival experience.

Through-Site Link

In principle, I support the inclusion of a mid-block link, which has the potential to improve pedestrian permeability within the precinct. However, I consider the single-storey volume a missed opportunity, as in my view the arrival experience for hotel patrons should be further enhanced with a greater sense of generosity. I also note that the environmental condition and amenity of the link is yet to be demonstrated, as the submitted wind report indicates further wind tunnel testing is required to ensure the comfort criteria are met.

I recommend review of the through-site link arrangement, including the following elements:

- spatial quality of the link, with the view to creating a consolidated entry plaza for the mixed-use precinct with an improved sense of generosity
- confirmation of mitigation strategy of micro-climatic impact on the pedestrian link to achieve envisaged amenity.

Architectural Expression

On the three street elevations, the two storey tall lower podium is proposed with red brickwork with openings infilled with glazing panels and car parking screening. Brushed gold coloured canopies are proposed along the Franklin and Cannon Street frontages. The street elevations of the upper podium are proposed with pre-finished dark coloured precast concrete framing, infilled with glazing panels and car parking screening. The southern end of the upper podium is expressed as a two storey element and level four is expressed as a transitional level with recessed wall lines to articulate between the podium and tower form. Timber-look aluminium batten cladding is proposed on the east and west elevations above the through-site link, between the inner facing walls of the towers above. The rear (northern) portion of the podium form, where the vehicle ramp is located, perforated metal screening is proposed on the side street elevations and red brick wall with horizontal banding is proposed on the north elevation and turns comers to extend to the north ends of the side elevations.

Level 1
26-28 Leigh Street
Adelaide SA 5000

GPO Box 1533
Adelaide SA 5001

T- +61(0)8 7133 3235
E- odasa@sa.gov.au

Government of South Australia

OFFICE FOR DESIGN + ARCHITECTURE SA

File No:
2022/07980/01

Ref No:
22186660

The south tower (hotel) is proposed with a singular expression with projecting angular concrete frames that articulate individual hotel suites. The west elevation includes a central vertical recess with solid patterned precast walling. The south elevation includes a continuous central band of full height glazing wall to create a symmetrical elevation.

The north tower (residential apartments) is proposed with pre-finished dark and light grey precast concrete walls and recessed balconies with semi-frameless glass balustrades. Wider concrete frames span over several floor levels, with the intent to visually breakdown the extent of the tower elevations. The west elevation includes a central vertical recess with solid patterned precast wall panelling continuing across the podium and tower forms.

I acknowledge and support the amendments to the podium expression, which have resulted in a simpler and more rational composition compared to the originally submitted scheme, including the removal of the previously proposed pergola structure at the top of the podium. In my opinion, an opportunity exists to further review facade alignments between the upper and lower podium elements, with the view to reinforce the three dimensional character of the brick base and mitigate the sheer wall conditions on the narrow side streets. I also recommend review of the alignment of the central batten screening to set back and clearly express the solid podium corners, with the view to reinforce the podium's character as a building base. I acknowledge the provision of perforated metal screen to all car parking areas, and recommend consideration of further details to minimise visibility of cars and parking infrastructure, including headlight spill.

In terms of the tower elements, I support the contrasting expression between the two towers. In particular, I support the singular expression of the south (hotel) tower. I recommend provision of the north elevation to demonstrate the regular orthogonal expression is continued to the inner facing wall, with the view to achieving a built form in the round.

The submitted drawings include images of the selected materials, however the elevations do not indicate where the materials are proposed. I request the submission of the annotated elevations to confirm the location of proposed materials/finishes. I also do not support the use of simulated materials (timber-look aluminium batten cladding), as in my view high quality authentic materials should be provided, cognisant of the streetscape character, scale and significance of this major city development.

Car Parking

A five storey tall podium accommodates naturally ventilated car parking sleeved by restaurant and hotel amenities fronting Franklin Street. I support the sleeving of car parking with active uses to Franklin Street and the consideration given to future adaptability. While I remain concerned by the amount of above ground car parking, I recognise a reduction in car parking numbers (114 compared to 158 spaces in the previously referred scheme). I acknowledge and support the reduction of the height and bulk of the podium, which is a result of the reduction in car parking numbers.

Level 1
26-28 Leigh Street
Adelaide SA 5000

GPO Box 1533
Adelaide SA 5001

T- +61(0)8 7133 3235
E- odasa@sa.gov.au

Government of South Australia

OFFICE FOR DESIGN + ARCHITECTURE SA

File No:
2022/07980/01

Ref No:
22186660

Internal Layouts and Amenity
On the first floor, a double height restaurant is proposed to the Franklin Street frontage. Other uses include back of house functions for the hotel to the southern half of the floor plate. Within the combined podium, a function room and hotel amenities are proposed at the southern end of each floor between levels one and four to sleeve the car parking floors. At the top of the podium, a service terrace is proposed with perimeter soft landscaping in raised planter boxes.

Within the south tower, the proposal includes 246 hotel suites including one accessible room over 13 floor levels. I support the provision of natural light and outlook at both ends of the central corridor. Acknowledging the final room typologies are likely to be informed by the requirements of a hotel operator, I recommend review of the number of DDA compliant suites to provide additional accessible offerings.

Within the north tower, a total of 175 residential apartments are proposed, with typical apartment floors between levels five and 19 with four one-bedroom and seven two-bedroom apartments. One two-bedroom and four three-bedroom apartments are proposed on levels 20 and 21. No affordable housing is included.

Generally, I support the internal planning of the residential apartments that appears rational and functional. I also acknowledge that 67 percent of the apartments are proposed with balconies exceeding the minimum private open space requirements. I continue to recommend reconsideration to include affordable housing given the current housing pressures. Acknowledging the provision of affordable housing is not mandatory, I am of the opinion that a development of such significant scale has a responsibility to contribute to the desired housing outcomes for the city.

Landscaping
The scope of soft landscaping is limited to:

- raised planters with climbing plants on the ground floor within the Cannon Street setback area, Franklin Street footpath and the through-site link
- raised planters on the service terrace at the top of the podium, around the plant enclosure.

I support the engagement of a landscape architect and indicative selection of the plant species. I also acknowledge that all planting areas, while limited, are designed with programmed irrigation system.

Advice summary
To ensure the most successful design outcome is achieved the State Commission Assessment Panel may like to consider particular aspects of the project, which would benefit from protection as part of the planning permission, such as:

- provision of above podium setbacks for the north tower from the side (Cannon Street and Tatham Street) boundaries
- improved built form articulation between the lower and upper podium sections
- review of the level transition arrangements for the Franklin Street tenancies to optimise tenancy functionality
- review of the level transition arrangements for the residential entry foyer to achieve a generous, integrated and unobstructed residential arrival experience
- review of the through-site link arrangement

Level 1
26-28 Leigh Street
Adelaide SA 5000

GPO Box 1533
Adelaide SA 5001

T- +61(0)8 7133 3235
E- odasa@sa.gov.au

Government of South Australia

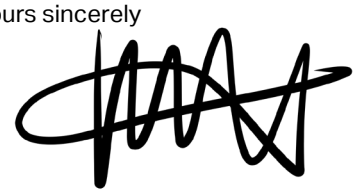
OFFICE FOR DESIGN + ARCHITECTURE SA

File No:
2022/07980/01

Ref No:
22186660

- consideration of further details of the car parking screening to minimise visibility of cars and parking infrastructure, including headlight spill
- confirmation of the location of proposed materials/finishes on the elevation drawings
- provision of the north elevation of the south tower to demonstrate the regular orthogonal expression is continued to achieve building in the round
- review of external material selections to ensure the use of high quality authentic materials, supported by provision of physical material samples
- provision of affordable housing.

Yours sincerely



Kirsteen Mackay
Government Architect

cc Aya Shirai-Doull ODASA aya.shirai-doull@sa.gov.au

Level 1
26-28 Leigh Street
Adelaide SA 5000

GPO Box 1533
Adelaide SA 5001

T- +61(0)8 7133 3235
E- odasa@sa.gov.au

Government of South Australia

CITY OF ADELAIDE

Kaurna Country
25 Pirie Street, Adelaide
GPO Box 2252 Adelaide
South Australia 5001

T +61 (08) 8203 7203
F +61 (08) 8203 7575
W cityofadelaide.com.au

ABN 20 903 762 572

Enquiries: Helen Dand 8203 7728
DA reference: 23037672

5 September 2024

State Commission Assessment Panel
GPO Box 1815
ADELAIDE SA 5001

Dear Sir/Madam

Application: 23037672

Applicant: 108 Franklin Pty Ltd C/- Future Urban Pty Ltd

Addresses: 108-112a Franklin St Adelaide SA 5000

Description: Construction of a twenty-nine-level mixed-use building comprising residential apartments, tourist accommodation, shops, and offices

I write in relation to the abovementioned Development Application and the re-referral undertaken to Council pursuant to Regulation 23(2)(b) of the *Planning, Development & Infrastructure (General) Regulations 2017*.

In accordance with Regulation 23(3), Council can provide comments with respect to the following matters:

- Essential infrastructure
- Traffic
- Waste management
- Stormwater
- Public open space
- Other public assets and infrastructure
- The impact on any local heritage place.

Matters relevant to this application are addressed below. Matters raised in Council's previous responses remain valid where relevant, unless superseded by comments below.

CITY OF ADELAIDE

PUBLIC REALM AND INFRASTRUCTURE

- The existing back of footpath levels (as per the survey) are not shown on the architectural ground floor plan. It is unclear how internal and external levels match. For example, the commercial tenancy (near the loading dock) has an entry from Cannon Street with the internal FFL at RL43.94m, whereas adjacent external footpath is RL43.74m.

STORMWATER

- The applicant has not verified suitability of the proposed floor levels based on an assessment of the 100-year overland flows along Franklin Street to address Hazards (Flooding – Evidence Required) Overlay. Council provided a catchment plan to the State Commission Assessment Panel on 22 May 2024 with the previous Council response to assist the applicant with this assessment.
- The updated documentation does not demonstrate compliance with the South Australian Water Sensitive Urban Design policy as details of the Stormwater Retention System (e.g. tank size, tank location, areas serviced, etc) has not been provided.
- Council will require full design and details of the works on Council land to Council requirements, including an upgrade to the Council pipe in Franklin Street, for further Council review and approval.

TRAFFIC & ACCESS

Sightlines and use of Mirror

- The applicant's amended documentation includes Appendix 3 Traffic and Parking Assessment Report. In this report 'Section 3.2 Sight Distance' suggests that because Department for Infrastructure and Transport has guidelines (DIT Operational Instruction 2.2), it is an accepted device to address sightlines issues. However, the report fails to consider the sightline issue is not an existing situation and as per the DIT Operational Instruction 2.2, a convex mirror is not an accepted device for new buildings where the sightlines are proposed to be obstructed by part of the new building.
- Review of the amended proposal has been undertaken without considering use of mirrors.

Sightlines at egress from central driveway

- The plans show a building column located immediately adjacent the central driveway egress which obstructs sightlines between egressing vehicles and pedestrians on Tatham Street.
- The applicant's Traffic and Parking Assessment Report suggests sightlines to pedestrians is not required as *"there is no formal footpath on Tatham Street adjacent the frontage of the site"*.
- Whilst it is noted the existing footpath is narrow on Tatham Street, pedestrians are still able to walk along Tatham Street either on the narrow footpath or along the roadway.

CITY OF ADELAIDE

- It is recommended sightlines to pedestrians be improved at the vehicle egress by one or more of the following amendments:
  - column relocated
  - column reduced in size
  - driveway egress relocated northwards to increase setback from column
  - driveway egress width reduced to increase setback from column.

Sightlines at egress from carpark

- It is noted vehicle egress from the carpark to Tatham Street relies on sightlines through a building window. There is a risk vision may be hampered through damage, or other obstructions, to the glazing.

Transport Review

- To ascertain the traffic impact of the proposal, Council requests the applicant provide the input and output files (including the turning movements) of the Sidra Traffic Model Analysis during the AM and PM peaks for both intersections i.e. Tatham/Franklin Streets and Tatham/Waymouth Streets.

ENCROACHMENTS

- The plans show narrow planter beds and threshold ramps along the Franklin Street frontage which protrude over the boundary into Council land. These are not permitted. Levels must match existing back of footpath levels.
- The canopies on Cannon Street must be setback 600mm from the kerb or raised to a minimum height of 5 metres above the road level.

LOCAL HERITAGE

- As previously noted, the subject site is located adjacent a Local Heritage Place (Federation Trading) to the north at 127-133 Waymouth Street.
- The introduction of red brick into the podium adjacent to the Federation Trading building is supported.
- Previous comments seeking an accurate representation of the Federation Trading building have not been addressed and remain.

RECOMMENDED RESERVE MATTER

Stormwater Reserve Matter

The applicant shall submit a final Stormwater Management Plan detailing stormwater quantity and quality measures prepared in consultation with the City of Adelaide, to the satisfaction of the Relevant Authority.

CITY OF ADELAIDE

RECOMMENDED CONDITIONS AND ADVICE

Awnings with Lighting

The proposed awning shall comply with Council's Encroachment Policy and include pedestrian lighting (Category PR1-AS1158). The lighting must not be obtrusive and should be designed so that it does not shine into any adjoining residences and shall be operational during the hours of darkness at all times to the reasonable satisfaction of Council.

Boundary Levels – Match existing

The finished floor level at the boundary of the site at all pedestrian and vehicular access locations shall match the existing back of footpath levels at the boundary.

Parking Facilities

The design of the vehicular access and off-street parking facilities shall comply with Australian Standards:

- AS/NZS 2890.1-2004 Parking Facilities - Off-Street Car Parking
- AS 2890.2-2018 Parking Facilities - Off-Street commercial vehicles facilities
- AS/NZS 2890.6-2022 Off-street parking for people with disabilities
- AS 2890.3-2015 Parking Facilities - Bicycle parking facilities

The off-street parking facilities shall be constructed in accordance with the approved design and relevant Australian Standards prior to the occupation of the building and an Operation and Management Plan for the facilities shall be maintained on site at all times.

Collected Water to Sewer

All collected drainage water from any bin rooms, carwash areas, internal vehicle parking areas, planter boxes, seepage collection systems, groundwater seepage systems, other internal areas, water features, swimming pools and/or spas located on the land shall be discharged to the sewer system.

Please contact Helen Dand if you require any clarification.

Yours sincerely

M. F. Sedgman

Michael Sedgman
CHIEF EXECUTIVE OFFICER

FUTURE URBAN

Level 1, 74 Pirie Street
Adelaide SA 5000
PH: 08 8221 5511
W: www.futureurban.com.au
E: info@futureurban.com.au
ABN: 76 651 171 630

October 17, 2024

Damon Huntley
Planning Officer
Planning and Land Use Services
Department for Housing and Urban Development
Via: The PlanSA Portal

Dear Damon,

APPLICATION 23037672 – RESPONSE TO ODASA AND COA

We have been instructed by the Applicant, 108 Franklin Pty Ltd, to provide a response to the second round of referral responses from the Office for Design and Architecture South Australia ('ODASA'), dated September 25, 2024, and the City of Adelaide ('CoA'), dated September 5, 2024.

In the first instance, we enclose the following amended, and final, documents (updated, as necessary, for consistency):

- the Architectural Plans drawn by Nic Design Studio in conjunction with Cheesman Architects ((Revision P), dated October 10, 2024);
- a letter prepared by Frank Siow & Associates, dated October 15, 2024, addressing the outstanding items raised by the City of Adelaide;
- the Civil Plan prepared by PT Design, dated October 11, 2024, together with e-mail correspondence between PT Design and CoA, dated October 11, 2024;
- the Waste Management Plan prepared by Colby Phillips Advisory, dated October 10, 2024;
- the Desktop Pedestrian Level Wind Assessment undertaken by GWTS, dated October 9, 2024;
- the Landscape Plan drawn by Oxigen, dated October 14, 2024; and
- the Sustainability Report prepared by BESTEC, dated October 15, 2024.

We note that there are no changes to the Environmental Noise Assessment, dated August 2, 2024, or to the Preliminary Site Investigation, dated September 18, 2023, that form appendices to the amended submission.

In addition, we enclose a design statement by Cheesman Architects, dated October 15, 2024, regarding the perimeter threshold levels.

Our responses to ODASA and the CoA are set out sequentially below.

ODASA Response

Building Height and Built Form Composition

We acknowledge the support for the proposal reverting back to a two-tower scheme, with legible differences, and an overall reduction, in building height, as well as increased separation between the two towers.

In response to the recommendations tabled by ODASA, we note that:

- whilst the northern (residential) tower does not incorporate a setback above the podium, it is already set back some 860 millimetres from Cannon Street to facilitate the widening of the footpath and thus improve the pedestrian experience at ground level; and
- the articulation between the lower and upper podiums is readily discernible, emphasising human scale and the fine-grain character of the streetscape at the lower podium, and providing a suitable transition from the upper podium to the tower forms above.

Ground Plane and Public Realm

We note that ODASA remains concerned about transition levels from the public realm to the ground floor tenancies within the building. In response, we refer to the design statement by Cheesman Architects, dated October 15, 2024, which outlines why the building will be stepped to minimise any level transitions, and, where unavoidable, a fully compliant ramp or steps will be incorporated internally.

ODASA has expressed support for the through-site link and its potential to improve pedestrian permeability within the precinct, however recommended review of the spatial quality and micro-climatic impacts. In response:

- the corners of the building façades that face the link have been amended to comprise curved glazing in lieu of the 90-degree corners and corner cut-offs that were previously proposed, which, in our view:
  - » provides a level of consistency in the expression and quality of the pedestrian link; and
  - » enhances spatial generosity and user experience; and
- the micro-climate of the development will be appropriately managed, with the wind assessment identifying that:
  - » the recommended comfort criteria are achieved for public footpaths and building entrances; and
  - » should the pedestrian link exceed recommended criteria during detailed design testing, this can be readily mitigated/remedied using wind control mechanisms, such as an air curtain.

Architectural Expression

The remaining comments from ODASA relate to:

- the alignment between the upper and lower podium elements, with the view to mitigating sheer wall conditions;
- the alignment of the central batten screen to set back, and clearly express, the solid podium corners, with the view to reinforcing the podium's character as a building base;
- the minimisation of the visibility of cars and parking-related infrastructure, as well as headlight spill; and
- the use of simulated materials (such as timber-look aluminium batten cladding), with the view to adopting high-quality authentic materials.

With reference to the Architectural Plans, we note that:

- the elevations have been updated to include annotations referencing the materials legend;
- the sheer wall condition has been mitigated through the:
  - » the differentiation between the composition and articulation of the lower and upper podium; and
  - » the varied expression between to the two towers; and
- the central batten screen cannot be realigned without compromising the functionality of the car park; however, we confirm that the simulated material has since been deleted and replaced, due to its inauthenticity, with brass copper aluminium batten cladding.

Car Parking

We acknowledge support for the reduction in the overall quantum of above ground car parking, which has, as a by-product, reduced the scale of the upper podium and overall building height.

Internal Layouts and Amenity

Whilst ODASA continues to encourage the inclusion of affordable housing, it is not mandatory under the policy. Further, and as we have stated previously, the direction of this project (in terms of the land use composition and influence over built form outcomes) has pivoted since the Bus Depot site was awarded to Renewal SA for predominantly affordable housing.

Landscaping

We acknowledge the support for the engagement of Oxigen to maximise, and ensure the ongoing viability of, landscaped areas.

COA Response

Public Realm and Infrastructure

We refer again to the design statement by Cheesman Architects, dated October 15, 2024, which outlines the design rationale behind the proposed level thresholds.

Stormwater

We refer to the Civil Plan and e-mail correspondence between PT Design and the CoA, dated October 11, 2024, and note:

- a new connection into the 900-millimetre pipe beneath Franklin Street is proposed;
- a retention/detention tank is proposed beneath the internal driveway (alongside the pedestrian link) for irrigation and cleaning purposes, and to satisfy WSUD;
- the permeability of the site will not change pre or post-development, and flows from the site are expected to be consistent (if anything, with an increase in the time of concentration of run-off);
- all run-off will be directed through the retention/detention tank, enabling flows from the site to be reduced; and
- permeable paving is not proposed, as the building covers the entirety of the site.

We also refer to the updated Sustainability Report which expands upon the WSUD measures incorporated into the proposed development.

Traffic and Access

In response to the CoA's comments relating to traffic and access, we firstly note that:

- the plans have been amended to include curved corners to the edges of the building that face the central link; and
- Frank Siow & Associates has provided a written response, by letter dated October 14, 2024, which addresses the final comments that were made.

That said, we also wish to highlight that:

- together with the introduction of the curved façades facing the link, the column immediately adjacent the central driveway egress to Tatham Street has been shifted further south to achieve desired sight lines;
- the window glazing adjacent the car park egress has been replaced with transparent louvres to facilitate sight lines to Tatham Street; and
- the SIDRA analysis was previously provided (and is since provided again), and it is worth pointing out that:
  - » the previous SIDRA concluded that the junctions and traffic could operate well below capacity when the proposal sought to accommodate 158 car parking spaces; and
  - » the revised SIDRA (based off the reduction in car parking to 114 spaces) continues to conclude that peak hour trips are reduced, and the junctions continue to operate below capacity.

Encroachments

In response to the CoA's comments relating to encroachments, we note that:

- the narrow planter beds and threshold ramps adjacent Franklin Street have been removed;
- the ramps and steps into tenancies off Franklin Street are wholly contained within the boundaries of the site; and
- the canopies on Cannon Street have been amended to be set back 600 millimetres from the kerb.

Local Heritage

We note that the introduction of the red brick to the northern elevation of the podium, as a backdrop to the Federation Trading building, is supported by the CoA.

We trust that you now have all of the information you reasonably require to finalise your assessment of Application 23037672.

Yours sincerely,

Renae Grida
Associate Director

Frank Siow & Associates

Traffic and Parking Consultants

TO

Date: 15 October 2024

Mr Nic Wong
Nic Design Studio
295 Pirie Street
Adelaide SA 5000

108 FRANKLIN STREET, ADELAIDE
PROPOSED MIXED-USE DEVELOPMENT
RESPONSE TO ADELAIDE CITY COUNCIL'S SECOND RFI DATED 5-9-2024

Our latest traffic report for the development is dated 6 August 2024. This traffic report is still relevant to the current proposal.

We have previously provided a response to the Council's RFI letter of 7 March 2024 in which the Council raised 19 specific traffic related comments regarding the proposed development (see our letter dated 30 April 2024 which addressed the matters raised).

In a follow-up to the 7 March 2024 RFI, Council has submitted a second RFI dated 5 September 2024 of which 3 remaining matters were detailed by Council as follows:

TRAFFIC & ACCESS
Sightlines and use of Mirror

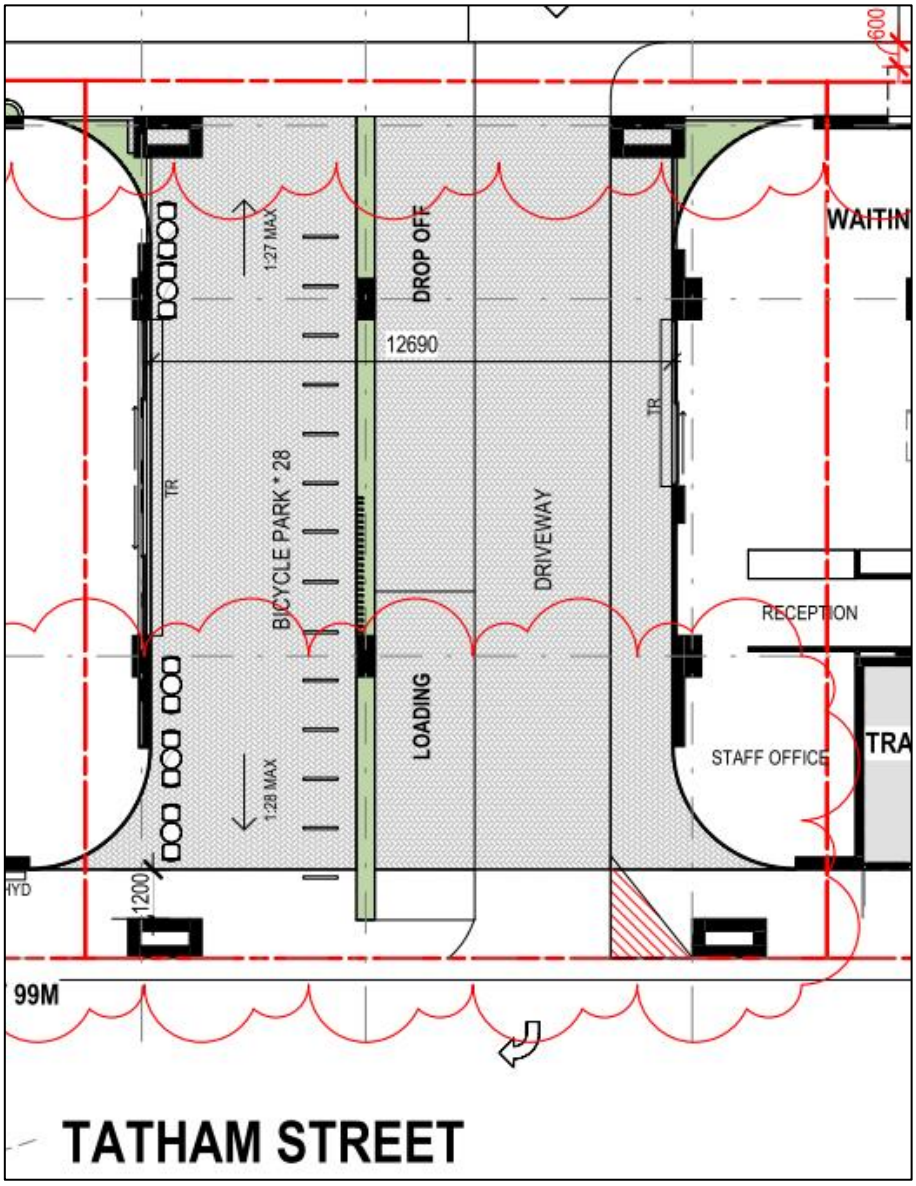
- *The applicant's amended documentation includes Appendix 3 Traffic and Parking Assessment Report. In this report 'Section 3.2 Sight Distance' suggests that because Department for Infrastructure and Transport has guidelines (DIT Operational Instruction 2.2), it is an accepted device to address sightlines issues. However, the report fails to consider the sightline issue is not an existing situation and as per the DIT Operational Instruction 2.2, a convex mirror is not an accepted device for new buildings where the sightlines are proposed to be obstructed by part of the new building.*
- *Review of the amended proposal has been undertaken without considering use of mirrors.*

We have noted the Council's comments above and we address the Council's remaining concerns below as follows.

1. *Sightlines at egress from central driveway*
    - *The plans show a building column located immediately adjacent the central driveway egress which obstructs sightlines between egressing vehicles and pedestrians on Tatham Street.*
    - *The applicant's Traffic and Parking Assessment Report suggests sightlines to pedestrians is not required as "there is no formal footpath on Tatham Street adjacent the frontage of the site".*
    - *Whilst it is noted the existing footpath is narrow on Tatham Street, pedestrians are still able to walk along Tatham Street either on the narrow footpath or along the roadway.*
    - *It is recommended sightlines to pedestrians be improved at the vehicle egress by one or more of the following amendments:*

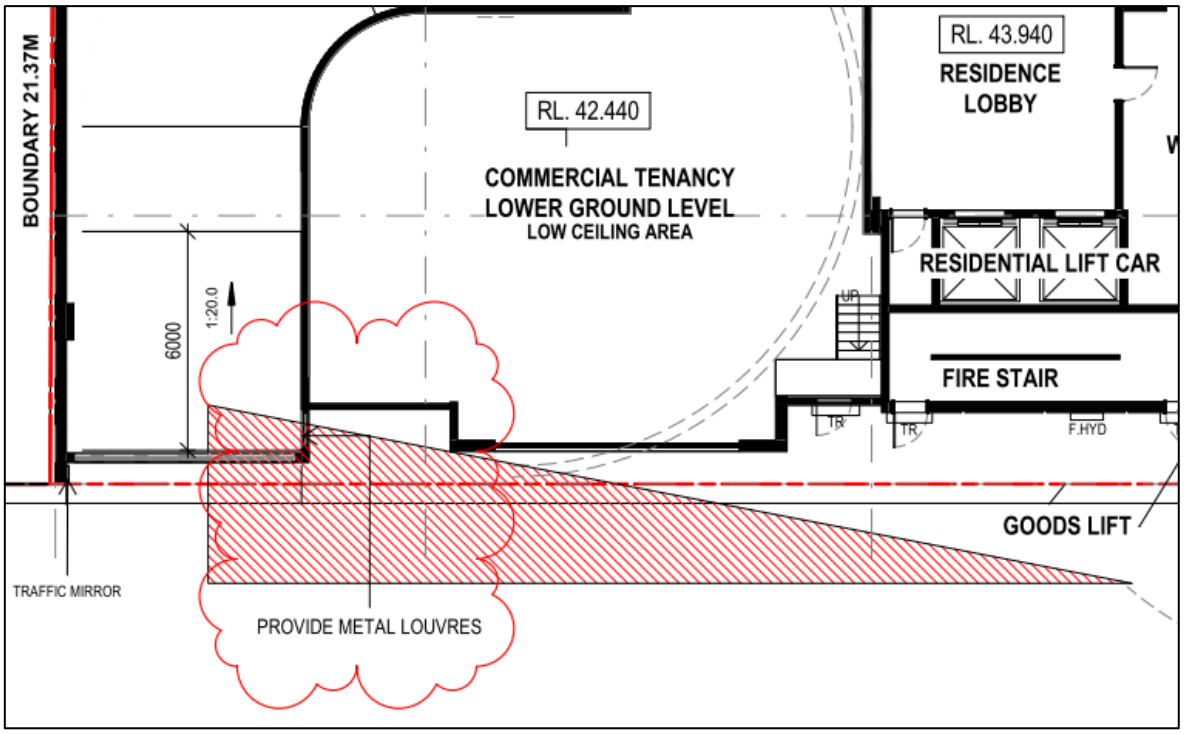
- *column relocated*
- *column reduced in size*
- *driveway egress relocated northwards to increase setback from column*
- *driveway egress width reduced to increase setback from column.*

As suggested by Council's first dot point, the subject column has been relocated to enable the pedestrian sight triangle to be met, thereby addressing the Council's requirement.



2. *Sightlines at egress from carpark*
   - *It is noted vehicle egress from the carpark to Tatham Street relies on sightlines through a building window. There is a risk vision may be hampered through damage, or other obstructions, to the glazing.*

The proposed window glazing arrangement was intended to provide security for the car park building by covering that part of the building. This window glazing is not part of any tenancy wall and so was unlikely to be obstructed. However, given Council's comment about the risk of the vision being hampered if the glazing is damaged, the window glazing is now proposed to be replaced by see-through metal louvres. This would address the Council's concern.



3. *Transport Review*
   - *To ascertain the traffic impact of the proposal, Council requests the applicant provide the input and output files (including the turning movements) of the Sidra Traffic Model Analysis during the AM and PM peaks for both intersections i.e. Tatham/Franklin Streets and Tatham/Waymouth Streets.*

The SIDRA analysis was included in our previous response to the Council's RFI of 7/3/2024. Our analysis at the time (where the development had 158 parking spaces on-site) indicated that the junctions of Tatham Street/Franklin Street and Tatham Street/Waymouth Street would continue to operate at well below capacity and we concluded that the additional traffic generated by the development would have minimal traffic impact on the adjacent roads and junctions.

The current proposal has significantly reduced the number of on-site parking spaces in the car park from the previous 158 spaces to 114 spaces, which is an approximately 25% reduction. The peak hour trips generated would also be significantly lower as a consequence of the number of parking spaces being reduced to 114. We estimate the trip generation of the development to be approximately 20 vehicles per hour in the AM peak and 16 vehicles per hour in the PM peak.

We have updated the SIDRA analysis for the current 114-space proposal in response to the Council's RFI requirement. The output of the SIDRA analysis is summarised in the Tables below for Tatham Street/Waymouth Street and Tatham Street/Franklin Street. The analysis shows either no change or marginal change to the degrees of saturation for the junctions during the peak periods.

The SIDRA input and output file is also attached as requested by Council.

MOVEMENT SUMMARY

Site: 101 [Tatham St Waymouth St - AM EXISTING (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Tatham St/Waymouth St Intersection
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Tatham St															
1	L2	All MCs	5	1.0	5	1.0	0.020	5.2	LOS A	0.1	0.5	0.40	0.60	0.40	42.4
3	R2	All MCs	12	1.0	12	1.0	0.020	7.4	LOS A	0.1	0.5	0.40	0.60	0.40	42.0
Approach			17	1.0	17	1.0	0.020	6.7	LOS A	0.1	0.5	0.40	0.60	0.40	42.1
East: Waymouth St															
5	T1	All MCs	200	2.0	200	2.0	0.106	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Approach			200	2.0	200	2.0	0.106	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
West: Waymouth St															
11	T1	All MCs	360	2.0	360	2.0	0.191	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach			360	2.0	360	2.0	0.191	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.9
All Vehicles			577	2.0	577	2.0	0.191	0.2	NA	0.1	0.5	0.01	0.02	0.01	49.8

MOVEMENT SUMMARY

Site: 101 [Tatham St Waymouth St - AM FUTURE (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Tatham St/Waymouth St Intersection
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Tatham St															
1	L2	All MCs	9	1.0	9	1.0	0.035	5.2	LOS A	0.1	0.8	0.41	0.62	0.41	42.3
3	R2	All MCs	21	1.0	21	1.0	0.035	7.5	LOS A	0.1	0.8	0.41	0.62	0.41	41.9
Approach			31	1.0	31	1.0	0.035	6.7	LOS A	0.1	0.8	0.41	0.62	0.41	42.1
East: Waymouth St															
5	T1	All MCs	200	2.0	200	2.0	0.106	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Approach			200	2.0	200	2.0	0.106	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
West: Waymouth St															
11	T1	All MCs	360	2.0	360	2.0	0.191	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach			360	2.0	360	2.0	0.191	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.9
All Vehicles			591	1.9	591	1.9	0.191	0.4	NA	0.1	0.8	0.02	0.03	0.02	49.6

MOVEMENT SUMMARY

Site: 101 [Tatham St Waymouth St - PM EXISTING (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Tatham St/Waymouth St Intersection
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Tatham St															
1	L2	All MCs	32	1.0	32	1.0	0.045	6.1	LOS A	0.2	1.1	0.45	0.64	0.45	42.5
3	R2	All MCs	11	1.0	11	1.0	0.045	7.9	LOS A	0.2	1.1	0.45	0.64	0.45	42.1
Approach			42	1.0	42	1.0	0.045	6.6	LOS A	0.2	1.1	0.45	0.64	0.45	42.4
East: Waymouth St															
5	T1	All MCs	426	2.0	426	2.0	0.227	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach			426	2.0	426	2.0	0.227	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.9
West: Waymouth St															
11	T1	All MCs	192	2.0	192	2.0	0.102	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Approach			192	2.0	192	2.0	0.102	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
All Vehicles			660	1.9	660	1.9	0.227	0.5	NA	0.2	1.1	0.03	0.04	0.03	49.5

MOVEMENT SUMMARY

Site: 101 [Tatham St Waymouth St - PM FUTURE (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Tatham St/Waymouth St Intersection
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Tatham St															
1	L2	All MCs	37	1.0	37	1.0	0.051	6.2	LOS A	0.2	1.3	0.45	0.65	0.45	42.5
3	R2	All MCs	12	1.0	12	1.0	0.051	7.9	LOS A	0.2	1.3	0.45	0.65	0.45	42.1
Approach			48	1.0	48	1.0	0.051	6.6	LOS A	0.2	1.3	0.45	0.65	0.45	42.4
East: Waymouth St															
5	T1	All MCs	426	2.0	426	2.0	0.227	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach			426	2.0	426	2.0	0.227	0.1	NA	0.0	0.0	0.00	0.00	0.00	49.9
West: Waymouth St															
11	T1	All MCs	192	2.0	192	2.0	0.102	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Approach			192	2.0	192	2.0	0.102	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
All Vehicles			666	1.9	666	1.9	0.227	0.5	NA	0.2	1.3	0.03	0.05	0.03	49.5

MOVEMENT SUMMARY

Site: 101 [Franklin St Tatham St - AM EXISTING (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Tatham St/Franklin St Intersection
AM Peak Extg
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Franklin St E															
5	T1	All MCs	389	2.0	389	2.0	0.103	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
6	R2	All MCs	7	0.0	7	0.0	0.018	12.0	LOS B	0.1	0.4	0.72	0.81	0.72	38.3
Approach			397	2.0	397	2.0	0.103	0.3	NA	0.1	0.4	0.01	0.02	0.01	49.8
West: Franklin St W															
10	L2	All MCs	26	0.0	26	0.0	0.275	4.6	LOS A	0.0	0.0	0.00	0.03	0.00	47.7
11	T1	All MCs	1007	2.0	1007	2.0	0.275	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	49.8
Approach			1034	1.9	1034	1.9	0.275	0.2	NA	0.0	0.0	0.00	0.01	0.00	49.8
All Vehicles			1431	2.0	1431	2.0	0.275	0.2	NA	0.1	0.4	0.00	0.01	0.00	49.8

MOVEMENT SUMMARY

Site: 101 [Franklin St Tatham St - AM FUTURE (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Tatham St/Franklin St Intersection
AM Peak Future

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Franklin St E															
5	T1	All MCs	389	2.0	389	2.0	0.103	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
6	R2	All MCs	8	0.0	8	0.0	0.021	12.1	LOS B	0.1	0.5	0.72	0.82	0.72	38.2
Approach			398	2.0	398	2.0	0.103	0.3	NA	0.1	0.5	0.02	0.02	0.02	49.8
West: Franklin St W															
10	L2	All MCs	33	0.0	33	0.0	0.277	4.6	LOS A	0.0	0.0	0.00	0.03	0.00	47.7
11	T1	All MCs	1007	2.0	1007	2.0	0.277	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	49.8
Approach			1040	1.9	1040	1.9	0.277	0.2	NA	0.0	0.0	0.00	0.02	0.00	49.7
All Vehicles			1438	1.9	1438	1.9	0.277	0.3	NA	0.1	0.5	0.00	0.02	0.00	49.7

MOVEMENT SUMMARY

Site: 101 [Franklin St Tatham St - PM EXISTING (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Tatham St/Franklin St Intersection
PM Peak Extg

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Franklin St E															
5	T1	All MCs	826	2.0	826	2.0	0.220	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
6	R2	All MCs	15	0.0	15	0.0	0.017	6.6	LOS A	0.1	0.4	0.47	0.61	0.47	42.0
Approach			841	2.0	841	2.0	0.220	0.2	NA	0.1	0.4	0.01	0.01	0.01	49.8
West: Franklin St W															
10	L2	All MCs	21	0.0	21	0.0	0.126	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	47.6
11	T1	All MCs	452	2.0	452	2.0	0.126	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	49.8
Approach			473	1.9	473	1.9	0.126	0.2	NA	0.0	0.0	0.00	0.02	0.00	49.8
All Vehicles			1314	1.9	1314	1.9	0.220	0.2	NA	0.1	0.4	0.01	0.02	0.01	49.8

MOVEMENT SUMMARY

Site: 101 [Franklin St Tatham St - PM FUTURE (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Tatham St/Franklin St Intersection
PM Peak Future

Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Franklin St E															
5	T1	All MCs	826	2.0	826	2.0	0.220	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
6	R2	All MCs	19	0.0	19	0.0	0.022	6.7	LOS A	0.1	0.6	0.47	0.63	0.47	42.0
Approach			845	2.0	845	2.0	0.220	0.2	NA	0.1	0.6	0.01	0.01	0.01	49.8
West: Franklin St W															
10	L2	All MCs	27	0.0	27	0.0	0.127	4.6	LOS A	0.0	0.0	0.00	0.06	0.00	47.5
11	T1	All MCs	452	2.0	452	2.0	0.127	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	49.8
Approach			479	1.9	479	1.9	0.127	0.3	NA	0.0	0.0	0.00	0.03	0.00	49.7
All Vehicles			1324	1.9	1324	1.9	0.220	0.2	NA	0.1	0.6	0.01	0.02	0.01	49.7

Based on the above, we conclude that all of the Council's previous traffic related concerns have been satisfactorily addressed.

Yours sincerely,

Frank Siow

FRANK SIOW
Principal Consultant

Cheesman Architects

304 The Parade
Kensington
South Australia 5068
T 08 8431 1144
F 08 8331 9442
E info@cheesman.com.au
www.cheesman.com.au
ABN 90 008 154 407 ACN 008 154 407

Architecture
Interior Design
Master Planning
Urban Design
Facilities Planning

15th October 2024

108-112a Franklin Street Mixed Use Development:
Perimeter Threshold Levels

With regard to the ODASA concerns with the "Ground Floor Tenancies transition from the public realm and the level transition arrangements" we can provide the following clarification:

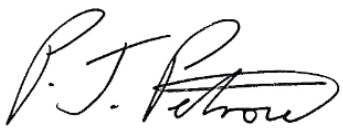
The ACC have stipulated the minimum finished floor levels which they would support to deal with stormwater and 100-year overland flow. The length of the building, and the existing footpath levels along Tatham and Cannon Streets make a seamless transition to all thresholds very challenging. It is proposed that the tenancy entrance doors and public realm transitions will match into the footpath levels, satisfy the minimum finished floor levels stipulated by the ACC and avoid steps at doorways and thresholds.

The building will be stepped where logical to minimise any level transitions, and where unavoidable a fully compliant ramp or steps will be incorporated internally. During design development it is possible that the tenancy entrance doors may be repositioned to suit the tenant, and at this stage every attempt to "engineer out" any internal steps or ramps will be pursued.

The revised Civil Engineering drawing provided by the Civil Engineer under separate cover is the outcome of ongoing discussions with the ACC and has incorporated what can be determined based on the current available data. The ACC has proposed the that final stormwater management plan (SMP) which resolves any matters that cannot be finalised due to the unavailability of data that is still being collected by them would become either a reserved matter or condition of approval.

Trusting that this is a reasonable response at this stage of the project.

Regards



Peter Petrou
Director
Cheesman Architects Pty Ltd