PPK
Environment&Infrastructure

Environmental Field Sampling Record

Project	CANBERRA RAIL YARDS			**Job Number**	27K140A
Date	25/06/98	**Time**	8.55	**Location No**	TP 117
Coordinates (AMG)	N		E	**Reduced Level (mAHD)**	

Soil Classification and Description of Each Visible Soil Profile

Depth (m)	Sample Number	Soil Description	Field Class.	Headspace Vapour (ppm)	Analytes Selected
0-0.25	0-0.15	FILL. Silty gravelly clay, grey brown, red brown, mixed gravel fine to coarse, some fine to coarse sand, some fine roots.	0/1		
0.25-0.9	0.4-0.5	Clayey SILTSTONE. Grey, mottled red and yellow, extremely to completely weathered, highly fractured.	0		
0.9-1.3	1.5	SILSTONE. Grey, distinctly weathered, highly fractured, main bedding plane dipping approximately 20° from vertical, some clay.	0		
		End of Test Pit 1.3 m Terminated Due to High Resistance			

Logged by	BJH	**Sampled by**	BJH

Field Classification

0 ... No obvious contamination
1 ... Slight visual contamination and/or slight odour
2 ... Visual contamination and/or odour
3 ... Gross visual contamination and/or strong odour

Comments

Adjacent stockpile of ballast.

PPK Environment & Infrastructure Pty Ltd, 101 Pirie Street, Adelaide SA 5000. Tel: 8405 4300 Fax: 8405 4301

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Environmental Field Sampling Record

Project	CANBERRA RAIL YARDS			**Job Number**	27K140A
Date	25/06/98	**Time**	9.20	**Location No**	**TP 118**
Coordinates (AMG)	N		E	**Reduced Level (mAHD)**	

Soil Classification and Description of Each Visible Soil Profile

Depth (m)	Sample Number	Soil Description	Field Class.	Headspace Vapour (ppm)	Analytes Selected
0-0.2	0-0.15	FILL. Sandy gravel, grey, fine to 40 mm, sand fine to coarse, some fine roots, some coal pieces at surface.	0/1		
0.2-1.5	0.4-0.5	Silty Sandy CLAY. Mottled yellow brown, orange, grey, fine to medium sand,	0		
	1.2-1.3	becoming gravelly towards base, some quartzitic gravel.	0		
1.5-1.8		Clayey SILTSTONE. Yellow brown, grey, distinctly to completely weathered.	0		
		End of Test Pit 1.8 m			

Logged by	BJH	**Sampled by**	BJH

Field Classification

0 ... No obvious contamination
1 ... Slight visual contamination and/or slight odour
2 ... Visual contamination and/or odour
3 ... Gross visual contamination and/or strong odour

Comments

Adjacent stockpiles of coal.

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Appendix E

Chain of Custody Documentation
(Soil)

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ACN 078 004 798

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☐ **Sydney**
9 Blaxland Road, Rhodes NSW 2138
Tel: (02) 9743 0333 Fax: (02) 9736 1568

Chain of Custody

Order No: 1925

Job Title: AN Canberra

PPK Job Number: 27K140A

Job Location: Canberra Rail Yards

Laboratory Name: AMDEL

Address: 5 Kelray Place
Asquith NSW

Fax Number: (02) 9482 1734

Phone Number: (02) 9482 1922

Contact Name:

Delivery Method: Carrier

Quote Number:

Project Manager: Stuart Taylor

Results Expected by/on:

Fax Results to: Stuart Taylor

Fax Number: (08) 8405 4301

Phone Number: (08) 8405 4300

Spreadsheet of Results Required: Y / N

Format:

Turnaround Time Required:

Invoice to: PPK

Comments: 1 of 4

Date Sampled	Time	Sample I.D.	Container Size	Sample Location	Medium*	Preservative Type	Filtered (X)	TPH	BTEX	PAH's	OC/OP/PCB's	Metals**	Initials	Comments/Additional Information and/or Analysis Required
17/6/98		BH1 14 samples	125 mL		S	<4°C							BJH	
		BH2 12 samples												
		BH3 11 samples												
		BH4 12 samples												
19/6/98		BH5 11 samples												
		BH6 11 samples												
		BH7 9 samples												
		BH8 9 samples												
		BH9 11 samples												
		BH10 7 samples												
		BH11 8 samples												
		BH12 11 samples			W									

Relinquished by: Brenton Harris
Date & Time: 22/6/98 13 MC
Company: PPK
Signature:

Relinquished by:
Date & Time:
Company:
Signature:

Relinquished by:
Date & Time:
Company:
Signature:

Medium*: S = Soil, W = Water, V = Vapour

Legend**: (circle the following to be tested)

Metals: Al As Be Cd Co Cr Cu Fe Hg Li Mg Mn Ni Pb Se Sn V Zn

Received in Good Order & Condition by (Name):
Date & Time:
Company:
Signature:

Received in Good Order & Condition by (Name):
Date & Time:
Company:
Signature:

Received in Good Order & Condition by (Name):
Date & Time:
Company:
Signature:

Samples on Ice: ☑ Yes ☐ No

Please fax back a signed copy when samples are received at the laboratory

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Green Page - Remains in Book

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Tel: (08) 9389 8668 Fax: (08) 9389 8447

☐ **Sydney**
9 Blaxland Road, Rhodes NSW 2138
Tel: (02) 9743 0333 Fax: (02) 9736 1568

Chain of Custody

Order No: 1926

Job Title: AN Canberra

Laboratory Name: ~~AMDEL~~

Address: 5 Kelray Place
Asquith NSW

Fax Number: (02) 9482 1934

Phone Number: (02) 9482 1922

Contact Name:

Delivery Method: Courier

Quote Number:

PPK Job Number: 27K140A

Job Location: Canberra Rail Yards

Project Manager: Stuart Taylor

Results Expected by/on:

Fax Results to: Stuart Taylor

Fax Number: (08) 8405 4301

Phone Number: (08) 8405 4300

Spreadsheet of Results Required: Y / N

Format:

Turnaround Time Required:

Invoice to: PPK

Comments: 2 of 4

Date Sampled	Time	Sample I.D.	Container Size	Sample Location	Medium*	Preservative Type	Filtered (X)	TPH	BTEX	PAH's	OC/OP/PCB's	Metals**	Initials	Comments/Additional Information and/or Analysis Required
19/6/98		BH13 7 samples	125 mL		S	<4°C							BJH	
		BH14 10 samples												
		BH 15 5 samples												
		BH 16 10 samples												
20/6/98		BH 17 7 samples												
		BH 18 7 samples												
		BH 19 7 samples												
		BH 20 7 samples												
		BH 21 7 samples												
		BH 22 7 samples												
		BH 23 8 samples												
		BH 24 8 samples	V		V	V							V	

Relinquished by: Brenton Harris	Relinquished by:	Relinquished by:
Date & Time: 23/6/98 10:00	Date & Time:	Date & Time:
Company: PPK	Company:	Company:
Signature:	Signature:	Signature:
Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):
Date & Time:	Date & Time:	Date & Time:
Company:	Company:	Company:
Signature:	Signature:	Signature:

Medium*: S = Soil, W = Water, V = Vapour

Legend**: (circle the following to be tested)

Metals: Al As Be Cd Co Cr Cu Fe Hg Li Mg Mn Ni Pb Se Sn V Zn

Samples on Ice: ☑ Yes ☐ No

Please fax back a signed copy when samples are received at the laboratory

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☐ **Sydney**
9 Blaxland Road, Rhodes NSW 2138
Tel: (02) 9743 0333 Fax: (02) 9736 1568

Chain of Custody

Order No: 1927

Job Title: AN Canberra

PPK Job Number: 27K140A

Job Location: Canberra Rail Yards

Laboratory Name: AMDEL

Address: 5 Kelray Place
Acquith NSW

Fax Number: (02) 9482 1734

Phone Number: (02) 9482 1922

Contact Name:

Delivery Method: Courier

Quote Number:

Project Manager: Stuart Taylor

Results Expected by/on:

Fax Results to: Stuart Taylor

Fax Number: (08) 8405 4301 / 4320

Phone Number: (08) 8405 4302

Spreadsheet of Results Required: Y / N

Format:

Turnaround Time Required:

Invoice to: PPK

Comments: 3 of 4

Date Sampled	Time	Sample I.D.	Container Size	Sample Location	Medium*	Preservative Type	Filtered (X)	TPH	BTEX	PAH's	OC/OP/PCB's	Metals**	Initials	Comments/Additional Information and/or Analysis Required
20/6/98		BH25 8 samples	125 mL		S	~4°C								
		BH26 7 samples												
		BH27 7 samples												
		BH28 7 samples												
21/6/98		BH29 8 samples												
		BH30 7 samples												
		BH31 7 samples												
		BH32 8 samples												
		BH33 7 samples												
22/6/98		BH34 7 samples												
		BH35 7 samples												
		BH36 7 samples												

Relinquished by: Brenton Howes	Relinquished by:	Relinquished by:
Date & Time: 23/6/98	Date & Time:	Date & Time:
Company: PPK	Company:	Company:
Signature:	Signature:	Signature:
Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):
Date & Time:	Date & Time:	Date & Time:
Company:	Company:	Company:
Signature:	Signature:	Signature:

Medium*: S = Soil, W = Water, V = Vapour

Legend**: (circle the following to be tested)

Metals: Al As Be Cd Co Cr Cu Fe Hg Li Mg Mn Ni Pb Se Sn V Zn

Samples on Ice: ☑ Yes ☐ No

Please fax back a signed copy when samples are received at the laboratory

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Chain of Custody

Order No: 1928

Job Title: AN Canberra

PPK Job Number: 27K140A

Job Location: Canberra Rail Yards

Laboratory Name: AMDEL
Address: 5 Kelray Place Asquith NSW
Fax Number: (02) 9482 1734
Phone Number: (02) 9482 1922
Contact Name:
Delivery Method: Courier
Quote Number:

Project Manager: Stuart Taylor
Results Expected by/on:
Fax Results to: Stuart Taylor
Fax Number: (08) 8405 4301
Phone Number: (08) 8405 4300
Spreadsheet of Results Required: Y / N
Format:
Turnaround Time Required:
Invoice to: PPK
Comments: 4 of 4

Date Sampled	Time	Sample I.D.	Container Size	Sample Location	Medium*	Preservative Type	Filtered (X)	TPH	BTEX	PAH's	OC/OP/PCB's	Metals**	Initials	Comments/Additional Information and/or Analysis Required
22/6/98		BH37 5 samples	125mL		S	<4°C								
22/6/98		BH38 7 samples	↓		S	<4°C								
~~22/6/98~~														
22/6/98		TP101 6 samples	125mL		S	<4°C								
		TP102 6 samples	↓		↓	↓								
		TP103 6 samples												
		TP104 4 samples												
		TP105 5 samples												
		TP106 5 sample												
		TP107 5 sample	↓		↓	↓								

Relinquished by:	Relinquished by:	Relinquished by:
Date & Time: 22/6/98 1300	Date & Time:	Date & Time:
Company: PPK	Company:	Company:
Signature:	Signature:	Signature:
Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):
Date & Time:	Date & Time:	Date & Time:
Company:	Company:	Company:
Signature:	Signature:	Sig

Medium*: S = Soil, W = Water, V = Vapour

Legend**: (circle the following to be tested)

Metals: Al As Be Cd Co Cr Cu Fe Hg Li Mg Mn Ni Pb Se Sn V Zn

Samples on Ice: ☑ Yes ☐ No

Please fax back a signed copy when samples are received at the laboratory

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Tel: (02) 9743 0333 Fax: (02) 9736 1568

Chain of Custody

Order No: 1929

Job Title: AN Canberra	PPK Job Number: 27K140A	Job Location: Canberra Rail Yards	Project Manager: Stuart Taylor
Laboratory Name: AMDEL			Results Expected by/on:
Address: 5 Kerby Place Ashgrove NSW 4077			Fax Results to: Stuart Taylor
Fax Number: 02 9482 1734			Fax Number: (08) 8405 4301
Phone Number: 02 9482 1922			Phone Number: (08) 8405 4300
Contact Name:			Spreadsheet of Results Required: Y / N
Delivery Method: Courier			Format:
Quote Number:			Turnaround Time Required:
			Invoice to: PPK
			Comments: 1 of 5

Date Sampled	Time	Sample I.D.	Container Size	Sample Location	Medium*	Preservative Type	Filtered (X)	TPH	BTEX	PAH's	OC/OP/PCB's	Metals**	Initials	Comments/Additional Information and/or Analysis Required
24/6/98		TP108 0-0.15	125mL	TP108	S	4°C							STH	
		TP108 1.0												
		TP108 1.5												
		TP108 2.9												
		TP109 0-0.15		TP109										
		TP109 1.2												
		TP109 1.7												
		TP109 3.5												
		TP109 3.8												
		TP110 0-0.15		TP110										
		TP110 1.3												
		TP110 2.6												

Relinquished by: Brenton Horn	Relinquished by:	Relinquished by:
Date & Time: 25/6/1998 1100	Date & Time:	Date & Time:
Company: PPK	Company:	Company:
Signature:	Signature:	Signature:
Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):
Date & Time:	Date & Time:	Date & Time:
Company:	Company:	Company:
Signature:	Signature:	Signature:

Medium*: S = Soil, W = Water, V = Vapour

Legend**: (circle the following to be tested)

Metals: Al As Be Cd Co Cr Cu Fe Hg Li Mg Mn Ni Pb Se Sn V Zn

Samples on Ice: ☑ Yes ☐ No

Please fax back a signed copy when samples are received at the laboratory

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Chain of Custody

Order No: 1930

Job Title:	AN Canberra
Laboratory Name:	AMDEL
Address:	6 Kelvey Place Asquith NSW
Fax Number:	02 9482 1734
Phone Number:	02 9482 1922
Contact Name:	
Delivery Method:	Courier
Quote Number:	

PPK Job Number:	27K140A
Job Location:	Canberra Rail Yards

Project Manager:	Stuart Taylor
Results Expected by/on:	
Fax Results to:	Stuart Taylor
Fax Number:	08 8405 4301
Phone Number:	088405 4300
Spreadsheet of Results Required:	Y / N
Format:	
Turnaround Time Required:	
Invoice to:	APK
Comments:	2 of 5

Date Sampled	Time	Sample I.D.	Container Size	Sample Location	Medium*	Preservative Type	Filtered (X)	TPH	BTEX	PAH's	OC/OP/PCB's	Metals**	Initials	Comments/Additional Information and/or Analysis Required
24/6/98		TP110 3-3	125 mL	TP110	S	<4°C							SJT	
		TP110 3-9												
		TP110 4-5												
		TP111 0-0-15		TP111										
		TP111 1-3												
		TP111 1-9												
		TP111 3-6												
		TP112 0-0-15		TP112										
		TP112 0-9												
		TP112 1-5												
		TP112 2-7												
		TP113 0-0-15		TP113										

Relinquished by: Brenton Harris	Relinquished by:	Relinquished by:
Date & Time: 25/6/98	Date & Time:	Date & Time:
Company: APK	Company:	Company:
Signature:	Signature:	Signature:
Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):
Date & Time:	Date & Time:	Date & Time:
Company:	Company:	Company:
Signature:	Signature:	Signature:

Medium*: S = Soil, W = Water, V = Vapour

Legend**: (circle the following to be tested)

Metals: Al As Be Cd Co Cr Cu Fe Hg Li Mg Mn Ni Pb Se Sn V Zn

Samples on Ice: ☑ Yes ☐ No

Please fax back a signed copy when samples are received at the laboratory

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Chain of Custody

Order No: 1931

Job Title: AN Canberra	PPK Job Number: 27K140A	Job Location: ~~[illegible]~~ Canberra Rail Yards	Project Manager: Stuart Taylor
Laboratory Name: AMDEL			Results Expected by/on:
Address: 5 Kelray Place Asquith NSW			Fax Results to: Stuart Taylor
Fax Number: 02 9482 1734			Fax Number: 08 8405 4301
Phone Number: 02 9482 1922			Phone Number: 08 8405 4300
Contact Name:			Spreadsheet of Results Required: Y / N
Delivery Method: Courier			Format:
Quote Number:			Turnaround Time Required:
			Invoice to: PPK
			Comments: 3 of 5

Date Sampled	Time	Sample I.D.	Container Size	Sample Location	Medium*	Preservative Type	Filtered (X)	TPH	BTEX	PAH's	OC/OP/PCB's	Metals**	Initials	Comments/Additional Information and/or Analysis Required
24/6/98		TP113 0.5	125 mL	TP113	S	<4°C							BJH	
↓		TP114 0-0.1	↓	TP114	↓	↓							↓	
		TP114 0.5		↓										
		TP114 0.8												
		TP114 1.4		↓										
		TP115 0-0.15		TP115										
		TP115 0.4-0.6		↓										
↓		TP115 1.0		↓										
25/6/98		TP116 0-0.15		TP116										
		TP116 0.5												
		TP116 1.0												
↓		TP116 1.5	↓	↓	↓	↓							↓	

Relinquished by: Brenton Hrvoj	Relinquished by:	Relinquished by:
Date & Time: 25/6/98 13:00	Date & Time:	Date & Time:
Company: PPK	Company:	Company:
Signature:	Signature:	Signature:
Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):
Date & Time:	Date & Time:	Date & Time:
Company:	Company:	Company:
Signature:	Signature:	Signature:

Medium*: S = Soil, W = Water, V = Vapour

Legend**: (circle the following to be tested)

Metals: Al As Be Cd Co Cr Cu Fe Hg Li Mg Mn Ni Pb Se Sn V Zn

Samples on Ice: ☑ Yes ☐ No

Please fax back a signed copy when samples are received at the laboratory

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Tel: (02) 9743 0333 Fax: (02) 9736 1568

Chain of Custody

Order No: 1932

Job Title: AN Canberra

PPK Job Number: 27K140A

Job Location: Canberra Rail Yards

Laboratory Name: AMDEL

Address: 5 Kelvin Place Nagu. th NSW

Fax Number: ~~02~~ 02 94821734

Phone Number: 02 94821922

Contact Name:

Delivery Method: By Courier

Quote Number:

Project Manager: Stuart Taylor

Results Expected by/on:

Fax Results to: Stuart Taylor

Fax Number: 08 8405 4301

Phone Number: 08 8405 4300

Spreadsheet of Results Required: Y / N

Format:

Turnaround Time Required:

Invoice to: PPK

Comments: 4 of 5

Date Sampled	Time	Sample I.D.	Container Size	Sample Location	Medium*	Preservative Type	Filtered (X)	TPH	BTEX	PAH's	OC/OP/PCB's	Metals**	Initials	Comments/Additional Information and/or Analysis Required
25/6/98		TP117 0-0.15	125mL	TP117	S	<4°C							BTH	
		TP117 0.15-0.5												
		TP117 1.5												
		TP118 0-0.15		TP118										
		TP118 1.4-0.5												
		TP118 1.2-1.3												
24/6/98		AB39 12 samples	125mL		S	<4°C							MLR	
		BH 40 4 samples												
		BH 41 3 samples												
		BH 42 4 samples												
		BH 43 3 samples												

Relinquished by: Brenton Horn	Relinquished by:	Relinquished by:
Date & Time: 25/6/98 (3pm	Date & Time:	Date & Time:
Company: PPK	Company:	Company:
Signature:	Signature:	Signature:
Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):
Date & Time:	Date & Time:	Date & Time:
Company:	Company:	Company:
Signature:	Signature:	Signature:

Medium*: S = Soil, W = Water, V = Vapour

Legend**: (circle the following to be tested)

Metals: Al As Be Cd Co Cr Cu Fe Hg Li Mg Mn Ni Pb Se Sn V Zn

Samples on Ice: ☑ Yes ☐ No

Please fax back a signed copy when samples are received at the laboratory

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Yellow Page - Project File Copy
Green Page - Remains in Book

Please deliver the goods and/or services to the office indicated:

☐ **Adelaide**
101 Pirie Street Adelaide SA 5000
Tel: (08) 8405 4300 Fax: (08) 8405 4301

☐ **Brisbane**
348 Edward Street, Brisbane QLD 4000
Tel: (07) 3218 2222 Fax: (07) 3831 4223

☐ **Melbourne**
163 Eastern Road, South Melbourne VIC 3205
Tel: (03) 9686 1166 Fax: (03) 9686 1110

☐ **Perth**
97 Broadway, Nedlands WA 6009
Tel: (08) 9389 8668 Fax: (08) 9389 8447

☐ **Sydney**
9 Blaxland Road, Rhodes NSW 2138
Tel: (02) 9743 0333 Fax: (02) 9736 1568

Chain of Custody

Order No: 1933

Job Title:	AN Canberra
Laboratory Name:	AMDEL
Address:	5 Kelvin Place Ashgrove NSW
Fax Number:	02 9482 1734
Phone Number:	02 9482 1922
Contact Name:	
Delivery Method:	Courier
Quote Number:	

PPK Job Number:	27K140A
Job Location:	Canberra Rail Yards

Project Manager:	Stuart Taylor
Results Expected by/on:	
Fax Results to:	Stuart Taylor
Fax Number:	08 8405 4301
Phone Number:	08 8405 4300
Spreadsheet of Results Required:	Y / N
Format:	
Turnaround Time Required:	
Invoice to:	PPK
Comments:	5 of 5

Date Sampled	Time	Sample I.D.	Container Size	Sample Location	Medium*	Preservative Type	Filtered (X)	TPH	BTEX	PAH's	OC/OP/PCB's	Metals**	Initials	Comments/Additional Information and/or Analysis Required
24/6/98		BH44 4 samples	125mL		S	4°C							MRR	
		BH45 2 samples												
		BH46 3 samples												
		BH47 3 samples												
		BH48 2 samples												

Relinquished by: Brenton Lewis	Relinquished by:	Relinquished by:
Date & Time: 25/6/98	Date & Time:	Date & Time:
Company: PPK	Company:	Company:
Signature:	Signature:	Signature:
Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):
Date & Time:	Date & Time:	Date & Time:
Company:	Company:	Company:
Signature:	Signature:	Signature:

Medium*: S = Soil, W = Water, V = Vapour

Legend**: (circle the following to be tested)

Metals: Al As Be Cd Co Cr Cu Fe Hg Li Mg Mn Ni Pb Se Sn V Zn

Samples on Ice: ☑ Yes ☐ No

Please fax back a signed copy when samples are received at the laboratory

Site	Sample	analysis	Sample	analysis	Sample	analysis	Sample	analysis
BH1	~~0-0.2~~	~~TPH,BTEX,Metals,PAH's~~						
BH2	E46103 - 0-0.15 ✓	TPH,BTEX,Metals,PAH's	04 - 4.0 ✓	Metals,TPH,PAH's,BTEX	05 - 6.0 ✓	Metals,TPH,PAH's,BTEX		
BH3	06 - 0-0.15 ✓	TPH,BTEX,Metals,PAH's	07 - 5.0 ✓	Metals,TPH,PAH's,BTEX	08 - 8.0 ✓	Metals,TPH,PAH's,BTEX		
BH4	09 - 0-0.15 ✓	TPH,BTEX,Metals,PAH's	10 - 4.0 ✓	Metals,TPH,PAH's,BTEX	11 - 5.0 ✓	Metals,TPH,PAH's,BTEX		
BH5	12 0-0.05 _	~~TPH,BTEX,Metals,PAH's~~	13 - 5.0 ✓	Metals,TPH,PAH's,BTEX	~~13~~ - 6.0 ✓	Metals,TPH,PAH's,BTEX		
BH6	~~15~~ 0-0.15	~~TPH,BTEX,Metals,PAH's~~	14 - 4.0 ✓	Metals,TPH,PAH's,BTEX	15 - 5.0 ✓	Metals,TPH,PAH's,BTEX		
BH7	16 0.25-0.35 ✓	TPH,BTEX,Metals,PAH's,OCP's	17 - 3.0 ✓	Metals,TPH,PAH's,BTEX	18 - 4.0 ✓	Metals,TPH,PAH's,BTEX		
BH8	19 - 0-0.1 ✓	TPH,BTEX,Metals,PAH's	20 4.0 ✓	Metals,TPH,PAH's,BTEX				
BH9	21 - 0.4-0.5 ✓	TPH,BTEX,Metals,PAH's,OCP's	22 - 4.0 ✓	Metals,TPH,PAH's,BTEX				
BH10	23 - 0.5-0.65 ✓	TPH,BTEX,Metals,PAH's,OCP's						
BH11	24 - 0-0.15 ✓	TPH,BTEX,Metals,PAH's,OCP's						
BH12	25 - 0.1-0.3 ✓	TPH,BTEX,Metals,PAH's,OCP's						
BH13	26 - 0-0.15 ✓	pH,Metals,OCP's,OPP's						
BH14	27 - 0-0.15 ✓	pH,PAH's,Metals,OCP's,OPP's	28 - 0.15-0.3 ✓	pH,PAH's,Metals,OCP's,OPP's	29 - 0.4-0.5 ✓	Metals,pH,PAH's		
BH15	30 - 0-0.15 ✓	pH,PAH's,Metals,OCP's,OPP's	31 - 1.5 ✓	Metals,pH,PAH's	~~32~~ 3.0 _	~~Metals,pH,PAH's~~	32 - 5.0 ✓	Metals,pH,PAH's
BH16	~~33~~ 2x - 0-0.15 ✓	Metals,pH	~~34~~ - 0.4-0.5 ✓	Metals,pH	0.8-0.9 _	Metals,pH		
BH17	35 - 0-0.1 ✓	pH,Metals,OCP's,OPP's	36 - 0.9-1.0 ✓	pH,Metals,OCP's,OPP's				
BH18	37 - 0-0.15 ✓	Metals,PAH's,OCP's	38 - 3.0 ✓	TPH,BTEX,Metals,PAH's	39 - 5.0 ✓	TPH,BTEX,Metals,PAH's		
BH19	40 - 0-0.15 ✓	pH,Metals,PAH's,OCP's	41 - 2.0 ✓	TPH,BTEX,Metals,PAH's	42 - 4.0 ✓	TPH,BTEX,Metals,PAH's		
BH20	43 - 0-0.15 ✓	pH,Metals,PAH's,OCP's	44 - 2.0 ✓	TPH,BTEX,Metals,PAH's	45 - 4.0 ✓	TPH,BTEX,Metals,PAH's		
BH21	46 - 0-0.15 ✓	pH,Metals,PAH's,OCP's						
BH22	47 - 0-0.15 ✓	pH,Metals,PAH's,OCP's	48 - 0.3-0.4 ✓	pH,Metals,PAH's,OCP's				
BH23	49 - 0-0.15 ✓	pH,Metals,PAH's,OCP's	50 - 2.5 ✓	TPH,BTEX,Metals,PAH's	51 - 3.0 ✓	TPH,BTEX,Metals,PAH's		
BH24	52 - 0.5-0.6 ✓	pH,Metals,PAH's,OCP's	53 - 1.5-1.6 ✓	TPH,BTEX,Metals,PAH's	54 - 2.0 ✓	TPH	55 - 4.0 ✓	TPH,BTEX,Metals,PAH's
BH25	56 - 0-0.15 ✓	pH,Metals,OCP's						
BH26	57 - 0-0.1 ✓	pH,Metals,OCP's	58 - 1.0-1.1 ✓	pH,Metals,OCP's				
BH27	59 - 0-0.15 ✓	pH,Metals,OCP's						
BH28	60 - 0-0.15 ✓	pH,Metals,OCP's	61 - 3.0 ✓	TPH,BTEX,Metals				
BH29	62 - 0-0.15 ✓	PAH's,Metals,OCP's	63 - 3.0 ✓	TPH,BTEX,Metals,PAH's	64 - 3.5 ✓	TPH,BTEX,Metals,PAH's		
BH30	65 - 0-0.15 ✓	PAH's,Metals,OCP's	66 - 0.25-0.4 ✓	TPH,BTEX,Metals,PAH's	67 - 3.0 ✓	TPH,BTEX,Metals,PAH's	4.0 _	~~TPH,BTEX,Metals,PAH's~~
BH31	68 - 0-0.1 ✓	PAH's,Metals,OCP's						
BH32	69 - 0-0.15 ✓	PAH's,Metals,OCP's	70 - 0.5-0.6 ✓	pH,Metals,PAH's,OCP's				
BH33	71 - 1.5 ✓	PAH's,Metals						
BH34	72 - 0.05-0.7 ✓	PAH's,Metals,OCP's						
BH35	73 - 0-0.05 ✓	PAH's,Metals,OCP's	74 - 2.0 ✓	TPH,BTEX,Metals,PAH's	75 - 4.0 ✓	TPH,BTEX,Metals,PAH's		
BH36	76 - 0-0.2 ✓	PAH's,Metals,OCP's						
BH37	77 - 0-0.4 ✓	PAH's,Metals,OCP's						
BH38	78 - 0-0.25 ✓	PAH's,Metals,OCP's						
BH39	79 - 1.0 ✓	PAH's,Metals,pH						
BH40	80 - 0-0.05 ✓	PAH's,Metals,OCP's	81 - 0.38-0.62 ✓	PAH's,Metals,OCP's				
BH41	82 - 0.15-0.41 ✓	PAH's,Metals,OCP's						
BH42	83 - 0-0.05 ✓	PAH's,Metals,OCP's						
BH43	84 - 0-0.15 ✓	PAH's,Metals,TPH,OCP's	85 - 0.15-0.57 ✓	PAH's,Metals				
BH44	86 - 0-0.15 ✓	pH,Metals,OCP's						
BH45	87 - 0-0.31 ✓	PAH's,Metals,TPH,OCP's						
BH46	88 - 0-0.21 ✓	pH,Metals,OCP's						
BH47	89 - 0-0.1 ✓	PAH's,Metals,TPH,OCP's	90 - 0.1-0.31 ✓	PAH's,Metals,TPH,OCP's				
BH48	91 - 0-0.15 ✓	PAH's,Metals,TPH,OCP's	92 - 0.15-0.40 ✓	PAH's,Metals,TPH,OCP's				

RECEIVED
29 JUN 1998
8E01086

Job No 27K1404

PPK Adelaide

04/2 3940 57

27/06/98 14:32 Pg: 1

348 - held. 91 - or + 6 missing = 98

Facsimile

PPK
Environment&Infrastructure

Organisation:	Amdel Environmental Laboratories
Attention:	Andrew Spencer
Fax No:	02 9482 1734
From:	Stuart Taylor
Date:	1 July 1998
No of Pages (incl cover):	2
Our Reference:	27K140A
Re:	Analytical Requests for TP samples

URGENT

Andrew

Please find attached a spreadsheet detailing our analytical requirements for the Test Pit (TP) samples recovered from the Canberra Railyards.

Required turn around time is two weeks.

Please batch and invoice along with our earlier submission.

If you require any further information, please do not hesistate to call me on (08) 8405 4300.

Regards

STUART TAYLOR

RECEIVED
01 JUL 1998
27E01140

ACN 078 004 798
A NATA Certified Company

PPK Environment & Infrastructure Pty Ltd
101 Pirie Street
Adelaide SA 5000
GPO Box 398
Adelaide SA 5001
Australia

Tel: + 61 8 8405 4300
Fax: + 61 8 8405 4301
Email: ppkadel@ozemail.com.au

Environment & Infrastructure Services

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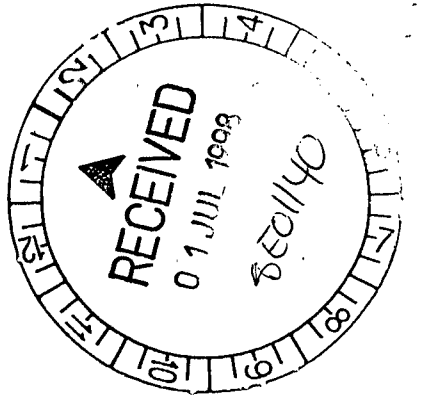
- Operational & maintenance;
- Outsourcing & partnering;
- Financing & equity participation

Industry Sectors:

- Mining & Resources
- Transport
- Urban Development & Building
- Water & Wastewater

Please phone this office if any part of this transmission failed or was misdirected

Site	Sample	analysis	Sample	analysis	Sample	analysis		
TP101	23 1.0 ✓	Metals	24 3.0m ✓	Metals	25 3.7m ✓	metals, SVOC screen		
TP102	26 0.4m ✓	Metals, PAH's	27 2.6m ✓	Metals, SVOC screen	28 3.7m ✓	Metals, pH		
TP103	29 0-0.15 ✓	Metals, pH, SVOC screen	30 3.7m ✓	Metals, pH, SVOC screen				
TP104	31 0-0.15 ✓	metals	32 1.0m ✓	metals, pH	33 3.6m ✓	Metals, pH		
TP105	34 3.8m ✓	Metals, SVOC sreeen	35 4.4m ✓	Metals				
TP106	36 0-0.15 ✓	metals, pH	37 4.2m ✓	metlas, pH				
TP107	38 4.3m ✓	TPH, BTEX, Metals, PAH's	39 5.1m ✓	Metals, TPH, PAH's, BTEX				
TP108	40 0-0.15m ✓	metals, pH, OCPs	41 2.9m ✓	metals, pH				
TP109	42 3.5m ✓	metals, SVOC screen						
TP110	43 0-0.15m ✓	metals, PAHs	44 3.9m ✓	metals, SVOC screen				
TP111	45 0-0.15 ✓	metals						
TP112	46 0.9m ✓	metals, PAHs						
TP113	47 0.5m ✓	metals						
TP114	48 0-0.1m ✓	metals, PAHs	49 0.8m ✓	metals, PAhs				
TP115	50 0-0.15 ✓	metals, PAHs	51 1.0m ✓	metals, PAHs				
TP116	52 0-0.15m ✓	PAHs	53 0.5m ✓	PAHs	54 1.0m ✓	PAHs		
TP117	55 0.4-0.5m ✓	metals, pH						
TP118	56 0-0.15m ✓	PAHs, metals	57 0.4-0.5m ✓	metals, PAhs				



Facsimile

PPK
Environment&Infrastructure

Organisation:	**Australian Environmental Laboratory**		
Attention:	**Sussan Cassar**		
Fax No:	**03 98184126**		
From:	STUART TAYLOR		
Date:	9 July 1998	No of Pages (incl cover):	1
Our Reference:	27K140A		
Re:	**Canberra Railyards Analyytical Request**		

Dear Susan

Further to our most recent telephone conversation, please arrange for the following analytical work to be undertaken on the four samples provided to you by Amdel.

The four samples should be labelled as BD 1, BD2, BD3 and BD4.

Each of these samples requires the following analysis:

- Metals (As, Cd, Cr, Cu, Hg, Pb, Zn)
- pH

Please reference PPK project number 27K140A - Australian National Canberra Railyards ESA Program.

The required turnaround time is 2 weeks.

Please all me on (08) 84054300 should you require any further information.

Yours Sincerely

STUART TAYLOR

ACN 078 004 798
A NATA Certified Company

PPK Environment & Infrastructure Pty Ltd
101 Pirie Street
Adelaide SA 5000
GPO Box 398
Adelaide SA 5001
Australia

Tel: + 61 8 8405 4300
Fax: + 61 8 8405 4301
Email: ppkadel@ozemail.com.au

Environment & Infrastructure Services

- Planning, investigation, design, project management;
- Operational & maintenance;
- Outsourcing & partnering;
- Financing & equity participation

Industry Sectors:

- Mining & Resources
- Transport
- Urban Development & Building
- Water & Wastewater

Please phone this office if any part of this transmission failed or was misdirected

Appendix F

Certified Laboratory Results (Soil)

Accreditation No. 1464

ENVIRONMENTAL AND INDUSTRIAL SERVICES DIVISION
Trading as Australian Analytical Laboratories Pty Ltd
ACN 001 491 667

Correspondence to:
PO BOX 514
HORNSBY NSW 2077

5 Kelray Place
ASQUITH NSW 2077
Telephone: (02) 9482 1922
Facsimile: (02) 9482 1734

CERTIFICATE OF ANALYSIS

Contents :
1) Cover Page
2) Analysis Report Pages
3) QA/QC Appendix

REPORT No : 8E01086

ATTENTION : Mr Stuart Taylor

CLIENT : PPK Adelaide

SAMPLES : 90

REFERENCE : 27K140A

DATE RECEIVED : 24/06/98

DATE REPORTED : 09/07/98

Method	Description	Extracted	Analysed
E7500	Moisture (%w/w)	04/07/98	06/07/98
E1220	Total Petroleum Hydrocarbons	02/07/98	09/07/98
E1010	Benzene,Toluene,Ethylbenzene & Xylene	01/07/98	04/07/98
E5910	Metals by ICP-AES	03/07/98	03/07/98
E5950	Mercury in Soil	02/07/98	09/07/98
E1110	Polynuclear Aromatic Hydrocarbons	02/07/98	03/07/98
E1080	Organochlorine Pesticides	01/07/98	09/07/98
E3600	pH in Soil	06/07/98	08/07/98
E1090	Organophosphorus Pesticides	01/07/98	05/07/98

RESULTS

All samples were analysed as received. This report relates specifically to the samples received.
Results relate to the source material only to the extent that the samples as supplied are truly representative of the sample source. This report replaces any preliminary results issued.
Note that for schemes indicated with * NATA accreditation does not cover the performance of this service.

PLEASE SEE ATTACHED PAGES FOR RESULTS

per G.W. ANDERSON
Manager Environmental Sydney

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48903	E48904	E48905	E48906	E48907
		BH2			BH3	
	Sample Id	0-0.15	BH2 4.0	BH2 6.0	0-0.15	BH3 5.0
	PQL					
Moisture Content	1	14%	59%	34%	14%	14%
E1220 TPH in Soil						
Total C6-C36	-	nd	1562	7272	nd	624
C6-C9 Fraction	10	nd	50	nd	nd	nd
C10-C14 Fraction	10	nd	916	22	nd	94
C15-C28 Fraction	50	nd	646	5511	nd	531
C29-C36 Fraction	50	nd	nd	1739	nd	nd
E1010 BTEX (P&T) in Soil						
Benzene	0.5	nd	nd	nd	nd	nd
Toluene	1	nd	nd	nd	nd	nd
Ethylbenzene	1	nd	5	nd	nd	nd
Total Xylenes	3	nd	39	nd	nd	nd
pH		--	--	--	--	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48908	E48909	E48910	E48911	E48912
			BH4			
	Sample Id	BH3 8.0	0-0.15	BH4 4.0	BH4 5.0	BH5 5.0
	PQL					
Moisture Content	1	10%	14%	15%	18%	13%
E1220 TPH in Soil						
Total C6-C36	-	6622	nd	179	nd	124
C6-C9 Fraction	10	nd	nd	nd	nd	63
C10-C14 Fraction	10	nd	nd	29	nd	61
C15-C28 Fraction	50	5055	nd	150	nd	nd
C29-C36 Fraction	50	1566	nd	nd	nd	nd
E1010 BTEX (P&T) in Soil						
Benzene	0.5	nd	nd	nd	nd	nd
Toluene	1	nd	nd	nd	nd	nd
Ethylbenzene	1	nd	nd	nd	nd	nd
Total Xylenes	3	nd	nd	nd	nd	nd
pH		--	--	--	--	--

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nd = <PQL
-- = Not Applicable

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Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48913	E48914	E48915	E48916	E48917
					BH7 0.25	
	Sample Id	BH5 6.0	BH6 4.0	BH6 5.0	-0.35	BH7 3.0
	PQL					
Moisture Content	**1**	12%	12%	17%	17%	18%
E1220 TPH in Soil						
Total C6-C36	**-**	nd	nd	nd	nd	nd
C6-C9 Fraction	**10**	nd	nd	nd	nd	nd
C10-C14 Fraction	**10**	nd	nd	nd	nd	nd
C15-C28 Fraction	**50**	nd	nd	nd	nd	nd
C29-C36 Fraction	**50**	nd	nd	nd	nd	nd
E1010 BTEX (P&T) in Soil						
Benzene	**0.5**	nd	nd	nd	nd	nd
Toluene	**1**	nd	nd	nd	nd	nd
Ethylbenzene	**1**	nd	nd	nd	nd	nd
Total Xylenes	**3**	nd	nd	nd	nd	nd
pH		--	--	--	--	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48918	E48919	E48920	E48921	E48922
			BH8		BH9	
	Sample Id	BH7 4.0	0-0.1	BH8 4.0	0.4-0.5	BH9 4.0
	PQL					
Moisture Content	1	28%	13%	31%	15%	10%
E1220 TPH in Soil						
Total C6-C36	-	nd	nd	nd	nd	nd
C6-C9 Fraction	10	nd	nd	nd	nd	nd
C10-C14 Fraction	10	nd	nd	nd	nd	nd
C15-C28 Fraction	50	nd	nd	nd	nd	nd
C29-C36 Fraction	50	nd	nd	nd	nd	nd
E1010 BTEX (P&T) in Soil						
Benzene	0.5	nd	nd	nd	nd	nd
Toluene	1	nd	nd	nd	nd	nd
Ethylbenzene	1	nd	nd	nd	nd	nd
Total Xylenes	3	nd	nd	nd	nd	nd
pH		--	--	--	--	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48923	E48924	E48925	E48926	E48927
		BH10	BH11	BH12	BH13	BH14
	Sample Id	0.5-0.65	0-0.15	0.1-0.3	0-0.15	0-0.15
	PQL					
Moisture Content	**1**	19%	14%	7%	22%	16%
E1220 TPH in Soil						
Total C6-C36	**-**	nd	nd	560	--	--
C6-C9 Fraction	**10**	nd	nd	nd	--	--
C10-C14 Fraction	**10**	nd	nd	nd	--	--
C15-C28 Fraction	**50**	nd	nd	165	--	--
C29-C36 Fraction	**50**	nd	nd	395	--	--
E1010 BTEX (P&T) in Soil						
Benzene	**0.5**	nd	nd	nd	--	--
Toluene	**1**	nd	nd	nd	--	--
Ethylbenzene	**1**	nd	nd	nd	--	--
Total Xylenes	**3**	nd	nd	nd	--	--
pH		--	--	--	6.3	6.2

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48928	E48929	E48930	E48931	E48932
		BH14	BH14	BH15		
	Sample Id	0.15-0.3	0.4-0.5	0-0.15	BH15 1.5	BH15 5.0
	PQL					
Moisture Content	1	13%	7%	14%	12%	15%
E1220 TPH in Soil						
Total C6-C36	-	--	--	--	--	--
C6-C9 Fraction	10	--	--	--	--	--
C10-C14 Fraction	10	--	--	--	--	--
C15-C28 Fraction	50	--	--	--	--	--
C29-C36 Fraction	50	--	--	--	--	--
E1010 BTEX (P&T) in Soil						
Benzene	0.5	--	--	--	--	--
Toluene	1	--	--	--	--	--
Ethylbenzene	1	--	--	--	--	--
Total Xylenes	3	--	--	--	--	--
pH		6.2	6.6	6.5	6.7	8.2

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48933	E48934	E48935	E48936	E48937
		BH16	BH16	BH17	BH17	BH18
	Sample Id	0-0.15	0.4-0.5	0-0.1	0.9-1.0	0-0.15
	PQL					
Moisture Content	**1**	18%	16%	13%	18%	8%
E1220 TPH in Soil						
Total C6-C36	**-**	--	--	--	--	--
C6-C9 Fraction	**10**	--	--	--	--	--
C10-C14 Fraction	**10**	--	--	--	--	--
C15-C28 Fraction	**50**	--	--	--	--	--
C29-C36 Fraction	**50**	--	--	--	--	--
E1010 BTEX (P&T) in Soil						
Benzene	**0.5**	--	--	--	--	--
Toluene	**1**	--	--	--	--	--
Ethylbenzene	**1**	--	--	--	--	--
Total Xylenes	**3**	--	--	--	--	--
pH		7.5	7.4	7.1	8.5	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48938	E48939	E48940	E48941	E48942
				BH19		
	Sample Id	BH18 3.0	BH18 5.0	0-0.15	BH19 2.0	BH19 4.0
	PQL					
Moisture Content	1	11%	16%	16%	15%	20%
E1220 TPH in Soil						
Total C6-C36	-	107	nd	--	21	nd
C6-C9 Fraction	10	nd	nd	--	nd	nd
C10-C14 Fraction	10	51	nd	--	21	nd
C15-C28 Fraction	50	56	nd	--	nd	nd
C29-C36 Fraction	50	nd	nd	--	nd	nd
E1010 BTEX (P&T) in Soil						
Benzene	0.5	nd	nd	--	nd	nd
Toluene	1	nd	nd	--	nd	nd
Ethylbenzene	1	nd	nd	--	nd	nd
Total Xylenes	3	nd	nd	--	nd	nd
pH		--	--	7.0	--	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48943	E48944	E48945	E48946	E48947
		BH20			BH21	BH22
	Sample Id	0-0.15	BH20 2.0	BH20 4.0	0-0.15	0-0.15
	PQL					
Moisture Content	**1**	10%	18%	16%	17%	11%
E1220 TPH in Soil						
Total C6-C36	**-**	--	1556	nd	--	--
C6-C9 Fraction	**10**	--	24	nd	--	--
C10-C14 Fraction	**10**	--	743	nd	--	--
C15-C28 Fraction	**50**	--	789	nd	--	--
C29-C36 Fraction	**50**	--	nd	nd	--	--
E1010 BTEX (P&T) in Soil						
Benzene	**0.5**	--	nd	nd	--	--
Toluene	**1**	--	nd	nd	--	--
Ethylbenzene	**1**	--	1	nd	--	--
Total Xylenes	**3**	--	14	nd	--	--
pH		6.9	--	--	6.4	6.7

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48948	E48949	E48950	E48951	E48952
		BH22	BH23			BH24
	Sample Id	0.3-0.4	0-0.15	BH23 2.5	BH23 3.0	0.5-0.6
	PQL					
Moisture Content	**1**	16%	8%	14%	14%	12%
E1220 TPH in Soil						
Total C6-C36	**-**	--	--	61	nd	--
C6-C9 Fraction	**10**	--	--	nd	nd	--
C10-C14 Fraction	**10**	--	--	61	nd	--
C15-C28 Fraction	**50**	--	--	nd	nd	--
C29-C36 Fraction	**50**	--	--	nd	nd	--
E1010 BTEX (P&T) in Soil						
Benzene	**0.5**	--	--	nd	nd	--
Toluene	**1**	--	--	nd	nd	--
Ethylbenzene	**1**	--	--	nd	nd	--
Total Xylenes	**3**	--	--	nd	nd	--
pH		6.7	6.7	--	--	6.6

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48953	E48954	E48955	E48956	E48957
		BH24			BH25	BH26
	Sample Id	1.5-1.6	BH24 2.0	BH24 4.0	0-0.15	0-0.1
	PQL					
Moisture Content	1	16%	20%	19%	13%	24%
E1220 TPH in Soil						
Total C6-C36	-	nd	960	nd	--	--
C6-C9 Fraction	10	nd	nd	nd	--	--
C10-C14 Fraction	10	nd	372	nd	--	--
C15-C28 Fraction	50	nd	589	nd	--	--
C29-C36 Fraction	50	nd	nd	nd	--	--
E1010 BTEX (P&T) in Soil						
Benzene	0.5	nd	--	nd	--	--
Toluene	1	nd	--	nd	--	--
Ethylbenzene	1	nd	--	nd	--	--
Total Xylenes	3	nd	--	nd	--	--
pH		--	--	--	6.3	6.7

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48958	E48959	E48960	E48961	E48962
		BH26	BH27	BH28		BH29
	Sample Id	1.0-1.1	0-0.15	0-0.15	BH28 3.0	0-0.15
	PQL					
Moisture Content	1	21%	18%	16%	16%	22%
E1220 TPH in Soil						
Total C6-C36	-	--	--	--	nd	--
C6-C9 Fraction	10	--	--	--	nd	--
C10-C14 Fraction	10	--	--	--	nd	--
C15-C28 Fraction	50	--	--	--	nd	--
C29-C36 Fraction	50	--	--	--	nd	--
E1010 BTEX (P&T) in Soil						
Benzene	0.5	--	--	--	nd	--
Toluene	1	--	--	--	nd	--
Ethylbenzene	1	--	--	--	nd	--
Total Xylenes	3	--	--	--	nd	--
pH		8.1	7.0	6.8	--	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Analyte	Lab No	E48963	E48964	E48965	E48966	E48967
				BH30	BH30	
	Sample Id	BH29 3.0	BH29 3.5	0-0.15	0.25-0.4	BH30 3.0
	PQL					
Moisture Content	**1**	23%	15%	24%	20%	23%
E1220 TPH in Soil						
Total C6-C36	**-**	nd	nd	--	nd	nd
C6-C9 Fraction	**10**	nd	nd	--	nd	nd
C10-C14 Fraction	**10**	nd	nd	--	nd	nd
C15-C28 Fraction	**50**	nd	nd	--	nd	nd
C29-C36 Fraction	**50**	nd	nd	--	nd	nd
E1010 BTEX (P&T) in Soil						
Benzene	**0.5**	nd	nd	--	nd	nd
Toluene	**1**	nd	nd	--	nd	nd
Ethylbenzene	**1**	nd	nd	--	nd	nd
Total Xylenes	**3**	nd	nd	--	nd	nd
pH		--	--	--	--	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Analyte	Lab No	E48968	E48969	E48970	E48971	E48972
		BH31	BH32	BH32		BH34
	Sample Id	0-0.1	0-0.15	0.5-0.6	BH33 1.5	0.05-0.7
	PQL					
Moisture Content	**1**	23%	12%	20%	23%	15%
E1220 TPH in Soil						
Total C6-C36	**-**	--	--	--	--	--
C6-C9 Fraction	**10**	--	--	--	--	--
C10-C14 Fraction	**10**	--	--	--	--	--
C15-C28 Fraction	**50**	--	--	--	--	--
C29-C36 Fraction	**50**	--	--	--	--	--
E1010 BTEX (P&T) in Soil						
Benzene	**0.5**	--	--	--	--	--
Toluene	**1**	--	--	--	--	--
Ethylbenzene	**1**	--	--	--	--	--
Total Xylenes	**3**	--	--	--	--	--
pH		--	--	8.6	--	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

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Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48973	E48974	E48975	E48976	E48977
		BH35			BH36	BH37
	Sample Id	0-0.05	BH35 2.0	BH35 4.0	0-0.2	0-0.4
	PQL					
Moisture Content	1	18%	17%	18%	13%	19%
E1220 TPH in Soil						
Total C6-C36	-	--	nd	nd	--	--
C6-C9 Fraction	10	--	nd	nd	--	--
C10-C14 Fraction	10	--	nd	nd	--	--
C15-C28 Fraction	50	--	nd	nd	--	--
C29-C36 Fraction	50	--	nd	nd	--	--
E1010 BTEX (P&T) in Soil						
Benzene	0.5	--	nd	nd	--	--
Toluene	1	--	nd	nd	--	--
Ethylbenzene	1	--	nd	nd	--	--
Total Xylenes	3	--	nd	nd	--	--
pH		--	--	--	--	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48978	E48979	E48980	E48981	E48982
		BH38		BH40	BH40	BH41
	Sample Id	0-0.25	BH39 1.0	0-0.05	.38-0.62	.15-0.41
	PQL					
Moisture Content	**1**	12%	14%	21%	20%	14%
E1220 TPH in Soil						
Total C6-C36	**-**	--	--	--	--	--
C6-C9 Fraction	**10**	--	--	--	--	--
C10-C14 Fraction	**10**	--	--	--	--	--
C15-C28 Fraction	**50**	--	--	--	--	--
C29-C36 Fraction	**50**	--	--	--	--	--
E1010 BTEX (P&T) in Soil						
Benzene	**0.5**	--	--	--	--	--
Toluene	**1**	--	--	--	--	--
Ethylbenzene	**1**	--	--	--	--	--
Total Xylenes	**3**	--	--	--	--	--
pH		--	7.5	--	--	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48983	E48984	E48985	E48986	E48987
		BH42	BH43	BH43	BH44	BH45
	Sample Id	0-0.05	0-0.15	.15-0.57	0-0.15	0-0.31
	PQL					
Moisture Content	1	15%	10%	13%	19%	18%
E1220 TPH in Soil						
Total C6-C36	-	--	nd	--	--	367
C6-C9 Fraction	10	--	nd	--	--	nd
C10-C14 Fraction	10	--	nd	--	--	nd
C15-C28 Fraction	50	--	nd	--	--	367
C29-C36 Fraction	50	--	nd	--	--	nd
E1010 BTEX (P&T) in Soil						
Benzene	0.5	--	--	--	--	--
Toluene	1	--	--	--	--	--
Ethylbenzene	1	--	--	--	--	--
Total Xylenes	3	--	--	--	--	--
pH		--	--	--	7.5	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48988	E48989	E48990	E48991	E48992
		BH46	BH47	BH47	BH48	BH48
	Sample Id	0-0.21	0-0.1	0.1-0.31	0-0.15	.15-0.40
	PQL					
Moisture Content	1	13%	17%	10%	23%	10%
E1220 TPH in Soil						
Total C6-C36	-	--	nd	nd	nd	nd
C6-C9 Fraction	10	--	nd	nd	nd	nd
C10-C14 Fraction	10	--	nd	nd	nd	nd
C15-C28 Fraction	50	--	nd	nd	nd	nd
C29-C36 Fraction	50	--	nd	nd	nd	nd
E1010 BTEX (P&T) in Soil						
Benzene	0.5	--	--	--	--	--
Toluene	1	--	--	--	--	--
Ethylbenzene	1	--	--	--	--	--
Total Xylenes	3	--	--	--	--	--
pH		7.2	--	--	--	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48903	E48904	E48905	E48906	E48907
		BH2			BH3	
	Sample Id	0-0.15	BH2 4.0	BH2 6.0	0-0.15	BH3 5.0
	PQL					
E5910 Metals in Soil						
Lead	**5**	45	33	25	72	42
Zinc	**5**	144	12	163	113	37
Arsenic	**5**	11	18	nd	8	12
Copper	**5**	32	12	43	34	42
Chromium	**5**	54	25	31	48	11
Cadmium	**0.5**	17.4	nd	nd	12.9	0.5
Mercury	**0.05**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48908	E48909	E48910	E48911	E48912
			BH4			
	Sample Id	BH3 8.0	0-0.15	BH4 4.0	BH4 5.0	BH5 5.0
	PQL					
E5910 Metals in Soil						
Lead	**5**	18	32	30	8	25
Zinc	**5**	27	40	118	49	297
Arsenic	**5**	7	7	8	10	114
Copper	**5**	39	21	44	56	24
Chromium	**5**	8	59	12	23	28
Cadmium	**0.5**	nd	1.0	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48913	E48914	E48915	E48916	E48917
					BH7 0.25	
	Sample Id	BH5 6.0	BH6 4.0	BH6 5.0	-0.35	BH7 3.0
	PQL					
E5910 Metals in Soil						
Lead	**5**	16	167	171	37	214
Zinc	**5**	244	2374	1830	80	719
Arsenic	**5**	104	56	82	67	66
Copper	**5**	27	36	37	33	32
Chromium	**5**	26	38	31	33	8
Cadmium	**0.5**	nd	1.0	1.1	nd	2.9
Mercury	**0.05**	nd	nd	nd	nd	0.05

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Analyte	Lab No	E48918	E48919	E48920	E48921	E48922
			BH8		BH9	
	Sample Id	BH7 4.0	0-0.1	BH8 4.0	0.4-0.5	BH9 4.0
	PQL					
E5910 Metals in Soil						
Lead	**5**	85	235	752	45	27
Zinc	**5**	604	92	1821	45	94
Arsenic	**5**	45	14	333	15	6
Copper	**5**	21	28	133	24	21
Chromium	**5**	10	51	nd	48	25
Cadmium	**0.5**	2.0	nd	1.2	nd	nd
Mercury	**0.05**	nd	0.11	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48923	E48924	E48925	E48926	E48927
		BH10	BH11	BH12	BH13	BH14
	Sample Id	0.5-0.65	0-0.15	0.1-0.3	0-0.15	0-0.15
	PQL					
E5910 Metals in Soil						
Lead	**5**	8	50	14	22	18
Zinc	**5**	100	70	24	63	39
Arsenic	**5**	6	12	29	6	nd
Copper	**5**	14	126	34	12	8
Chromium	**5**	5	41	17	20	14
Cadmium	**0.5**	nd	nd	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

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Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48928	E48929	E48930	E48931	E48932
		BH14	BH14	BH15		
	Sample Id	0.15-0.3	0.4-0.5	0-0.15	BH15 1.5	BH15 5.0
	PQL					
E5910 Metals in Soil						
Lead	**5**	26	15	35	35	30
Zinc	**5**	149	14	91	86	57
Arsenic	**5**	6	nd	9	10	7
Copper	**5**	13	9	23	33	18
Chromium	**5**	25	33	32	36	32
Cadmium	**0.5**	nd	nd	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	0.05

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48933	E48934	E48935	E48936	E48937
		BH16	BH16	BH17	BH17	BH18
	Sample Id	0-0.15	0.4-0.5	0-0.1	0.9-1.0	0-0.15
	PQL					
E5910 Metals in Soil						
Lead	**5**	26	80	37	12	40
Zinc	**5**	70	277	52	26	81
Arsenic	**5**	29	8	7	6	14
Copper	**5**	24	32	55	20	14
Chromium	**5**	37	38	42	30	20
Cadmium	**0.5**	nd	0.6	nd	nd	nd
Mercury	**0.05**	nd	0.20	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48938	E48939	E48940	E48941	E48942
				BH19		
	Sample Id	BH18 3.0	BH18 5.0	0-0.15	BH19 2.0	BH19 4.0
	PQL					
E5910 Metals in Soil						
Lead	**5**	27	38	49	13	25
Zinc	**5**	175	195	76	153	200
Arsenic	**5**	16	22	14	8	15
Copper	**5**	33	27	27	26	32
Chromium	**5**	21	16	39	24	13
Cadmium	**0.5**	nd	nd	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48943	E48944	E48945	E48946	E48947
		BH20			BH21	BH22
	Sample Id	0-0.15	BH20 2.0	BH20 4.0	0-0.15	0-0.15
	PQL					
E5910 Metals in Soil						
Lead	**5**	23	28	24	30	60
Zinc	**5**	49	47	67	69	74
Arsenic	**5**	8	6	6	13	7
Copper	**5**	13	30	33	26	16
Chromium	**5**	21	30	27	40	49
Cadmium	**0.5**	nd	nd	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48948	E48949	E48950	E48951	E48952
		BH22	BH23			BH24
	Sample Id	0.3-0.4	0-0.15	BH23 2.5	BH23 3.0	0.5-0.6
	PQL					
E5910 Metals in Soil						
Lead	**5**	31	25	13	6	24
Zinc	**5**	47	25	48	41	35
Arsenic	**5**	22	7	9	12	9
Copper	**5**	25	23	18	12	21
Chromium	**5**	46	45	22	7	42
Cadmium	**0.5**	nd	nd	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

	Lab No	E48953	E48955	E48956	E48957	E48958
		BH24		BH25	BH26	BH26
	Sample Id	1.5-1.6	BH24 4.0	0-0.15	0-0.1	1.0-1.1
Analyte	PQL					
E5910 Metals in Soil						
Lead	**5**	20	16	58	25	24
Zinc	**5**	19	120	66	40	25
Arsenic	**5**	9	10	10	6	6
Copper	**5**	16	30	18	27	22
Chromium	**5**	64	15	46	45	37
Cadmium	**0.5**	nd	nd	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48959	E48960	E48961	E48962	E48963
		BH27	BH28		BH29	
	Sample Id	0-0.15	0-0.15	BH28 3.0	0-0.15	BH29 3.0
	PQL					
E5910 Metals in Soil						
Lead	**5**	61	27	35	35	21
Zinc	**5**	125	25	28	47	142
Arsenic	**5**	9	7	9	43	17
Copper	**5**	20	13	21	47	24
Chromium	**5**	39	56	57	23	nd
Cadmium	**0.5**	nd	nd	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48964	E48965	E48966	E48967	E48968
			BH30	BH30		BH31
	Sample Id	BH29 3.5	0-0.15	0.25-0.4	BH30 3.0	0-0.1
	PQL					
E5910 Metals in Soil						
Lead	**5**	30	27	14	27	28
Zinc	**5**	127	31	25	81	52
Arsenic	**5**	17	134	6	7	31
Copper	**5**	24	34	19	25	22
Chromium	**5**	6	26	27	26	17
Cadmium	**0.5**	nd	nd	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48969	E48970	E48971	E48972	E48973
		BH32	BH32		BH34	BH35
	Sample Id	0-0.15	0.5-0.6	BH33 1.5	0.05-0.7	0-0.05
	PQL					
E5910 Metals in Soil						
Lead	**5**	4733	2203	13	18	35
Zinc	**5**	53264	22181	45	20	73
Arsenic	**5**	18	10	nd	nd	6
Copper	**5**	4772	1793	20	13	22
Chromium	**5**	306	149	34	28	37
Cadmium	**0.5**	10.5	4.3	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48974	E48975	E48976	E48977	E48978
				BH36	BH37	BH38
	Sample Id	BH35 2.0	BH35 4.0	0-0.2	0-0.4	0-0.25
	PQL					
E5910 Metals in Soil						
Lead	**5**	14	14	17	21	18
Zinc	**5**	45	35	19	35	37
Arsenic	**5**	nd	7	nd	nd	nd
Copper	**5**	22	25	8	10	12
Chromium	**5**	24	9	55	15	30
Cadmium	**0.5**	nd	nd	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48979	E48980	E48981	E48982	E48983
			BH40	BH40	BH41	BH42
	Sample Id	BH39 1.0	0-0.05	.38-0.62	.15-0.41	0-0.05
	PQL					
E5910 Metals in Soil						
Lead	**5**	86	38	18	18	22
Zinc	**5**	167	48	19	10	40
Arsenic	**5**	13	6	7	nd	nd
Copper	**5**	24	14	22	9	8
Chromium	**5**	35	31	57	54	43
Cadmium	**0.5**	nd	nd	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48984	E48985	E48986	E48987	E48988
		BH43	BH43	BH44	BH45	BH46
	Sample Id	0-0.15	.15-0.57	0-0.15	0-0.31	0-0.21
	PQL					
E5910 Metals in Soil						
Lead	**5**	28	71	109	33	53
Zinc	**5**	40	36	42	49	73
Arsenic	**5**	nd	6	7	7	8
Copper	**5**	11	17	18	18	18
Chromium	**5**	32	43	30	6	40
Cadmium	**0.5**	nd	nd	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48989	E48990	E48991	E48992	
		BH47	BH47	BH48	BH48	
	Sample Id	0-0.1	0.1-0.31	0-0.15	.15-0.40	
	PQL					
E5910 Metals in Soil						
Lead	**5**	25	21	87	20	
Zinc	**5**	61	81	99	46	
Arsenic	**5**	5	8	49	6	
Copper	**5**	14	17	24	56	
Chromium	**5**	23	25	20	58	
Cadmium	**0.5**	nd	nd	nd	nd	
Mercury	**0.05**	nd	nd	nd	nd	

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Analyte	Lab No	E48903	E48904	E48905	E48906	E48907
		BH2			BH3	
	Sample Id	0-0.15	BH2 4.0	BH2 6.0	0-0.15	BH3 5.0
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	12.9	nd	nd	1.2
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	0.6	nd	nd	nd
Phenanthrene	**0.5**	nd	1.3	nd	nd	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	nd	nd	nd	nd
Pyrene	**0.5**	nd	nd	nd	nd	nd
Benz(a)anthracene	**0.5**	nd	nd	nd	nd	nd
Chrysene	**0.5**	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	**-**	nd	14.8	nd	nd	1.2
2-Fluorobiphenyl-SURROGATE	**1**	130%	121%	119%	123%	121%
Anthracene-d10-SURROGATE	**1**	130%	130%	129%	128%	127%
d14-Terphenyl-SURROGATE	**1**	130%	125%	130%	127%	126%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Analyte	Lab No	E48908	E48909	E48910	E48911	E48912
			BH4			
	Sample Id	BH3 8.0	0-0.15	BH4 4.0	BH4 5.0	BH5 5.0
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	nd	0.5	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	nd	nd	nd	nd
Phenanthrene	**0.5**	nd	nd	nd	nd	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	nd	nd	nd	nd
Pyrene	**0.5**	nd	nd	nd	nd	nd
Benz(a)anthracene	**0.5**	nd	nd	nd	nd	nd
Chrysene	**0.5**	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	-	nd	nd	0.5	nd	nd
2-Fluorobiphenyl-SURROGATE	**1**	82%	101%	110%	102%	107%
Anthracene-d10-SURROGATE	**1**	98%	109%	121%	109%	119%
d14-Terphenyl-SURROGATE	**1**	94%	106%	87%	78%	116%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

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Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48913	E48914	E48915	E48916	E48917
					BH7 0.25	
	Sample Id	BH5 6.0	BH6 4.0	BH6 5.0	-0.35	BH7 3.0
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	nd	nd	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	nd	nd	nd	nd
Phenanthrene	**0.5**	nd	nd	nd	nd	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	nd	nd	nd	nd
Pyrene	**0.5**	nd	nd	nd	nd	nd
Benz(a)anthracene	**0.5**	nd	nd	nd	nd	nd
Chrysene	**0.5**	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	**-**	nd	nd	nd	nd	nd
2-Fluorobiphenyl-SURROGATE	**1**	108%	113%	110%	116%	110%
Anthracene-d10-SURROGATE	**1**	119%	127%	126%	118%	123%
d14-Terphenyl-SURROGATE	**1**	118%	124%	120%	120%	118%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Analyte	Lab No	E48918	E48919	E48920	E48921	E48922
			BH8		BH9	
	Sample Id	BH7 4.0	0-0.1	BH8 4.0	0.4-0.5	BH9 4.0
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	nd	nd	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	nd	nd	nd	nd
Phenanthrene	**0.5**	nd	nd	nd	nd	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	0.5	nd	nd	nd
Pyrene	**0.5**	nd	nd	nd	nd	nd
Benz(a)anthracene	**0.5**	nd	nd	nd	nd	nd
Chrysene	**0.5**	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	**-**	nd	0.5	nd	nd	nd
2-Fluorobiphenyl-SURROGATE	**1**	113%	118%	113%	93%	92%
Anthracene-d10-SURROGATE	**1**	116%	118%	118%	95%	97%
d14-Terphenyl-SURROGATE	**1**	113%	119%	119%	94%	96%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

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Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

	Lab No	E48923	E48924	E48925	E48927	E48928
		BH10	BH11	BH12	BH14	BH14
	Sample Id	0.5-0.65	0-0.15	0.1-0.3	0-0.15	0.15-0.3
Analyte	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	nd	nd	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	nd	nd	nd	nd
Phenanthrene	**0.5**	nd	nd	nd	nd	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	nd	nd	nd	nd
Pyrene	**0.5**	nd	nd	nd	nd	nd
Benz(a)anthracene	**0.5**	nd	nd	nd	nd	nd
Chrysene	**0.5**	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	**-**	nd	nd	nd	nd	nd
2-Fluorobiphenyl-SURROGATE	**1**	104%	114%	109%	99%	96%
Anthracene-d10-SURROGATE	**1**	81%	107%	112%	102%	104%
d14-Terphenyl-SURROGATE	**1**	95%	115%	107%	100%	95%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48929	E48930	E48931	E48932	E48937
		BH14	BH15			BH18
	Sample Id	0.4-0.5	0-0.15	BH15 1.5	BH15 5.0	0-0.15
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	nd	nd	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	nd	nd	nd	nd
Phenanthrene	**0.5**	nd	nd	nd	nd	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	nd	nd	nd	nd
Pyrene	**0.5**	nd	nd	nd	nd	nd
Benz(a)anthracene	**0.5**	nd	nd	nd	nd	nd
Chrysene	**0.5**	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	**-**	nd	nd	nd	nd	nd
2-Fluorobiphenyl-SURROGATE	**1**	95%	91%	92%	94%	89%
Anthracene-d10-SURROGATE	**1**	102%	97%	98%	96%	94%
d14-Terphenyl-SURROGATE	**1**	97%	97%	99%	96%	90%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Analyte	Lab No	E48938	E48939	E48940	E48941	E48942
				BH19		
	Sample Id	BH18 3.0	BH18 5.0	0-0.15	BH19 2.0	BH19 4.0
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	nd	nd	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	nd	nd	nd	nd
Phenanthrene	**0.5**	nd	nd	nd	nd	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	nd	nd	nd	nd
Pyrene	**0.5**	nd	nd	nd	nd	nd
Benz(a)anthracene	**0.5**	nd	nd	nd	nd	nd
Chrysene	**0.5**	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	**-**	nd	nd	nd	nd	nd
2-Fluorobiphenyl-SURROGATE	**1**	115%	108%	82%	118%	102%
Anthracene-d10-SURROGATE	**1**	119%	112%	88%	121%	106%
d14-Terphenyl-SURROGATE	**1**	114%	108%	89%	119%	104%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Analyte	Lab No	E48943	E48944	E48945	E48946	E48947
		BH20			BH21	BH22
	Sample Id	0-0.15	BH20 2.0	BH20 4.0	0-0.15	0-0.15
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	2.3	nd	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	0.6	nd	nd	nd
Phenanthrene	**0.5**	nd	0.8	nd	nd	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	nd	nd	nd	nd
Pyrene	**0.5**	nd	nd	nd	nd	nd
Benz(a)anthracene	**0.5**	nd	nd	nd	nd	nd
Chrysene	**0.5**	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	**-**	nd	3.7	nd	nd	nd
2-Fluorobiphenyl-SURROGATE	**1**	99%	112%	100%	96%	96%
Anthracene-d10-SURROGATE	**1**	99%	107%	101%	96%	100%
d14-Terphenyl-SURROGATE	**1**	102%	104%	96%	96%	97%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48948	E48949	E48950	E48951	E48952
		BH22	BH23			BH24
	Sample Id	0.3-0.4	0-0.15	BH23 2.5	BH23 3.0	0.5-0.6
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	nd	nd	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	nd	nd	nd	nd
Phenanthrene	**0.5**	nd	nd	nd	nd	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	nd	nd	nd	nd
Pyrene	**0.5**	nd	nd	nd	nd	nd
Benz(a)anthracene	**0.5**	nd	nd	nd	nd	nd
Chrysene	**0.5**	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	**-**	nd	nd	nd	nd	nd
2-Fluorobiphenyl-SURROGATE	**1**	97%	93%	102%	99%	96%
Anthracene-d10-SURROGATE	**1**	95%	94%	103%	104%	93%
d14-Terphenyl-SURROGATE	**1**	93%	91%	99%	101%	91%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48953	E48955	E48962	E48963	E48964
		BH24		BH29		
	Sample Id	1.5-1.6	BH24 4.0	0-0.15	BH29 3.0	BH29 3.5
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	nd	nd	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	nd	nd	nd	nd
Phenanthrene	**0.5**	nd	nd	nd	nd	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	nd	nd	nd	nd
Pyrene	**0.5**	nd	nd	nd	nd	nd
Benz(a)anthracene	**0.5**	nd	nd	nd	nd	nd
Chrysene	**0.5**	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	**-**	nd	nd	nd	nd	nd
2-Fluorobiphenyl-SURROGATE	**1**	106%	102%	84%	105%	83%
Anthracene-d10-SURROGATE	**1**	114%	111%	87%	108%	86%
d14-Terphenyl-SURROGATE	**1**	118%	111%	95%	113%	82%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48965	E48966	E48967	E48968	E48969
		BH30	BH30		BH31	BH32
	Sample Id	0-0.15	0.25-0.4	BH30 3.0	0-0.1	0-0.15
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	nd	nd	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	nd	nd	nd	nd
Phenanthrene	**0.5**	nd	nd	nd	nd	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	nd	nd	nd	nd
Pyrene	**0.5**	nd	nd	nd	nd	nd
Benz(a)anthracene	**0.5**	nd	nd	nd	nd	nd
Chrysene	**0.5**	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	**-**	nd	nd	nd	nd	nd
2-Fluorobiphenyl-SURROGATE	**1**	99%	112%	103%	98%	97%
Anthracene-d10-SURROGATE	**1**	101%	116%	104%	98%	99%
d14-Terphenyl-SURROGATE	**1**	102%	114%	102%	98%	98%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48970	E48971	E48972	E48973	E48974
		BH32		BH34	BH35	
	Sample Id	0.5-0.6	BH33 1.5	0.05-0.7	0-0.05	BH35 2.0
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	nd	nd	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	nd	nd	nd	nd
Phenanthrene	**0.5**	nd	nd	nd	nd	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	nd	nd	nd	nd
Pyrene	**0.5**	nd	nd	nd	nd	nd
Benz(a)anthracene	**0.5**	nd	nd	nd	nd	nd
Chrysene	**0.5**	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	**-**	nd	nd	nd	nd	nd
2-Fluorobiphenyl-SURROGATE	**1**	97%	95%	92%	92%	102%
Anthracene-d10-SURROGATE	**1**	100%	103%	98%	95%	109%
d14-Terphenyl-SURROGATE	**1**	104%	100%	97%	95%	107%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

	Lab No	E48975	E48976	E48977	E48978	E48979
			BH36	BH37	BH38	
	Sample Id	BH35 4.0	0-0.2	0-0.4	0-0.25	BH39 1.0
Analyte	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	nd	nd	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	nd	nd	nd	nd
Phenanthrene	**0.5**	nd	nd	nd	nd	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	nd	nd	nd	nd
Pyrene	**0.5**	nd	nd	nd	nd	nd
Benz(a)anthracene	**0.5**	nd	nd	nd	nd	nd
Chrysene	**0.5**	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	**-**	nd	nd	nd	nd	nd
2-Fluorobiphenyl-SURROGATE	**1**	113%	100%	97%	99%	93%
Anthracene-d10-SURROGATE	**1**	115%	100%	100%	100%	96%
d14-Terphenyl-SURROGATE	**1**	124%	100%	98%	100%	96%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48980	E48981	E48982	E48983	E48984
		BH40	BH40	BH41	BH42	BH43
	Sample Id	0-0.05	.38-0.62	.15-0.41	0-0.05	0-0.15
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	nd	nd	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	nd	nd	nd	nd
Phenanthrene	**0.5**	nd	nd	nd	nd	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	nd	nd	nd	nd
Pyrene	**0.5**	nd	nd	nd	nd	nd
Benz(a)anthracene	**0.5**	nd	nd	nd	nd	nd
Chrysene	**0.5**	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	**-**	nd	nd	nd	nd	nd
2-Fluorobiphenyl-SURROGATE	**1**	91%	81%	87%	92%	110%
Anthracene-d10-SURROGATE	**1**	98%	89%	94%	97%	117%
d14-Terphenyl-SURROGATE	**1**	95%	88%	90%	94%	115%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

	Lab No	E48985	E48987	E48989	E48990	E48991
		BH43	BH45	BH47	BH47	BH48
	Sample Id	.15-0.57	0-0.31	0-0.1	0.1-0.31	0-0.15
Analyte	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	nd	nd	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	nd	nd	nd	nd
Phenanthrene	**0.5**	nd	2.4	nd	nd	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	1.2	nd	nd	nd
Pyrene	**0.5**	nd	0.8	nd	nd	nd
Benz(a)anthracene	**0.5**	nd	0.6	nd	nd	nd
Chrysene	**0.5**	nd	0.6	nd	nd	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	**-**	nd	5.6	nd	nd	nd
2-Fluorobiphenyl-SURROGATE	**1**	90%	94%	103%	105%	103%
Anthracene-d10-SURROGATE	**1**	96%	94%	110%	111%	108%
d14-Terphenyl-SURROGATE	**1**	94%	94%	105%	105%	104%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48992				
		BH48				
	Sample Id	.15-0.40				
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd				
Acenaphthylene	**0.5**	nd				
Acenaphthene	**0.5**	nd				
Fluorene	**0.5**	nd				
Phenanthrene	**0.5**	nd				
Anthracene	**0.5**	nd				
Fluoranthene	**0.5**	nd				
Pyrene	**0.5**	nd				
Benz(a)anthracene	**0.5**	nd				
Chrysene	**0.5**	nd				
Benzo(b) & (k)fluoranthene	**1**	nd				
Benzo(a)pyrene	**0.5**	nd				
Indeno(1.2.3-cd)pyrene	**0.5**	nd				
Dibenz(a.h)anthracene	**0.5**	nd				
Benzo(g.h.i)perylene	**0.5**	nd				
Total PAH	**-**	nd				
2-Fluorobiphenyl-SURROGATE	**1**	107%				
Anthracene-d10-SURROGATE	**1**	112%				
d14-Terphenyl-SURROGATE	**1**	108%				

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48916	E48921	E48923	E48924	E48925
		BH7 0.25	BH9	BH10	BH11	BH12
	Sample Id	-0.35	0.4-0.5	0.5-0.65	0-0.15	0.1-0.3
	PQL					
E1080 Organochlorine Pesticides in Soil						
HCB	**0.1**	nd	nd	nd	nd	nd
a-BHC	**0.1**	nd	nd	nd	nd	nd
g-BHC	**0.1**	nd	nd	nd	nd	nd
Heptachlor	**0.1**	nd	nd	nd	nd	nd
Aldrin	**0.1**	nd	nd	nd	nd	nd
b-BHC	**0.1**	nd	nd	nd	nd	nd
d-BHC	**0.1**	nd	nd	nd	nd	nd
Oxychlordane	**0.1**	nd	nd	nd	nd	nd
Heptachlor epoxide	**0.1**	nd	nd	nd	nd	nd
Endosulfan 1	**0.1**	nd	nd	nd	nd	nd
Chlordane-Trans	**0.1**	nd	nd	nd	nd	nd
Chlordane-Cis	**0.1**	nd	nd	nd	nd	nd
trans-Nonachlor	**0.1**	nd	nd	nd	nd	nd
DDE	**0.1**	nd	nd	nd	0.2	nd
Dieldrin	**0.1**	nd	nd	nd	nd	nd
Endrin	**0.1**	nd	nd	nd	nd	nd
DDD	**0.1**	nd	nd	nd	nd	nd
Endosulfan 2	**0.1**	nd	nd	nd	nd	nd
DDT	**0.1**	nd	nd	nd	0.3	nd
Endosulfan sulfate	**0.1**	nd	nd	nd	nd	nd
Methoxychlor	**0.1**	nd	nd	nd	nd	nd
2.4.5.6-tetrachloro-m-xylene-SURROGATE	**1**	119%	121%	108%	122%	111%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

	Lab No	E48926	E48927	E48928	E48930	E48935
		BH13	BH14	BH14	BH15	BH17
	Sample Id	0-0.15	0-0.15	0.15-0.3	0-0.15	0-0.1
Analyte	PQL					
E1080 Organochlorine Pesticides in Soil						
HCB	**0.1**	nd	nd	nd	nd	nd
a-BHC	**0.1**	nd	nd	nd	nd	nd
g-BHC	**0.1**	nd	nd	nd	nd	nd
Heptachlor	**0.1**	nd	nd	nd	nd	nd
Aldrin	**0.1**	nd	nd	nd	nd	nd
b-BHC	**0.1**	nd	nd	nd	nd	nd
d-BHC	**0.1**	nd	nd	nd	nd	nd
Oxychlordane	**0.1**	nd	nd	nd	nd	nd
Heptachlor epoxide	**0.1**	nd	nd	nd	nd	nd
Endosulfan 1	**0.1**	nd	nd	nd	nd	nd
Chlordane-Trans	**0.1**	nd	nd	nd	nd	nd
Chlordane-Cis	**0.1**	nd	nd	nd	nd	nd
trans-Nonachlor	**0.1**	nd	nd	nd	nd	nd
DDE	**0.1**	nd	nd	nd	nd	nd
Dieldrin	**0.1**	nd	nd	nd	nd	nd
Endrin	**0.1**	nd	nd	nd	nd	nd
DDD	**0.1**	nd	nd	nd	nd	nd
Endosulfan 2	**0.1**	nd	nd	nd	nd	nd
DDT	**0.1**	nd	nd	nd	nd	nd
Endosulfan sulfate	**0.1**	nd	nd	nd	nd	nd
Methoxychlor	**0.1**	nd	nd	nd	nd	nd
2.4.5.6-tetrachloro-m-xylene-SURROGATE	**1**	121%	113%	120%	121%	121%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48936	E48937	E48940	E48943	E48946
		BH17	BH18	BH19	BH20	BH21
	Sample Id	0.9-1.0	0-0.15	0-0.15	0-0.15	0-0.15
	PQL					
E1080 Organochlorine Pesticides in Soil						
HCB	**0.1**	nd	nd	nd	nd	nd
a-BHC	**0.1**	nd	nd	nd	nd	nd
g-BHC	**0.1**	nd	nd	nd	nd	nd
Heptachlor	**0.1**	nd	nd	nd	nd	nd
Aldrin	**0.1**	nd	nd	nd	nd	nd
b-BHC	**0.1**	nd	nd	nd	nd	nd
d-BHC	**0.1**	nd	nd	nd	nd	nd
Oxychlordane	**0.1**	nd	nd	nd	nd	nd
Heptachlor epoxide	**0.1**	nd	nd	nd	nd	nd
Endosulfan 1	**0.1**	nd	nd	nd	nd	nd
Chlordane-Trans	**0.1**	nd	nd	nd	nd	nd
Chlordane-Cis	**0.1**	nd	nd	nd	nd	nd
trans-Nonachlor	**0.1**	nd	nd	nd	nd	nd
DDE	**0.1**	nd	nd	nd	nd	nd
Dieldrin	**0.1**	nd	nd	nd	nd	nd
Endrin	**0.1**	nd	nd	nd	nd	nd
DDD	**0.1**	nd	nd	nd	nd	nd
Endosulfan 2	**0.1**	nd	nd	nd	nd	nd
DDT	**0.1**	nd	nd	nd	nd	nd
Endosulfan sulfate	**0.1**	nd	nd	nd	nd	nd
Methoxychlor	**0.1**	nd	nd	nd	nd	nd
2.4.5.6-tetrachloro-m-xylene-SURROGATE	**1**	121%	113%	118%	123%	122%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48947	E48948	E48949	E48952	E48956
		BH22	BH22	BH23	BH24	BH25
	Sample Id	0-0.15	0.3-0.4	0-0.15	0.5-0.6	0-0.15
	PQL					
E1080 Organochlorine Pesticides in Soil						
HCB	**0.1**	nd	nd	nd	nd	nd
a-BHC	**0.1**	nd	nd	nd	nd	nd
g-BHC	**0.1**	nd	nd	nd	nd	nd
Heptachlor	**0.1**	nd	nd	nd	nd	nd
Aldrin	**0.1**	nd	nd	nd	nd	nd
b-BHC	**0.1**	nd	nd	nd	nd	nd
d-BHC	**0.1**	nd	nd	nd	nd	nd
Oxychlordane	**0.1**	nd	nd	nd	nd	nd
Heptachlor epoxide	**0.1**	nd	nd	nd	nd	nd
Endosulfan 1	**0.1**	nd	nd	nd	nd	nd
Chlordane-Trans	**0.1**	nd	nd	nd	nd	nd
Chlordane-Cis	**0.1**	nd	nd	nd	nd	nd
trans-Nonachlor	**0.1**	nd	nd	nd	nd	nd
DDE	**0.1**	nd	0.1	nd	nd	nd
Dieldrin	**0.1**	nd	nd	nd	nd	nd
Endrin	**0.1**	nd	nd	nd	nd	nd
DDD	**0.1**	nd	nd	nd	nd	nd
Endosulfan 2	**0.1**	nd	nd	nd	nd	nd
DDT	**0.1**	nd	nd	nd	nd	nd
Endosulfan sulfate	**0.1**	nd	nd	nd	nd	nd
Methoxychlor	**0.1**	nd	nd	nd	nd	nd
2.4.5.6-tetrachloro-m-xylene-SURROGATE	**1**	120%	118%	121%	118%	116%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

	Lab No	E48957	E48958	E48959	E48960	E48962
		BH26	BH26	BH27	BH28	BH29
	Sample Id	0-0.1	1.0-1.1	0-0.15	0-0.15	0-0.15
Analyte	PQL					
E1080 Organochlorine Pesticides in Soil						
HCB	**0.1**	nd	nd	nd	nd	nd
a-BHC	**0.1**	nd	nd	nd	nd	nd
g-BHC	**0.1**	nd	nd	nd	nd	nd
Heptachlor	**0.1**	nd	nd	nd	nd	nd
Aldrin	**0.1**	nd	nd	nd	nd	nd
b-BHC	**0.1**	nd	nd	nd	nd	nd
d-BHC	**0.1**	nd	nd	nd	nd	nd
Oxychlordane	**0.1**	nd	nd	nd	nd	nd
Heptachlor epoxide	**0.1**	nd	nd	nd	nd	nd
Endosulfan 1	**0.1**	nd	nd	nd	nd	nd
Chlordane-Trans	**0.1**	nd	nd	nd	nd	nd
Chlordane-Cis	**0.1**	nd	nd	nd	nd	nd
trans-Nonachlor	**0.1**	nd	nd	nd	nd	nd
DDE	**0.1**	nd	nd	nd	nd	nd
Dieldrin	**0.1**	nd	nd	nd	nd	nd
Endrin	**0.1**	nd	nd	nd	nd	nd
DDD	**0.1**	nd	nd	nd	nd	nd
Endosulfan 2	**0.1**	nd	nd	nd	nd	nd
DDT	**0.1**	nd	nd	nd	nd	nd
Endosulfan sulfate	**0.1**	nd	nd	nd	nd	nd
Methoxychlor	**0.1**	nd	nd	nd	nd	nd
2.4.5.6-tetrachloro-m-xylene-SURROGATE	**1**	111%	123%	123%	123%	125%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

amdel

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48965	E48968	E48969	E48970	E48972
		BH30	BH31	BH32	BH32	BH34
	Sample Id	0-0.15	0-0.1	0-0.15	0.5-0.6	0.05-0.7
	PQL					
E1080 Organochlorine Pesticides in Soil						
HCB	**0.1**	nd	nd	nd	nd	nd
a-BHC	**0.1**	nd	nd	nd	nd	nd
g-BHC	**0.1**	nd	nd	nd	nd	nd
Heptachlor	**0.1**	nd	nd	nd	nd	nd
Aldrin	**0.1**	nd	nd	nd	nd	nd
b-BHC	**0.1**	nd	nd	nd	nd	nd
d-BHC	**0.1**	nd	nd	nd	nd	nd
Oxychlordane	**0.1**	nd	nd	nd	nd	nd
Heptachlor epoxide	**0.1**	nd	nd	nd	nd	nd
Endosulfan 1	**0.1**	nd	nd	nd	nd	nd
Chlordane-Trans	**0.1**	nd	nd	nd	nd	nd
Chlordane-Cis	**0.1**	nd	nd	nd	nd	nd
trans-Nonachlor	**0.1**	nd	nd	nd	nd	nd
DDE	**0.1**	nd	nd	nd	nd	nd
Dieldrin	**0.1**	nd	nd	nd	nd	nd
Endrin	**0.1**	nd	nd	nd	nd	nd
DDD	**0.1**	nd	nd	nd	nd	nd
Endosulfan 2	**0.1**	nd	nd	nd	nd	nd
DDT	**0.1**	nd	nd	nd	nd	nd
Endosulfan sulfate	**0.1**	nd	nd	nd	nd	nd
Methoxychlor	**0.1**	nd	nd	nd	nd	nd
2.4.5.6-tetrachloro-m-xylene-SURROGATE	**1**	125%	123%	123%	117%	126%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Analyte	Lab No	E48973	E48976	E48977	E48978	E48980
		BH35	BH36	BH37	BH38	BH40
	Sample Id	0-0.05	0-0.2	0-0.4	0-0.25	0-0.05
	PQL					
E1080 Organochlorine Pesticides in Soil						
HCB	**0.1**	nd	nd	nd	nd	nd
a-BHC	**0.1**	nd	nd	nd	nd	nd
g-BHC	**0.1**	nd	nd	nd	nd	nd
Heptachlor	**0.1**	nd	nd	nd	nd	nd
Aldrin	**0.1**	nd	nd	nd	nd	nd
b-BHC	**0.1**	nd	nd	nd	nd	nd
d-BHC	**0.1**	nd	nd	nd	nd	nd
Oxychlordane	**0.1**	nd	nd	nd	nd	nd
Heptachlor epoxide	**0.1**	nd	nd	nd	nd	nd
Endosulfan 1	**0.1**	nd	nd	nd	nd	nd
Chlordane-Trans	**0.1**	nd	nd	nd	nd	nd
Chlordane-Cis	**0.1**	nd	nd	nd	nd	nd
trans-Nonachlor	**0.1**	nd	nd	nd	nd	nd
DDE	**0.1**	nd	nd	nd	nd	nd
Dieldrin	**0.1**	nd	nd	nd	nd	nd
Endrin	**0.1**	nd	nd	nd	nd	nd
DDD	**0.1**	nd	nd	nd	nd	nd
Endosulfan 2	**0.1**	nd	nd	nd	nd	nd
DDT	**0.1**	nd	nd	nd	nd	nd
Endosulfan sulfate	**0.1**	nd	nd	nd	nd	nd
Methoxychlor	**0.1**	nd	nd	nd	nd	nd
2.4.5.6-tetrachloro-m-xylene-SURROGATE	**1**	120%	127%	123%	123%	120%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

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Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48981	E48982	E48983	E48984	E48986
		BH40	BH41	BH42	BH43	BH44
	Sample Id	.38-0.62	.15-0.41	0-0.05	0-0.15	0-0.15
	PQL					
E1080 Organochlorine Pesticides in Soil						
HCB	**0.1**	nd	nd	nd	nd	nd
a-BHC	**0.1**	nd	nd	nd	nd	nd
g-BHC	**0.1**	nd	nd	nd	nd	nd
Heptachlor	**0.1**	nd	nd	nd	nd	nd
Aldrin	**0.1**	nd	nd	nd	nd	nd
b-BHC	**0.1**	nd	nd	nd	nd	nd
d-BHC	**0.1**	nd	nd	nd	nd	nd
Oxychlordane	**0.1**	nd	nd	nd	nd	nd
Heptachlor epoxide	**0.1**	nd	nd	nd	nd	nd
Endosulfan 1	**0.1**	nd	nd	nd	nd	nd
Chlordane-Trans	**0.1**	nd	nd	nd	nd	nd
Chlordane-Cis	**0.1**	nd	nd	nd	nd	nd
trans-Nonachlor	**0.1**	nd	nd	nd	nd	nd
DDE	**0.1**	nd	nd	nd	nd	nd
Dieldrin	**0.1**	nd	nd	nd	nd	nd
Endrin	**0.1**	nd	nd	nd	nd	nd
DDD	**0.1**	nd	nd	nd	nd	nd
Endosulfan 2	**0.1**	nd	nd	nd	nd	nd
DDT	**0.1**	nd	nd	nd	nd	nd
Endosulfan sulfate	**0.1**	nd	nd	nd	nd	nd
Methoxychlor	**0.1**	nd	nd	nd	nd	nd
2.4.5.6-tetrachloro-m-xylene-SURROGATE	**1**	126%	122%	122%	118%	121%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

	Lab No	E48987	E48988	E48989	E48990	E48991
		BH45	BH46	BH47	BH47	BH48
	Sample Id	0-0.31	0-0.21	0-0.1	0.1-0.31	0-0.15
Analyte	PQL					
E1080 Organochlorine Pesticides in Soil						
HCB	**0.1**	nd	nd	nd	nd	nd
a-BHC	**0.1**	nd	nd	nd	nd	nd
g-BHC	**0.1**	nd	nd	nd	nd	nd
Heptachlor	**0.1**	nd	nd	nd	nd	nd
Aldrin	**0.1**	nd	nd	nd	nd	nd
b-BHC	**0.1**	nd	nd	nd	nd	nd
d-BHC	**0.1**	nd	nd	nd	nd	nd
Oxychlordane	**0.1**	nd	nd	nd	nd	nd
Heptachlor epoxide	**0.1**	nd	nd	nd	nd	nd
Endosulfan 1	**0.1**	nd	nd	nd	nd	nd
Chlordane-Trans	**0.1**	nd	nd	nd	nd	nd
Chlordane-Cis	**0.1**	nd	nd	nd	nd	nd
trans-Nonachlor	**0.1**	nd	nd	nd	nd	nd
DDE	**0.1**	nd	nd	nd	nd	nd
Dieldrin	**0.1**	nd	nd	nd	nd	nd
Endrin	**0.1**	nd	nd	nd	nd	nd
DDD	**0.1**	nd	nd	nd	nd	nd
Endosulfan 2	**0.1**	nd	nd	nd	nd	nd
DDT	**0.1**	nd	nd	nd	nd	nd
Endosulfan sulfate	**0.1**	nd	nd	nd	nd	nd
Methoxychlor	**0.1**	nd	nd	nd	nd	nd
2.4.5.6-tetrachloro-m-xylene-SURROGATE	**1**	113%	126%	119%	125%	127%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

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Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48992				
		BH48				
	Sample Id	.15-0.40				
	PQL					
E1080 Organochlorine Pesticides in Soil						
HCB	**0.1**	nd				
a-BHC	**0.1**	nd				
g-BHC	**0.1**	nd				
Heptachlor	**0.1**	nd				
Aldrin	**0.1**	nd				
b-BHC	**0.1**	nd				
d-BHC	**0.1**	nd				
Oxychlordane	**0.1**	nd				
Heptachlor epoxide	**0.1**	nd				
Endosulfan 1	**0.1**	nd				
Chlordane-Trans	**0.1**	nd				
Chlordane-Cis	**0.1**	nd				
trans-Nonachlor	**0.1**	nd				
DDE	**0.1**	nd				
Dieldrin	**0.1**	nd				
Endrin	**0.1**	nd				
DDD	**0.1**	nd				
Endosulfan 2	**0.1**	nd				
DDT	**0.1**	nd				
Endosulfan sulfate	**0.1**	nd				
Methoxychlor	**0.1**	nd				
2.4.5.6-tetrachloro-m-xylene-SURROGATE	**1**	124 %				

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

Analyte	Lab No	E48926	E48927	E48928	E48930	E48935
		BH13	BH14	BH14	BH15	BH17
	Sample Id	0-0.15	0-0.15	0.15-0.3	0-0.15	0-0.1
	PQL					
E1090 OP Pesticides in Soil						
Dichlorvos	**0.5**	nd	nd	nd	nd	nd
Mevinphos	**0.5**	nd	nd	nd	nd	nd
Ethoprop	**0.5**	nd	nd	nd	nd	nd
Phorate	**0.5**	nd	nd	nd	nd	nd
Demeton-s-methyl	**0.5**	nd	nd	nd	nd	nd
Diazinon	**0.5**	nd	nd	nd	nd	nd
Disulfoton	**0.5**	nd	nd	nd	nd	nd
Ronnel	**0.5**	nd	nd	nd	nd	nd
Chlorpyrifos methyl	**0.5**	nd	nd	nd	nd	nd
Chlorpyrifos	**0.5**	nd	nd	nd	nd	nd
Merphos	**0.5**	nd	nd	nd	nd	nd
Parathion methyl	**0.5**	nd	nd	nd	nd	nd
Fenthion	**0.5**	nd	nd	nd	nd	nd
Malathion	**0.5**	nd	nd	nd	nd	nd
Fenitrothion	**0.5**	nd	nd	nd	nd	nd
Prothiophos	**0.5**	nd	nd	nd	nd	nd
Stirophos	**0.5**	nd	nd	nd	nd	nd
Ethion	**0.5**	nd	nd	nd	nd	nd
Bolstar	**0.5**	nd	nd	nd	nd	nd
Fensulfothion	**0.5**	nd	nd	nd	nd	nd
Azinphos methyl	**0.5**	nd	nd	nd	nd	nd
Coumaphos	**0.5**	nd	nd	nd	nd	nd
2-Nitro-m-xylene-SURROGATE	**1**	94%	92%	96%	95%	92%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

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Job Number : 8E01086
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E48936				
		BH17				
	Sample Id	0.9-1.0				
	PQL					
E1090 OP Pesticides in Soil						
Dichlorvos	**0.5**	nd				
Mevinphos	**0.5**	nd				
Ethoprop	**0.5**	nd				
Phorate	**0.5**	nd				
Demeton-s-methyl	**0.5**	nd				
Diazinon	**0.5**	nd				
Disulfoton	**0.5**	nd				
Ronnel	**0.5**	nd				
Chlorpyrifos methyl	**0.5**	nd				
Chlorpyrifos	**0.5**	nd				
Merphos	**0.5**	nd				
Parathion methyl	**0.5**	nd				
Fenthion	**0.5**	nd				
Malathion	**0.5**	nd				
Fenitrothion	**0.5**	nd				
Prothiophos	**0.5**	nd				
Stirophos	**0.5**	nd				
Ethion	**0.5**	nd				
Bolstar	**0.5**	nd				
Fensulfothion	**0.5**	nd				
Azinphos methyl	**0.5**	nd				
Coumaphos	**0.5**	nd				
2-Nitro-m-xylene-SURROGATE	**1**	90%				

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified
Leachates : mg/L (ppm) in leachate

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QA/QC APPENDIX NO. 8E01086

Method	Description
E1220	Total Petroleum Hydrocarbons
E1010	Benzene,Toluene,Ethylbenzene & Xylene
E5910	Metals by ICP-AES
E5950	Mercury in Soil
E1110	Polynuclear Aromatic Hydrocarbons
E1080	Organochlorine Pesticides
E3600	pH in Soil
E1090	Organophosphorus Pesticides

Chromatography QA/QC

	Yes	No	N/A
Retention Time Window Within Acceptance Criteria(±2%)	√		
Check Standard Within Acceptance Criteria(±10%)	√		
Recalibration Within Acceptance Criteria(±15%)	√		

Other QA/QC

Holding time conforming With Method Specification	√		
Chain of Custody Attached	√		

N/A=Not Applicable

Comments

1. Laboratory QA/QC including Method Blanks, Duplicates, Matrix Spike Duplicates, Laboratory Control Samples or CRM's are included in this QA/QC appendix. (Where applicable)
2. Inter-Laboratory proficiency trial results available on request. (Where applicable)
3. Surrogate description and recoveries are recorded in the Report. (Where applicable)
4. Acceptance criteria for specific analytes are available upon request (Refer to SPM-01).
5. Practical Quantitation Limit (PQL is typically 2-10 x method detection limit (MDL)).
6. PQL's are matrix dependent and are increased accordingly where sample extracts are diluted.
7. Results are uncorrected for matrix spike or surrogate recoveries.

per G.W. ANDERSON
Manager Environmental Sydney

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Job Number : 8E01086

QAQC : Spike Recoveries

Analyte	Spike Level	Level Detected		Recovery Details			
		Spike 1	Spike 2	Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E1220 TPH in Soil							
C6-C9 Fraction	400	323	351	81%	88%	84%	8%
C15-C28 Fraction	550	544	404	98%	73%	85%	29%
E1010 BTEX (P&T) in Soil							
Benzene	10	12.3	12.3	123%	124%	123%	0%
Toluene	10	11	11	113%	113%	113%	0%
Ethylbenzene	10	12	12	123%	124%	123%	0%
Total Xylenes	30	35	36	116%	120%	118%	3%

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

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Job Number : 8E01086

QAQC : Laboratory Control Sample

Analyte	Level	Level	Detected	Recovery Details			
		Result1	Result2	Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
pH	7.40	7.3	7.3	99%	99%	99%	0%

PQL = Practical Quantitation Limit

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

nd = <PQL

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

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Job Number : 8E01086

QAQC : Laboratory Duplicates

Analyte	PQL	Dupl 1	Dupl 2	Average	RPD (%)
E1220 TPH in Soil					
Total C6-C36	-	1527	1562	1544	2%
C6-C9 Fraction	**10**	48	50	49	4%
C10-C14 Fraction	**10**	912	916	914	0%
C15-C28 Fraction	**50**	615	646	630	4%
C29-C36 Fraction	**50**	nd	nd		
E1010 BTEX (P&T) in Soil					
Benzene	**0.5**	nd	nd		
Toluene	**1**	nd	nd		
Ethylbenzene	**1**	nd	nd		
Total Xylenes	**3**	nd	nd		

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/L (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
pH		6.7				
E1220 TPH in Soil						
Total C6-C36	-	nd				
C6-C9 Fraction	**10**	nd				
C10-C14 Fraction	**10**	nd				
C15-C28 Fraction	**50**	nd				
C29-C36 Fraction	**50**	nd				
E1010 BTEX (P&T) in Soil						
Benzene	**0.5**	nd				
Toluene	**1**	nd				
Ethylbenzene	**1**	nd				
Total Xylenes	**3**	nd				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

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Job Number : 8E01086

QAQC : Spike Recoveries

Analyte	Spike Level	Level Detected		Recovery Details			
		Spike 1	Spike 2	Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E5910 Metals in Soil							
Lead	50	41	44	82%	89%	86%	8%
Zinc	50	44	48	89%	95%	92%	7%
Arsenic	50	48	41	97%	82%	89%	16%
Copper	50	40	43	79%	86%	82%	8%
Chromium	50	45	49	90%	97%	94%	7%
Cadmium	50	53.1	53.2	106%	106%	106%	0%
Mercury	0.50	0.54	0.53	107%	105%	106%	2%

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

amdel

Job Number : 8E01086

QAQC : Laboratory Duplicates

Analyte	PQL	Dupl 1	Dupl 2	Average	RPD (%)
E5910 Metals in Soil					
Lead	**5**	43	33	38	26%
Zinc	**5**	19	12	15	45%
Arsenic	**5**	29	18	23	46%
Copper	**5**	19	12	15	45%
Chromium	**5**	34	25	29	30%
Cadmium	**0.5**	nd	nd		
Mercury	**0.05**	nd	nd		

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/L (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
E5910 Metals in Soil						
Lead	**5**	nd				
Zinc	**5**	nd				
Arsenic	**5**	nd				
Copper	**5**	nd				
Chromium	**5**	nd				
Cadmium	**0.5**	nd				
Mercury	**0.05**	nd				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

Job Number : 8E01086

QAQC : Spike Recoveries

Analyte	Spike Level	Level Detected		Recovery Details			
		Spike 1	Spike 2	Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E1110 PAH's in Soil							
Naphthalene	5	5.3	5.2	106%	104%	105%	2%
Acenaphthylene	5	5.4	5.4	108%	108%	108%	0%
Acenaphthene	5	5.2	5.1	104%	102%	103%	2%
Fluorene	5	5.4	5.4	108%	108%	108%	0%
Phenanthrene	5	5.2	5.2	104%	104%	104%	0%
Anthracene	5	5.3	5.3	106%	106%	106%	0%
Fluoranthene	5	5.8	5.8	116%	116%	116%	0%
Pyrene	5	5.7	5.4	114%	108%	111%	5%
Benz(a)anthracene	5	5.7	5.6	114%	112%	113%	2%
Chrysene	5	5.1	5.0	102%	100%	101%	2%
Benzo(b) & (k)fluoranthene	10	11	12	110%	120%	115%	9%
Benzo(a)pyrene	5	5.5	5.5	110%	110%	110%	0%
Indeno(1.2.3-cd)pyrene	5	5.0	4.9	100%	98%	99%	2%
Dibenz(a.h)anthracene	5	5.0	5.0	100%	100%	100%	0%
Benzo(g.h.i)perylene	5	4.7	4.7	94%	94%	94%	0%

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

amdel

Job Number : 8E01086

QAQC : Laboratory Duplicates

Analyte	PQL	Dupl 1	Dupl 2	Average	RPD (%)
E1110 PAH's in Soil					
Naphthalene	**0.5**	13.5	12.9	13.3	4%
Acenaphthylene	**0.5**	nd	nd		
Acenaphthene	**0.5**	nd	nd		
Fluorene	**0.5**	0.8	0.6	0.7	28%
Phenanthrene	**0.5**	1.7	1.3	1.5	26%
Anthracene	**0.5**	nd	nd		
Fluoranthene	**0.5**	nd	nd		
Pyrene	**0.5**	nd	nd		
Benz(a)anthracene	**0.5**	nd	nd		
Chrysene	**0.5**	nd	nd		
Benzo(b) & (k)fluoranthene	**1**	nd	nd		
Benzo(a)pyrene	**0.5**	nd	nd		
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd		
Dibenz(a.h)anthracene	**0.5**	nd	nd		
Benzo(g.h.i)perylene	**0.5**	nd	nd		
Total PAH	**-**	16.1	14.8		
2-Fluorobiphenyl-SURROGATE	**1**	114%	121%		
Anthracene-d10-SURROGATE	**1**	107%	130%		
d14-Terphenyl-SURROGATE	**1**	111%	125%		

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/L (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd				
Acenaphthylene	**0.5**	nd				
Acenaphthene	**0.5**	nd				
Fluorene	**0.5**	nd				
Phenanthrene	**0.5**	nd				
Anthracene	**0.5**	nd				
Fluoranthene	**0.5**	nd				
Pyrene	**0.5**	nd				
Benz(a)anthracene	**0.5**	nd				
Chrysene	**0.5**	nd				
Benzo(b) & (k)fluoranthene	**1**	nd				
Benzo(a)pyrene	**0.5**	nd				
Indeno(1.2.3-cd)pyrene	**0.5**	nd				
Dibenz(a.h)anthracene	**0.5**	nd				
Benzo(g.h.i)perylene	**0.5**	nd				
Total PAH	-	nd				
2-Fluorobiphenyl-SURROGATE	**1**	92%				
Anthracene-d10-SURROGATE	**1**	101%				
d14-Terphenyl-SURROGATE	**1**	101%				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

amdel

Job Number : 8E01086

QAQC : Spike Recoveries

Analyte	Spike Level	Level Detected		Recovery Details			
		Spike 1	Spike 2	Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E1080 Organochlorine Pesticides in Soil							
HCB	0.5	0.5	0.5	98%	98%	98%	0%
a-BHC	0.5	0.4	0.4	89%	89%	89%	1%
g-BHC	0.5	0.4	0.4	87%	88%	87%	1%
Heptachlor	0.5	0.4	0.4	86%	88%	87%	2%
Aldrin	0.5	0.5	0.5	91%	92%	92%	2%
b-BHC	0.5	0.5	0.5	99%	102%	101%	3%
d-BHC	0.5	0.5	0.5	94%	96%	95%	1%
Oxychlordane	0.5	0.5	0.5	93%	95%	94%	2%
Heptachlor epoxide	0.5	0.5	0.5	100%	102%	101%	2%
Endosulfan 1	0.5	0.5	0.5	93%	95%	94%	1%
Chlordane-Trans	0.5	0.4	0.4	85%	86%	86%	2%
Chlordane-Cis	0.5	0.4	0.4	82%	81%	82%	1%
trans-Nonachlor	0.5	0.5	0.5	98%	100%	99%	2%
DDE	1	1.0	1.0	101%	103%	102%	2%
Dieldrin	0.5	0.4	0.5	90%	91%	90%	2%
Endrin	0.5	0.5	0.5	95%	97%	96%	2%
DDD	1	1.0	1.0	98%	101%	100%	3%
Endosulfan 2	0.5	0.4	0.5	88%	90%	89%	2%
DDT	1	0.8	0.8	83%	83%	83%	1%
Endosulfan sulfate	0.5	0.4	0.5	89%	90%	90%	2%
Methoxychlor	0.5	0.4	0.4	82%	82%	82%	0%

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
E1080 Organochlorine Pesticides in Soil						
HCB	**0.1**	nd				
a-BHC	**0.1**	nd				
g-BHC	**0.1**	nd				
Heptachlor	**0.1**	nd				
Aldrin	**0.1**	nd				
b-BHC	**0.1**	nd				
d-BHC	**0.1**	nd				
Oxychlordane	**0.1**	nd				
Heptachlor epoxide	**0.1**	nd				
Endosulfan 1	**0.1**	nd				
Chlordane-Trans	**0.1**	nd				
Chlordane-Cis	**0.1**	nd				
trans-Nonachlor	**0.1**	nd				
DDE	**0.1**	nd				
Dieldrin	**0.1**	nd				
Endrin	**0.1**	nd				
DDD	**0.1**	nd				
Endosulfan 2	**0.1**	nd				
DDT	**0.1**	nd				
Endosulfan sulfate	**0.1**	nd				
Methoxychlor	**0.1**	nd				
2.4.5.6-tetrachloro-m-xylene-SURROGATE	**1**	116%				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Laboratory Control Sample

Analyte	Spike Level	Level Detected		Recovery Details			
		Spike 1	Spike 2	Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E1090 OP Pesticides in Soil							
Dichlorvos	5	4.7		94%			
Mevinphos	5	5.0		100%			
Ethoprop	5	4.8		96%			
Phorate	5	5.0		100%			
Demeton-s-methyl	5	5.2		103%			
Diazinon	5	4.6		92%			
Disulfoton	5	4.5		90%			
Ronnel	5	4.8		96%			
Chlorpyrifos methyl	5	4.2		84%			
Chlorpyrifos	5	5.3		106%			
Merphos	5	4.2		83%			
Parathion methyl	5	4.3		87%			
Fenthion	5	5.2		104%			
Malathion	5	5.1		102%			
Fenitrothion	5	5.4		108%			
Prothiophos	5	5.1		101%			
Stirophos	5	4.9		99%			
Ethion	5	5.5		109%			
Bolstar	5	4.9		97%			
Fensulfothion	5	5.3		107%			
Azinphos methyl	5	4.8		95%			
Coumaphos	5	5.0		99%			

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
E1090 OP Pesticides in Soil						
Dichlorvos	**0.5**	nd				
Mevinphos	**0.5**	nd				
Ethoprop	**0.5**	nd				
Phorate	**0.5**	nd				
Demeton-s-methyl	**0.5**	nd				
Diazinon	**0.5**	nd				
Disulfoton	**0.5**	nd				
Ronnel	**0.5**	nd				
Chlorpyrifos methyl	**0.5**	nd				
Chlorpyrifos	**0.5**	nd				
Merphos	**0.5**	nd				
Parathion methyl	**0.5**	nd				
Fenthion	**0.5**	nd				
Malathion	**0.5**	nd				
Fenitrothion	**0.5**	nd				
Prothiophos	**0.5**	nd				
Stirophos	**0.5**	nd				
Ethion	**0.5**	nd				
Bolstar	**0.5**	nd				
Fensulfothion	**0.5**	nd				
Azinphos methyl	**0.5**	nd				
Coumaphos	**0.5**	nd				
2-Nitro-m-xylene-SURROGATE	**1**	85%				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

Accreditation No. 1464

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CERTIFICATE OF ANALYSIS

Contents :
1) Cover Page
2) Analysis Report Pages
3) QA/QC Appendix

REPORT No : 8E01140

ATTENTION : Mr Stuart Taylor

CLIENT : PPK Adelaide

SAMPLES : 35

REFERENCE : 27K140A

DATE RECEIVED : 26/06/98

DATE REPORTED : 13/07/98

Method	Description	Extracted	Analysed
E7500	Moisture (%w/w)	06/07/98	06/07/98
E5910	Metals by ICP-AES	08/07/98	08/07/98
E5950	Mercury in Soil	06/07/98	06/07/98
E1110	Polynuclear Aromatic Hydrocarbons	03/07/98	13/07/98
E3600	pH in Soil	03/07/98	10/07/98
E1180	Semivolatile Organic Compounds	03/07/98	13/07/98
E1220	Total Petroleum Hydrocarbons	03/07/98	10/07/98
E1010	Benzene,Toluene,Ethylbenzene & Xylene	03/07/98	09/07/98
E1080	Organochlorine Pesticides	02/07/98	13/07/98

RESULTS

All samples were analysed as received. This report relates specifically to the samples received.
Results relate to the source material only to the extent that the samples as supplied are truly representative of the sample source. This report replaces any preliminary results issued.
Note that for schemes indicated with * NATA accreditation does not cover the performance of this service.

PLEASE SEE ATTACHED PAGES FOR RESULTS

per G.W. ANDERSON
Manager Environmental Sydney

amdel

Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49023	E49024	E49025	E49026	E49027
		TP101	TP101	TP101	TP102	TP102
	Sample Id	1.0	3.0m	3.7m	0.4m	2.6m
	PQL					
Moisture Content	**1**	11%	13%	14%	37%	21%
E5910 Metals in Soil						
Lead	**5**	64	23	21	59	80
Zinc	**5**	91	42	16	62	65
Arsenic	**5**	6	nd	5	12	nd
Copper	**5**	24	23	9	15	142
Chromium	**5**	32	31	23	9	23
Cadmium	**0.5**	nd	nd	nd	nd	nd
Mercury	**0.05**	0.07	nd	nd	0.13	nd
pH	**0.1**	--	--	--	--	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49028	E49029	E49030	E49031	E49032
		TP102	TP103	TP103	TP104	TP104
	Sample Id	3.7m	0-0.15	3.7m	0-0.15	1.0m
	PQL					
Moisture Content	**1**	24%	16%	18%	16%	12%
E5910 Metals in Soil						
Lead	**5**	13	15	14	17	89
Zinc	**5**	33	77	21	69	37
Arsenic	**5**	nd	nd	nd	nd	nd
Copper	**5**	19	27	8	22	16
Chromium	**5**	26	28	11	25	24
Cadmium	**0.5**	nd	nd	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd
pH	**0.1**	7.4	6.6	7.1	--	7.1

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49033	E49034	E49035	E49036	E49037
		TP104	TP105	TP105	TP106	TP106
	Sample Id	3.6m	3.8m	4.4m	0-0.15	4.2m
	PQL					
Moisture Content	**1**	14%	17%	15%	15%	16%
E5910 Metals in Soil						
Lead	**5**	11	259	15	30	16
Zinc	**5**	83	684	25	44	28
Arsenic	**5**	nd	5	nd	6	nd
Copper	**5**	5	41	11	36	13
Chromium	**5**	8	17	9	32	13
Cadmium	**0.5**	2.0	nd	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd
pH	**0.1**	6.9	--	--	6.5	7.2

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49038	E49039	E49040	E49041	E49042
		TP107	TP107	TP108	TP108	TP109
	Sample Id	4.3m	5.1m	0-0.15	2.9m	3.5m
	PQL					
Moisture Content	**1**	18%	19%	15%	21%	16%
E5910 Metals in Soil						
Lead	**5**	15	14	11	19	15
Zinc	**5**	26	23	23	98	24
Arsenic	**5**	nd	nd	nd	8	nd
Copper	**5**	10	8	8	22	12
Chromium	**5**	9	11	10	9	15
Cadmium	**0.5**	nd	nd	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd
pH	**0.1**	--	--	7.1	7.4	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49043	E49044	E49045	E49046	E49047
		TP110	TP110	TP111	TP112	TP113
	Sample Id	0-0.15m	3.9m	0-0.15	0.9m	0.5m
	PQL					
Moisture Content	**1**	14%	27%	24%	15%	20%
E5910 Metals in Soil						
Lead	**5**	26	23	14	30	18
Zinc	**5**	72	43	28	70	20
Arsenic	**5**	nd	nd	7	7	nd
Copper	**5**	18	21	15	17	6
Chromium	**5**	21	18	17	45	25
Cadmium	**0.5**	nd	nd	nd	nd	nd
Mercury	**0.05**	nd	nd	nd	nd	nd
pH	**0.1**	--	--	--	--	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49048	E49049	E49050	E49051	E49052
		TP114	TP114	TP115	TP115	TP116
	Sample Id	0-0.1m	0.8m	0-0.15	1.0m	0-0.15m
	PQL					
Moisture Content	**1**	22%	21%	21%	20%	20%
E5910 Metals in Soil						
Lead	**5**	62	24	10	14	--
Zinc	**5**	39	12	22	10	--
Arsenic	**5**	nd	nd	nd	nd	--
Copper	**5**	11	16	8	9	--
Chromium	**5**	6	39	nd	39	--
Cadmium	**0.5**	nd	nd	nd	nd	--
Mercury	**0.05**	nd	nd	nd	nd	--
pH	**0.1**	--	--	--	--	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49053	E49054	E49055	E49056	E49057
		TP116	TP116	TP117	TP118	TP118
	Sample Id	0.5m	1.0m	0.4-0.5m	0-0.15m	0.4-0.5m
	PQL					
Moisture Content	**1**	20%	10%	11%	11%	22%
E5910 Metals in Soil						
Lead	**5**	--	--	11	85	13
Zinc	**5**	--	--	49	81	30
Arsenic	**5**	--	--	nd	nd	nd
Copper	**5**	--	--	20	8	28
Chromium	**5**	--	--	21	23	25
Cadmium	**0.5**	--	--	nd	nd	nd
Mercury	**0.05**	--	--	nd	nd	nd
pH	**0.1**	--	--	7.4	--	--

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49026	E49038	E49039	E49043	E49046
		TP102	TP107	TP107	TP110	TP112
	Sample Id	0.4m	4.3m	5.1m	0-0.15m	0.9m
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	9.5	nd	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	0.9	nd	nd	nd
Fluorene	**0.5**	nd	0.6	nd	nd	nd
Phenanthrene	**0.5**	nd	nd	nd	1.1	nd
Anthracene	**0.5**	nd	nd	nd	nd	nd
Fluoranthene	**0.5**	nd	nd	nd	1.2	nd
Pyrene	**0.5**	nd	nd	nd	1.5	nd
Benz(a)anthracene	**0.5**	nd	nd	nd	0.6	nd
Chrysene	**0.5**	nd	nd	nd	0.6	nd
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	1	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	0.7	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	0.9	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	1.0	nd
Total PAH	**-**	nd	11	nd	8.7	nd
2-Fluorobiphenyl-SURROGATE	**1**	93%	111%	104%	104%	100%
Anthracene-d10-SURROGATE	**1**	95%	103%	105%	108%	96%
d14-Terphenyl-SURROGATE	**1**	92%	98%	105%	105%	96%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49048	E49049	E49050	E49051	E49052
		TP114	TP114	TP115	TP115	TP116
	Sample Id	0-0.1m	0.8m	0-0.15	1.0m	0-0.15m
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	nd	nd	nd	nd
Acenaphthylene	**0.5**	nd	nd	nd	nd	nd
Acenaphthene	**0.5**	nd	nd	nd	nd	nd
Fluorene	**0.5**	nd	nd	nd	nd	nd
Phenanthrene	**0.5**	4.5	nd	4.6	nd	nd
Anthracene	**0.5**	nd	nd	0.5	nd	nd
Fluoranthene	**0.5**	2.7	nd	2.7	nd	nd
Pyrene	**0.5**	2.1	nd	2.1	nd	nd
Benz(a)anthracene	**0.5**	1.5	nd	1.3	nd	nd
Chrysene	**0.5**	1.1	nd	1.1	nd	nd
Benzo(b) & (k)fluoranthene	**1**	1	nd	nd	nd	nd
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	nd
Total PAH	**-**	12.9	nd	12.3	nd	nd
2-Fluorobiphenyl-SURROGATE	**1**	85%	82%	89%	83%	105%
Anthracene-d10-SURROGATE	**1**	79%	82%	70%	79%	99%
d14-Terphenyl-SURROGATE	**1**	89%	82%	77%	81%	106%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49053	E49054	E49056	E49057	
		TP116	TP116	TP118	TP118	
	Sample Id	0.5m	1.0m	0-0.15m	0.4-0.5m	
	PQL					
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd	nd	nd	nd	
Acenaphthylene	**0.5**	nd	nd	nd	nd	
Acenaphthene	**0.5**	nd	nd	nd	nd	
Fluorene	**0.5**	nd	nd	nd	nd	
Phenanthrene	**0.5**	nd	nd	nd	nd	
Anthracene	**0.5**	nd	nd	nd	nd	
Fluoranthene	**0.5**	nd	nd	nd	nd	
Pyrene	**0.5**	nd	nd	nd	nd	
Benz(a)anthracene	**0.5**	nd	nd	nd	nd	
Chrysene	**0.5**	nd	nd	nd	nd	
Benzo(b) & (k)fluoranthene	**1**	nd	nd	nd	nd	
Benzo(a)pyrene	**0.5**	nd	nd	nd	nd	
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd	nd	nd	
Dibenz(a.h)anthracene	**0.5**	nd	nd	nd	nd	
Benzo(g.h.i)perylene	**0.5**	nd	nd	nd	nd	
Total PAH	**-**	nd	nd	nd	nd	
2-Fluorobiphenyl-SURROGATE	**1**	80%	105%	108%	94%	
Anthracene-d10-SURROGATE	**1**	72%	108%	104%	97%	
d14-Terphenyl-SURROGATE	**1**	77%	107%	109%	97%	

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

Analyte	Lab No	E49025	E49027	E49029	E49030	E49034
		TP101	TP102	TP103	TP103	TP105
	Sample Id	3.7m	2.6m	0-0.15	3.7m	3.8m
	PQL					
E0180 Semivolatile Organic Compounds	**(µg/L)**					
Phenol	**1**	nd	nd	nd	nd	nd
Aniline	**10**	nd	nd	nd	nd	nd
Bis(2-chloroethyl) ether	**1**	nd	nd	nd	nd	nd
2-Chlorophenol	**1**	nd	nd	nd	nd	nd
1.3-Dichlorobenzene	**1**	nd	nd	nd	nd	nd
1.4-Dichlorobenzene	**1**	nd	nd	nd	nd	nd
1.2-Dichlorobenzene	**1**	nd	nd	nd	nd	nd
Benzyl Alcohol	**1**	nd	nd	nd	nd	nd
2-Methylphenol	**1**	nd	nd	nd	nd	nd
N-Nitrosodi-n-propylamine	**1**	nd	nd	nd	nd	nd
Bis(2-chloroisopropyl) ether	**1**	nd	nd	nd	nd	nd
4-Methylphenol	**1**	nd	nd	nd	nd	nd
3-Methylphenol	**1**	nd	nd	nd	nd	nd
Hexachloroethane	**1**	nd	nd	nd	nd	nd
Nitrobenzene	**1**	nd	nd	nd	nd	nd
Isophorone	**1**	nd	nd	nd	nd	nd
2-Nitrophenol	**1**	nd	nd	nd	nd	nd
2.4-Dimethylphenol	**1**	nd	nd	nd	nd	nd
Bis(2-chloroethoxy) methane	**1**	nd	nd	nd	nd	nd
Benzoic Acid	**10**	nd	nd	nd	nd	nd
2.4-Dichlorophenol	**1**	nd	nd	nd	nd	nd
1.2.4-Trichlorobenzene	**1**	nd	nd	nd	nd	nd
Naphthalene	**1**	nd	nd	nd	nd	nd
4-Chloroaniline	**1**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

Analyte	Lab No	E49025	E49027	E49029	E49030	E49034
		TP101	TP102	TP103	TP103	TP105
	Sample Id	3.7m	2.6m	0-0.15	3.7m	3.8m
	PQL					
Hexachlorobutadiene	1	nd	nd	nd	nd	nd
4-Chloro-3-methylphenol	1	nd	nd	nd	nd	nd
2-Methylnaphthalene	1	nd	nd	nd	nd	nd
Hexachlorocyclopentadiene	1	nd	nd	nd	nd	nd
2.4.6-Trichlorophenol	1	nd	nd	nd	nd	nd
2.4.5-Trichlorophenol	1	nd	nd	nd	nd	nd
2-Chloronaphthalene	1	nd	nd	nd	nd	nd
2-Nitroaniline	1	nd	nd	nd	nd	nd
Dimethyl phthalate	1	nd	nd	nd	nd	nd
2.6-Dinitrotoluene	1	nd	nd	nd	nd	nd
Acenaphthylene	1	nd	nd	nd	nd	nd
3-Nitroaniline	1	nd	nd	nd	nd	nd
Acenaphthene	1	nd	2	nd	nd	nd
2.4-Dinitrophenol	1	nd	nd	nd	nd	nd
4-Nitrophenol	1	nd	nd	nd	nd	nd
Dibenzofuran	1	nd	nd	nd	nd	nd
Diethyl phthalate	1	nd	nd	nd	nd	nd
Fluorene	1	nd	nd	nd	nd	nd
4-Chlorophenyl phenyl ether	1	nd	nd	nd	nd	nd
4-Nitroaniline	1	nd	nd	nd	nd	nd
4.6-Dinitro-2-methylphenol	1	nd	nd	nd	nd	nd
Azobenzene	10	nd	nd	nd	nd	nd
N-Nitrosodiphenylamine	10	nd	nd	nd	nd	nd
a-BHC	1	nd	nd	nd	nd	nd
4-Bromophenyl phenyl ether	1	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

Analyte	Lab No	E49025	E49027	E49029	E49030	E49034
		TP101	TP102	TP103	TP103	TP105
	Sample Id	3.7m	2.6m	0-0.15	3.7m	3.8m
	PQL					
Hexachlorobenzene	1	nd	nd	nd	nd	nd
b-BHC	1	nd	nd	nd	nd	nd
Pentachlorophenol	1	nd	nd	nd	nd	nd
g-BHC	1	nd	nd	nd	nd	nd
Phenanthrene	1	nd	4	nd	nd	nd
Anthracene	1	nd	1	nd	nd	nd
d-BHC	1	nd	nd	nd	nd	nd
Heptachlor	1	nd	nd	nd	nd	nd
Di-n-butyl phthalate	1	nd	nd	nd	nd	nd
Aldrin	1	nd	nd	nd	nd	nd
Heptachlor epoxide	1	nd	nd	nd	nd	nd
Fluoranthene	1	nd	nd	nd	nd	nd
Pyrene	1	nd	38	nd	nd	nd
Endosulfan 1	1	nd	nd	nd	nd	nd
4.4-DDE	1	nd	nd	nd	nd	nd
Dieldrin	1	nd	nd	nd	nd	nd
Endrin	1	nd	nd	nd	nd	nd
Endosulfan 2	1	nd	nd	nd	nd	nd
4.4-DDD	1	nd	nd	nd	nd	nd
Endrin aldehyde	1	nd	nd	nd	nd	nd
Butyl benzyl phthalate	1	nd	nd	nd	nd	nd
Endosulfan sulfate	1	nd	nd	nd	nd	nd
4.4-DDT	1	nd	nd	nd	nd	nd
3.3-Dichlorobenzidine	1	nd	nd	nd	nd	nd
Benz(a)anthracene	1	nd	12	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49025	E49027	E49029	E49030	E49034
		TP101	TP102	TP103	TP103	TP105
	Sample Id	3.7m	2.6m	0-0.15	3.7m	3.8m
	PQL					
Chrysene	1	nd	10	nd	nd	nd
Bis(2-ethylhexyl) phthalate	1	nd	nd	nd	nd	nd
Di-n-octylphthalate	1	nd	nd	nd	nd	nd
Benzo(b)fluoranthene	1	nd	8	nd	nd	nd
Benzo(k)fluoranthene	1	nd	4	nd	nd	nd
Benzo(a)pyrene	1	nd	11	nd	nd	nd
Indeno(1.2.3-cd)pyrene	1	nd	4	nd	nd	nd
Dibenz(a.h)anthracene	1	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	1	nd	4	nd	nd	nd
2-Fluorophenol-SURROGATE		108%	75%	128%	106%	123%
D5-Phenol-SURROGATE		109%	76%	130%	105%	129%
D5-Nitrobenzene-SURROGATE		82%	83%	114%	77%	89%
2-Fluorobiphenyl-SURROGATE		82%	83%	130%	74%	86%
2.4.6-Tribromophenol-SURROGATE		70%	100%	117%	71%	83%
D-Terphenyl-D14-SURROGATE		88%	90%	127%	83%	95%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

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Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49042	E49044			
		TP109	TP110			
	Sample Id	3.5m	3.9m			
	PQL					
E0180 Semivolatile Organic Compounds(µg/L)						
Phenol	1	nd	nd			
Aniline	10	nd	nd			
Bis(2-chloroethyl) ether	1	nd	nd			
2-Chlorophenol	1	nd	nd			
1.3-Dichlorobenzene	1	nd	nd			
1.4-Dichlorobenzene	1	nd	nd			
1.2-Dichlorobenzene	1	nd	nd			
Benzyl Alcohol	1	nd	nd			
2-Methylphenol	1	nd	nd			
N-Nitrosodi-n-propylamine	1	nd	nd			
Bis(2-chloroisopropyl) ether	1	nd	nd			
4-Methylphenol	1	nd	nd			
3-Methylphenol	1	nd	nd			
Hexachloroethane	1	nd	nd			
Nitrobenzene	1	nd	nd			
Isophorone	1	nd	nd			
2-Nitrophenol	1	nd	nd			
2.4-Dimethylphenol	1	nd	nd			
Bis(2-chloroethoxy) methane	1	nd	nd			
Benzoic Acid	10	nd	nd			
2.4-Dichlorophenol	1	nd	nd			
1.2.4-Trichlorobenzene	1	nd	nd			
Naphthalene	1	nd	nd			
4-Chloroaniline	1	nd	nd			

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49042	E49044			
		TP109	TP110			
	Sample Id	3.5m	3.9m			
	PQL					
Hexachlorobutadiene	1	nd	nd			
4-Chloro-3-methylphenol	1	nd	nd			
2-Methylnaphthalene	1	nd	nd			
Hexachlorocyclopentadiene	1	nd	nd			
2.4.6-Trichlorophenol	1	nd	nd			
2.4.5-Trichlorophenol	1	nd	nd			
2-Chloronaphthalene	1	nd	nd			
2-Nitroaniline	1	nd	nd			
Dimethyl phthalate	1	nd	nd			
2.6-Dinitrotoluene	1	nd	nd			
Acenaphthylene	1	nd	nd			
3-Nitroaniline	1	nd	nd			
Acenaphthene	1	nd	nd			
2.4-Dinitrophenol	1	nd	nd			
4-Nitrophenol	1	nd	nd			
Dibenzofuran	1	nd	nd			
Diethyl phthalate	1	nd	nd			
Fluorene	1	nd	nd			
4-Chlorophenyl phenyl ether	1	nd	nd			
4-Nitroaniline	1	nd	nd			
4.6-Dinitro-2-methylphenol	1	nd	nd			
Azobenzene	10	nd	nd			
N-Nitrosodiphenylamine	10	nd	nd			
a-BHC	1	nd	nd			
4-Bromophenyl phenyl ether	1	nd	nd			

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

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Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49042	E49044			
		TP109	TP110			
	Sample Id	3.5m	3.9m			
	PQL					
Hexachlorobenzene	1	nd	nd			
b-BHC	1	nd	nd			
Pentachlorophenol	1	nd	nd			
g-BHC	1	nd	nd			
Phenanthrene	1	nd	nd			
Anthracene	1	nd	nd			
d-BHC	1	nd	nd			
Heptachlor	1	nd	nd			
Di-n-butyl phthalate	1	nd	nd			
Aldrin	1	nd	nd			
Heptachlor epoxide	1	nd	nd			
Fluoranthene	1	nd	nd			
Pyrene	1	nd	nd			
Endosulfan 1	1	nd	nd			
4.4-DDE	1	nd	nd			
Dieldrin	1	nd	nd			
Endrin	1	nd	nd			
Endosulfan 2	1	nd	nd			
4.4-DDD	1	nd	nd			
Endrin aldehyde	1	nd	nd			
Butyl benzyl phthalate	1	nd	nd			
Endosulfan sulfate	1	nd	nd			
4.4-DDT	1	nd	nd			
3.3-Dichlorobenzidine	1	nd	nd			
Benz(a)anthracene	1	nd	nd			

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

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Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49042	E49044			
		TP109	TP110			
	Sample Id	3.5m	3.9m			
	PQL					
Chrysene	1	nd	nd			
Bis(2-ethylhexyl) phthalate	1	nd	nd			
Di-n-octylphthalate	1	nd	nd			
Benzo(b)fluoranthene	1	nd	nd			
Benzo(k)fluoranthene	1	nd	nd			
Benzo(a)pyrene	1	nd	nd			
Indeno(1.2.3-cd)pyrene	1	nd	nd			
Dibenz(a.h)anthracene	1	nd	nd			
Benzo(g.h.i)perylene	1	nd	nd			
2-Fluorophenol-SURROGATE		115%	117%			
D5-Phenol-SURROGATE		117%	130%			
D5-Nitrobenzene-SURROGATE		73%	89%			
2-Fluorobiphenyl-SURROGATE		72%	86%			
2.4.6-Tribromophenol-SURROGATE		70%	121%			
D-Terphenyl-D14-SURROGATE		86%	102%			

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

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Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49038	E49039			
		TP107	TP107			
	Sample Id	4.3m	5.1m			
	PQL					
E1220 TPH in Soil						
Total C6-C36	-	2441	nd			
C6-C9 Fraction	**10**	44	nd			
C10-C14 Fraction	**10**	2191	nd			
C15-C28 Fraction	**50**	207	nd			
C29-C36 Fraction	**50**	nd	nd			
E1010 BTEX (P&T) in Soil						
Benzene	**0.5**	nd	nd			
Toluene	**1**	nd	nd			
Ethylbenzene	**1**	nd	nd			
Total Xylenes	**3**	nd	nd			

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

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Job Number : 8E01140
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49040				
		TP108				
	Sample Id	0-0.15				
	PQL					
E1080 Organochlorine Pesticides in Soil						
HCB	**0.1**	nd				
a-BHC	**0.1**	nd				
g-BHC	**0.1**	nd				
Heptachlor	**0.1**	nd				
Aldrin	**0.1**	nd				
b-BHC	**0.1**	nd				
d-BHC	**0.1**	nd				
Oxychlordane	**0.1**	nd				
Heptachlor epoxide	**0.1**	nd				
Endosulfan 1	**0.1**	nd				
Chlordane-Trans	**0.1**	nd				
Chlordane-Cis	**0.1**	nd				
trans-Nonachlor	**0.1**	nd				
DDE	**0.1**	nd				
Dieldrin	**0.1**	nd				
Endrin	**0.1**	nd				
DDD	**0.1**	nd				
Endosulfan 2	**0.1**	nd				
DDT	**0.1**	nd				
Endosulfan sulfate	**0.1**	nd				
Methoxychlor	**0.1**	nd				
2.4.5.6-tetrachloro-m-xylene-SURROGATE	**1**	82%				

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

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QA/QC APPENDIX NO. 8E01140

Method	Description
E5910	Metals by ICP-AES
E5950	Mercury in Soil
E1110	Polynuclear Aromatic Hydrocarbons
E3600	pH in Soil
E1180	Semivolatile Organic Compounds
E1220	Total Petroleum Hydrocarbons
E1010	Benzene,Toluene,Ethylbenzene & Xylene
E1080	Organochlorine Pesticides

Chromatography QA/QC

	Yes	No	N/A
Retention Time Window Within Acceptance Criteria(±2%)	√		
Check Standard Within Acceptance Criteria(±10%)	√		
Recalibration Within Acceptance Criteria(±15%)	√		

Other QA/QC

Holding time conforming With Method Specification	√		
Chain of Custody Attached	√		

N/A=Not Applicable

Comments

1. Laboratory QA/QC including Method Blanks, Duplicates, Matrix Spike Duplicates, Laboratory Control Samples or CRM's are included in this QA/QC appendix. (Where applicable)
2. Inter-Laboratory proficiency trial results available on request. (Where applicable)
3. Surrogate description and recoveries are recorded in the Report. (Where applicable)
4. Acceptance criteria for specific analytes are available upon request (Refer to SPM-01).
5. Practical Quantitation Limit (PQL is typically 2-10 x method detection limit (MDL)).
6. PQL's are matrix dependent and are increased accordingly where sample extracts are diluted.
7. Results are uncorrected for matrix spike or surrogate recoveries.

per G.W. ANDERSON
Manager Environmental Sydney

amdel

Job Number : 8E01140

QAQC : Spike Recoveries

Analyte	Spike Level	Level Detected		Recovery Details			
		Spike 1	Spike 2	Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E5910 Metals in Soil							
Lead	50	46	48	93%	96%	95%	4%
Zinc	50	43	41	86%	82%	84%	4%
Arsenic	50	46	47	93%	94%	93%	2%
Copper	50	51	51	101%	102%	102%	1%
Chromium	50	44	46	88%	92%	90%	5%
Cadmium	50	43.8	44.1	88%	88%	88%	1%
Mercury	0.50	0.54	0.55	108%	110%	109%	2%

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

Job Number : 8E01140

QAQC : Laboratory Control Sample

Analyte	Level	Level Detected		Recovery Details			
		Result1	Result2	Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
pH	7.40	7.3	7.3	99%	99%	99%	0%

PQL = Practical Quantitation Limit

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

nd = <PQL

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

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Job Number : 8E01140

QAQC : Laboratory Duplicates

Analyte	PQL	Dupl 1	Dupl 2	Average	RPD (%)
E5910 Metals in Soil					
Lead	**5**	36	30	33	18%
Zinc	**5**	54	44	49	20%
Arsenic	**5**	8	6	7	28%
Copper	**5**	23	36	29	44%
Chromium	**5**	38	32	35	17%
Cadmium	**0.5**	nd	nd		
Mercury	**0.05**	nd	nd		

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/L (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
E5910 Metals in Soil						
Lead	**5**	nd				
Zinc	**5**	nd				
Arsenic	**5**	nd				
Copper	**5**	nd				
Chromium	**5**	nd				
Cadmium	**0.5**	nd				
Mercury	**0.05**	nd				
pH	**0.1**	6.7				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Spike Recoveries

Analyte	Spike Level	Level Detected		Recovery Details			
		Spike 1	Spike 2	Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E1110 PAH's in Soil							
Naphthalene	5	4.9	4.7	98%	94%	96%	4%
Acenaphthylene	5	5.3	5.0	106%	100%	103%	6%
Acenaphthene	5	4.9	4.9	98%	98%	98%	0%
Fluorene	5	5.0	4.9	100%	98%	99%	2%
Phenanthrene	5	5.1	4.8	102%	96%	99%	6%
Anthracene	5	5.4	4.9	108%	98%	103%	10%
Fluoranthene	5	5.1	4.9	102%	98%	100%	4%
Pyrene	5	5.3	5.1	106%	102%	104%	4%
Benz(a)anthracene	5	5.3	5.1	106%	102%	104%	4%
Chrysene	5	4.9	4.7	98%	94%	96%	4%
Benzo(b) & (k)fluoranthene	10	10	10	100%	100%	100%	0%
Benzo(a)pyrene	5	4.8	4.7	96%	94%	95%	2%
Indeno(1.2.3-cd)pyrene	5	5.2	5.1	104%	102%	103%	2%
Dibenz(a.h)anthracene	5	4.8	4.7	96%	94%	95%	2%
Benzo(g.h.i)perylene	5	4.7	4.6	94%	92%	93%	2%

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

amdel

Job Number : 8E01140

QAQC : Laboratory Duplicates

Analyte	PQL	Dupl 1	Dupl 2	Average	RPD (%)
E1110 PAH's in Soil					
Naphthalene	**0.5**	nd	nd		
Acenaphthylene	**0.5**	nd	nd		
Acenaphthene	**0.5**	nd	nd		
Fluorene	**0.5**	nd	nd		
Phenanthrene	**0.5**	nd	nd		
Anthracene	**0.5**	nd	nd		
Fluoranthene	**0.5**	nd	nd		
Pyrene	**0.5**	nd	nd		
Benz(a)anthracene	**0.5**	nd	nd		
Chrysene	**0.5**	nd	nd		
Benzo(b) & (k)fluoranthene	**1**	nd	nd		
Benzo(a)pyrene	**0.5**	nd	nd		
Indeno(1.2.3-cd)pyrene	**0.5**	nd	nd		
Dibenz(a.h)anthracene	**0.5**	nd	nd		
Benzo(g.h.i)perylene	**0.5**	nd	nd		
Total PAH	**-**	nd	nd		
2-Fluorobiphenyl-SURROGATE	**1**	99%	104%		
Anthracene-d10-SURROGATE	**1**	102%	105%		
d14-Terphenyl-SURROGATE	**1**	102%	105%		

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/L (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
E1110 PAH's in Soil						
Naphthalene	**0.5**	nd				
Acenaphthylene	**0.5**	nd				
Acenaphthene	**0.5**	nd				
Fluorene	**0.5**	nd				
Phenanthrene	**0.5**	nd				
Anthracene	**0.5**	nd				
Fluoranthene	**0.5**	nd				
Pyrene	**0.5**	nd				
Benz(a)anthracene	**0.5**	nd				
Chrysene	**0.5**	nd				
Benzo(b) & (k)fluoranthene	**1**	nd				
Benzo(a)pyrene	**0.5**	nd				
Indeno(1.2.3-cd)pyrene	**0.5**	nd				
Dibenz(a.h)anthracene	**0.5**	nd				
Benzo(g.h.i)perylene	**0.5**	nd				
Total PAH	**-**	nd				
2-Fluorobiphenyl-SURROGATE	**1**	95%				
Anthracene-d10-SURROGATE	**1**	95%				
d14-Terphenyl-SURROGATE	**1**	94%				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

Job Number : 8E01140

QAQC : Laboratory Control Sample

Analyte	Spike Level	Level Detected		Recovery Details			
		Spike 1	Spike 2	Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E0180 Semivolatile Organic Compounds(µg/L)							
Phenol	20	24		120%			
2-Chlorophenol	20	25		124%			
1.4-Dichlorobenzene	20	19		95%			
N-Nitrosodi-n-propylamine	20	19		97%			
1.2.4-Trichlorobenzene	20	18		89%			
4-Chloro-3-methylphenol	20	19		94%			
Acenaphthene	20	18		90%			
Pentachlorophenol	20	15		76%			
Pyrene	20	20		98%			

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
E0180 Semivolatile Organic Compounds(μg/L)						
Phenol	1	nd				
Aniline	10	nd				
Bis(2-chloroethyl) ether	1	nd				
2-Chlorophenol	1	nd				
1.3-Dichlorobenzene	1	nd				
1.4-Dichlorobenzene	1	nd				
1.2-Dichlorobenzene	1	nd				
Benzyl Alcohol	1	nd				
2-Methylphenol	1	nd				
N-Nitrosodi-n-propylamine	1	nd				
Bis(2-chloroisopropyl) ether	1	nd				
4-Methylphenol	1	nd				
3-Methylphenol	1	nd				
Hexachloroethane	1	nd				
Nitrobenzene	1	nd				
Isophorone	1	nd				
2-Nitrophenol	1	nd				
2.4-Dimethylphenol	1	nd				
Bis(2-chloroethoxy) methane	1	nd				
Benzoic Acid	10	nd				
2.4-Dichlorophenol	1	nd				
1.2.4-Trichlorobenzene	1	nd				
Naphthalene	1	nd				
4-Chloroaniline	1	nd				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
Hexachlorobutadiene	1	nd				
4-Chloro-3-methylphenol	1	nd				
2-Methylnaphthalene	1	nd				
Hexachlorocyclopentadiene	1	nd				
2.4.6-Trichlorophenol	1	nd				
2.4.5-Trichlorophenol	1	nd				
2-Chloronaphthalene	1	nd				
2-Nitroaniline	1	nd				
Dimethyl phthalate	1	nd				
2.6-Dinitrotoluene	1	nd				
Acenaphthylene	1	nd				
3-Nitroaniline	1	nd				
Acenaphthene	1	nd				
2.4-Dinitrophenol	1	nd				
4-Nitrophenol	1	nd				
Dibenzofuran	1	nd				
Diethyl phthalate	1	nd				
Fluorene	1	nd				
4-Chlorophenyl phenyl ether	1	nd				
4-Nitroaniline	1	nd				
4.6-Dinitro-2-methylphenol	1	nd				
Azobenzene	10	nd				
N-Nitrosodiphenylamine	10	nd				
a-BHC	1	nd				
4-Bromophenyl phenyl ether	1	nd				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID	Blank				
	PQL					
Hexachlorobenzene	1	nd				
b-BHC	1	nd				
Pentachlorophenol	1	nd				
g-BHC	1	nd				
Phenanthrene	1	nd				
Anthracene	1	nd				
d-BHC	1	nd				
Heptachlor	1	nd				
Di-n-butyl phthalate	1	nd				
Aldrin	1	nd				
Heptachlor epoxide	1	nd				
Fluoranthene	1	nd				
Pyrene	1	nd				
Endosulfan 1	1	nd				
4.4-DDE	1	nd				
Dieldrin	1	nd				
Endrin	1	nd				
Endosulfan 2	1	nd				
4.4-DDD	1	nd				
Endrin aldehyde	1	nd				
Butyl benzyl phthalate	1	nd				
Endosulfan sulfate	1	nd				
4.4-DDT	1	nd				
3.3-Dichlorobenzidine	1	nd				
Benz(a)anthracene	1	nd				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
Chrysene	**1**	nd				
Bis(2-ethylhexyl) phthalate	**1**	nd				
Di-n-octylphthalate	**1**	nd				
Benzo(b)fluoranthene	**1**	nd				
Benzo(k)fluoranthene	**1**	nd				
Benzo(a)pyrene	**1**	nd				
Indeno(1.2.3-cd)pyrene	**1**	nd				
Dibenz(a.h)anthracene	**1**	nd				
Benzo(g.h.i)perylene	**1**	nd				
2-Fluorophenol-SURROGATE		117%				
D5-Phenol-SURROGATE		117%				
D5-Nitrobenzene-SURROGATE		89%				
2-Fluorobiphenyl-SURROGATE		86%				
2.4.6-Tribromophenol-SURROGATE		70%				
D-Terphenyl-D14-SURROGATE		86%				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

amdel

Job Number : 8E01140

QAQC : Laboratory Control Sample

Analyte	Spike Level	Level Detected		Recovery Details			
		Spike 1	Spike 2	Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E1080 Organochlorine Pesticides in Soil							
HCB	0.5	0.5		105%			
a-BHC	0.5	0.5		103%			
g-BHC	0.5	0.5		104%			
Heptachlor	0.5	0.5		100%			
Aldrin	0.5	0.5		103%			
b-BHC	0.5	0.5		98%			
d-BHC	0.5	0.5		108%			
Oxychlordane	0.5	0.5		97%			
Heptachlor epoxide	0.5	0.5		108%			
Endosulfan 1	0.5	0.5		104%			
Chlordane-Trans	0.5	0.5		100%			
Chlordane-Cis	0.5	0.5		98%			
trans-Nonachlor	0.5	0.5		102%			
DDE	1	1.0		99%			
Dieldrin	0.5	0.5		97%			
Endrin	0.5	0.6		112%			
DDD	1	1.1		106%			
Endosulfan 2	0.5	0.5		103%			
DDT	1	0.9		94%			
Endosulfan sulfate	0.5	0.5		109%			
Methoxychlor	0.5	0.5		100%			

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
E1080 Organochlorine Pesticides in Soil						
HCB	**0.1**	nd				
a-BHC	**0.1**	nd				
g-BHC	**0.1**	nd				
Heptachlor	**0.1**	nd				
Aldrin	**0.1**	nd				
b-BHC	**0.1**	nd				
d-BHC	**0.1**	nd				
Oxychlordane	**0.1**	nd				
Heptachlor epoxide	**0.1**	nd				
Endosulfan 1	**0.1**	nd				
Chlordane-Trans	**0.1**	nd				
Chlordane-Cis	**0.1**	nd				
trans-Nonachlor	**0.1**	nd				
DDE	**0.1**	nd				
Dieldrin	**0.1**	nd				
Endrin	**0.1**	nd				
DDD	**0.1**	nd				
Endosulfan 2	**0.1**	nd				
DDT	**0.1**	nd				
Endosulfan sulfate	**0.1**	nd				
Methoxychlor	**0.1**	nd				
2.4.5.6-tetrachloro-m-xylene-SURROGATE	**1**	90%				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

amdel

Job Number : 8E01140

QAQC : Spike Recoveries

Analyte	Spike Level	Level Spike 1	Detected Spike 2	Recovery Details Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E1220 TPH in Soil							
Total C6-C36	950	940	925	99%	97%	98%	2%
C6-C9 Fraction	400	380	360	95%	90%	93%	5%
C15-C28 Fraction	550	560	565	102%	103%	102%	1%
E1010 BTEX (P&T) in Soil							
Benzene	10	11.0	12.0	110%	120%	115%	9%
Toluene	10	11	11	110%	110%	110%	0%
Ethylbenzene	10	11	11	110%	110%	110%	0%
Total Xylenes	30	34	33	113%	110%	112%	3%

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
E1220 TPH in Soil						
Total C6-C36	-	nd				
C6-C9 Fraction	**10**	nd				
C10-C14 Fraction	**10**	nd				
C15-C28 Fraction	**50**	nd				
C29-C36 Fraction	**50**	nd				
E1010 BTEX (P&T) in Soil						
Benzene	**0.5**	nd				
Toluene	**1**	nd				
Ethylbenzene	**1**	nd				
Total Xylenes	**3**	nd				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

Australian Environmental Laboratories

att^: Jason

Quality Endorsed Company

20 July 1998

PPK Environmental & Infrastructure
100 Pirie Street
SA 5000

Your Reference: 27K140A
Report Number: 23331

Attention: Stuart Taylor

Dear Stuart

The following samples were received by us on the date indicated.

Samples: Quantity	4 Soil samples
Date of Registration	10/07/98
Date of Receipt of Samples:	9/7/98
Date of Receipt of Instructions :	9/7/98

These samples were analysed in accordance with your written instructions. A copy of the instructions accompanies this analytical report.

The results and associated quality control are contained in the following pages of this report. Unless otherwise stated, solid samples are expressed on a dry weight basis and liquid samples as received.

A preliminary report was issued under the same report number.

Should you have any queries regarding this report please contact the undersigned.

Yours faithfully
AUSTRALIAN ENVIRONMENTAL LABORATORIES

Shane Carruthers
Laboratory Manager

Phillip Dews
Quality Manager

Metals in Soil Our Reference: Your Reference	UNITS ---- ----	23331-1 BD1	23331-2 BD2	23331-3 BD3	23331-4 BD4
Arsenic, As	mg/kg	6	7	230	5
Cadmium, Cd	mg/kg	<1	<1	2	<1
Chromium, Cr	mg/kg	43	14	24	25
Copper, Cu	mg/kg	33	74	36	36
Lead, Pb	mg/kg	23	35	240	19
Zinc, Zn	mg/kg	44	170	2400	140
Mercury, Hg	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Australian Environmental Laboratories

PROJECT: 27K140A **REPORT NO.:23331**

Our Reference: Your Reference	UNITS ---- ----	23331-1 BD1	23331-2 BD2	23331-3 BD3	23331-4 BD4
pH (1:5 extract)	pH Units	6.6	8.6	8.9	8.6

Australian Environmental Laboratories

PROJECT: 27K140A **REPORT NO.: 23331**

QUALITY CONTROL Metals in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm #	Duplicate Sample‖Duplicate	Spike Sm #	% Recovery ‖ % Rec. (Dup) ‖ RPD:%
Arsenic, As	mg/kg	5	MEM-004	<5	23331-1	6 ‖ 7	23331-2	83 ‖ 85 ‖ RPD: 2
Cadmium, Cd	mg/kg	1	MEM-010	<1	23331-1	<1 ‖ <1	23331-2	94 ‖ 92 ‖ RPD: 2
Chromium, Cr	mg/kg	1	MEM-010	<1	23331-1	43 ‖ 44	23331-2	96 ‖ 93 ‖ RPD: 3
Copper, Cu	mg/kg	1	MEM-010	<1	23331-1	33 ‖ 34	23331-2	108 ‖ 108 ‖ RPD: 0
Lead, Pb	mg/kg	2	MEM-010	<2	23331-1	23 ‖ 24	23331-2	96 ‖ 94 ‖ RPD: 2
Zinc, Zn	mg/kg	1	MEM-010	<1	23331-1	44 ‖ 43	23331-2	114 ‖ 116 ‖ RPD: 2
Mercury, Hg	mg/kg	0.05	MEM-005	< 0.05	23331-1	< 0.05 ‖ < 0.05	23331-2	81 ‖ 80 ‖ RPD: 1

QUALITY CONTROL	UNITS	PQL	METHOD	Blank
pH (1:5 extract)	pH Units		MEI-001	[NT]

Result Codes

[INS] : Insufficient Sample for this test
[NR] : Not Requested
[NT] : Not tested
[HBG] : Results not reported due to High Background Interference.
* : Not part of NATA Registration

Results Comments

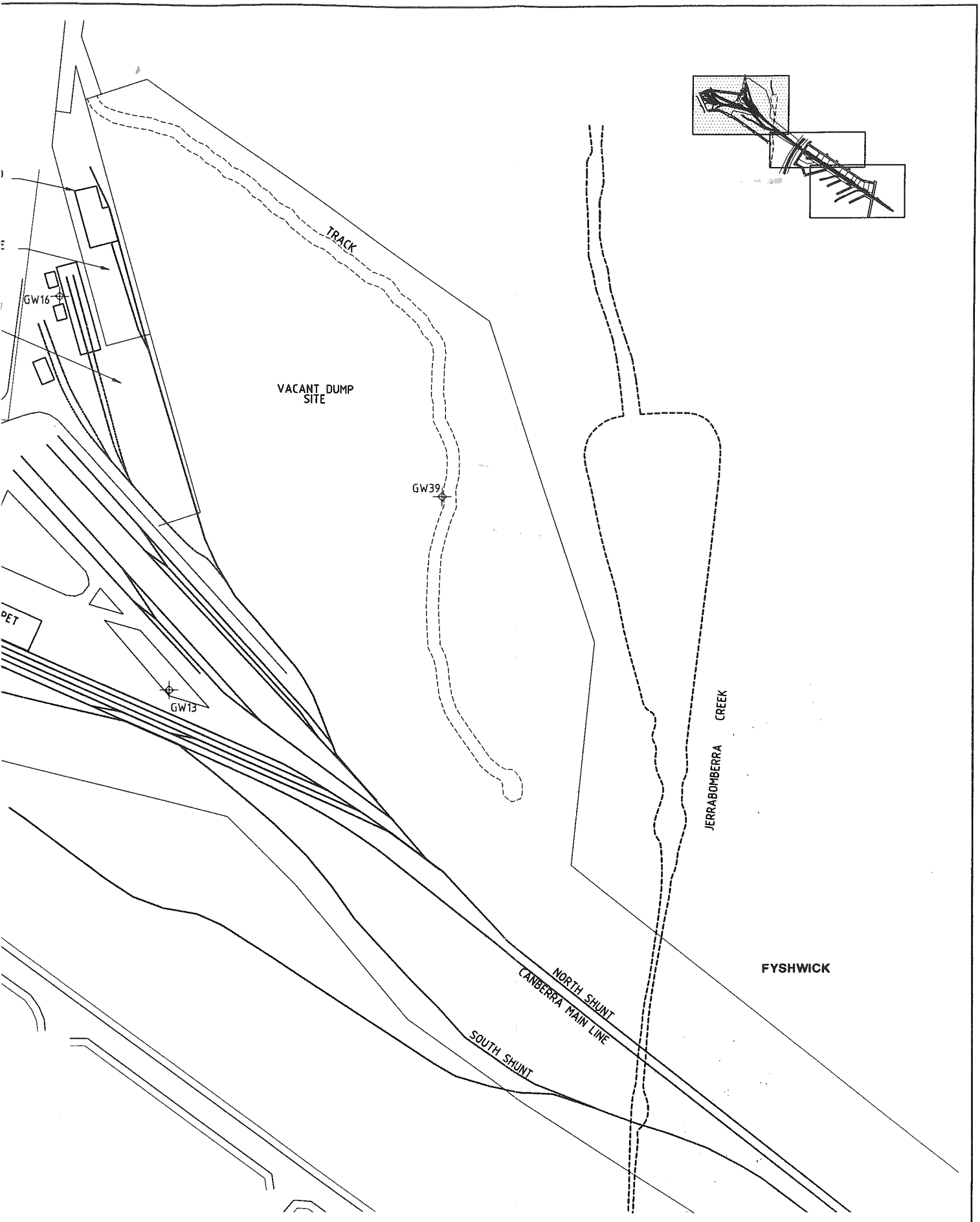
Australian National, Canberra Railyards

Summary of Quality Control Duplicates (Soil).

Sample ID	Various Analytes				
	Actual	Duplicate	RPD (%)	Norm. Val.	Norm. Rep.
arsenic (As)	8	7	13	1.07	0.93
cadmium (Cd)	<5	<1	0	1.00	1.00
chromium (Cr)	12	14	15	0.92	1.08
copper (Cu)	44	74	51	0.75	1.25
lead (Pb)	30	35	15	0.92	1.08
zinc (Zn)	118	170	36	0.82	1.18
mercury (Hg)	<0.05	<0.05	0	1.00	1.00
				RSD (%)	13

Appendix G

Sampling Location Plans
(Groundwater)



PPK Environment & Infrastructure

PPK Environment & Infrastructure Pty. Ltd.

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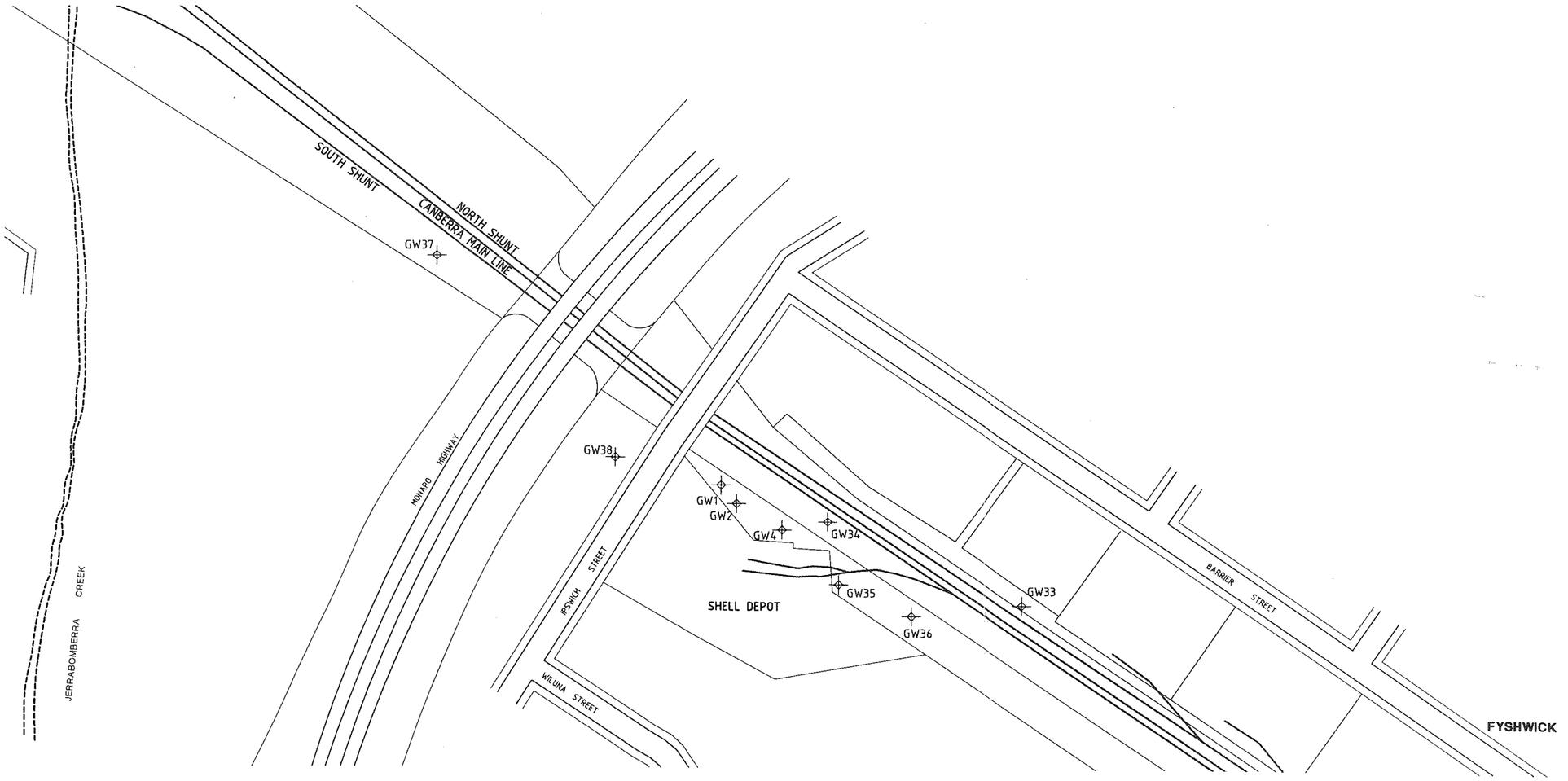
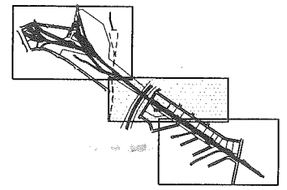
ACN 078 004 798
A NATA Certified Quality Company

PROJECT
CANBERRA RAIL YARDS

TITLE
PHASE 2 INVESTIGATION
GROUNDWATER WELL LOCATIONS
SHEET 6 OF 11

DESIGNED		DATE	SCALES A1 1:2000, A3 1:4000
DESIGN CHECK			CAD REFERENCE 27K140A — DATE
DRAWN	BJB	10.7.98	PROJECT APPROVAL
DRAWING CHECK	BJH	10.7.98	CLIENT APPROVAL
DRAWING No	27K140A/06		ISSUE -





LEGEND

GW5 DENOTES GROUNDWATER WELL LOCATION

CODE	DATE	DESCRIPTION	BY	APPR
		REVISIONS AND APPROVALS		

CODE	DATE	DESCRIPTION	BY	APPR
		REVISIONS AND APPROVALS		

CLIENT
INDEC CONSULTING

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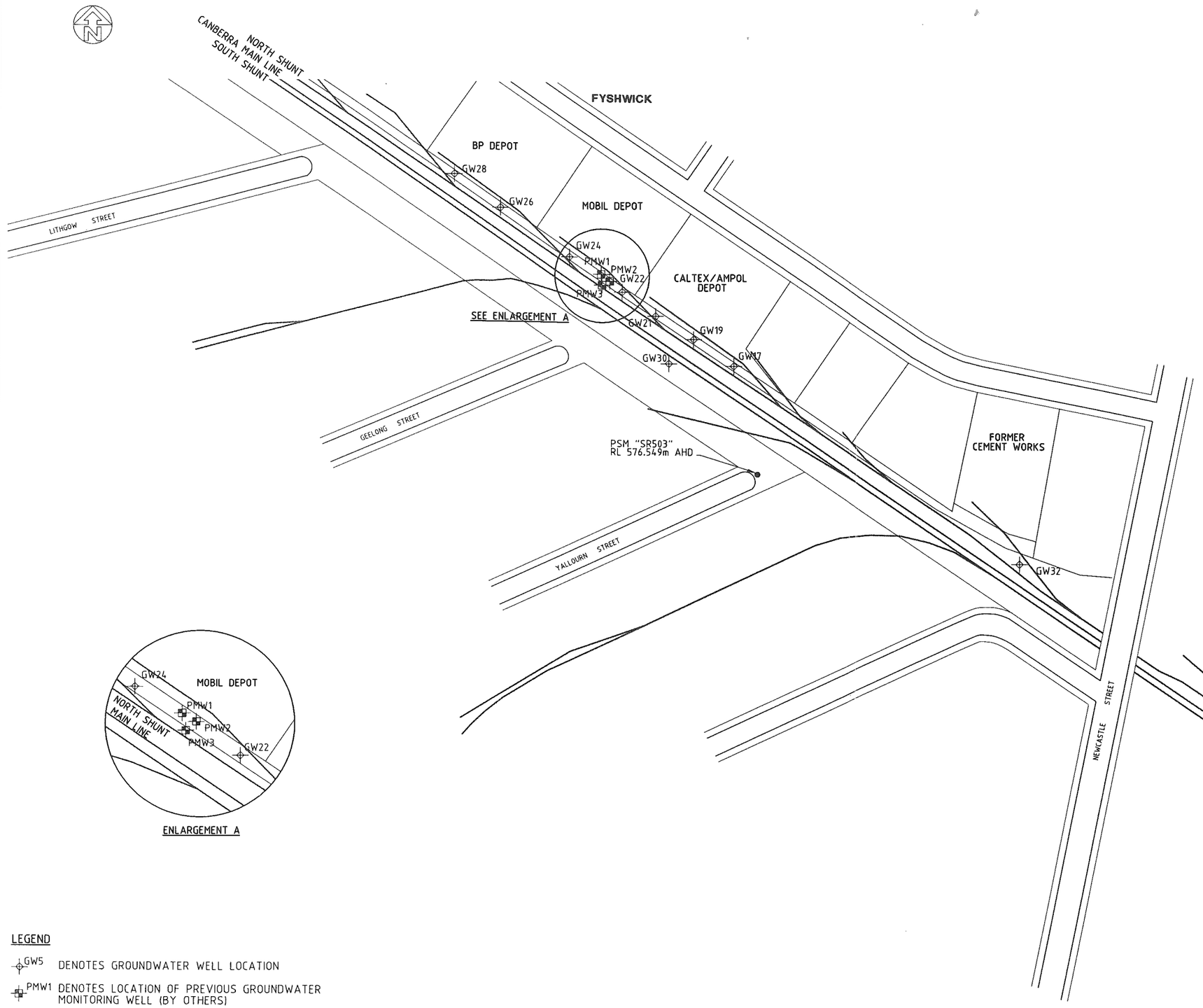
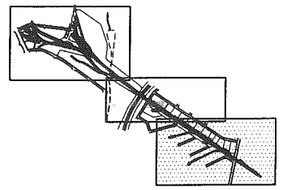
PROJECT
CANBERRA RAIL YARDS

TITLE
PHASE 2 INVESTIGATION
GROUNDWATER WELL LOCATIONS
SHEET 7 OF 11

DESIGNED	DATE	SCALES: A1 1:2000, A3 1:4000
DESIGN CHECK		CAD REFERENCE: 27K140A — DATE
DRAWN: BJB	10.7.98	PROJECT APPROVAL
DRAWING CHECK: BJH	10.7.98	CLIENT APPROVAL: -
DRAWING No: 27K140A/07		ISSUE: -





ENLARGEMENT A

LEGEND

GW5 DENOTES GROUNDWATER WELL LOCATION

PMW1 DENOTES LOCATION OF PREVIOUS GROUNDWATER MONITORING WELL (BY OTHERS)

CODE	DATE	DESCRIPTION	BY	APPR
		REVISIONS AND APPROVALS		

CODE	DATE	DESCRIPTION	BY	APPR
		REVISIONS AND APPROVALS		

CLIENT
INDEC CONSULTING

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PROJECT
CANBERRA RAIL YARDS

TITLE
PHASE 2 INVESTIGATION
GROUNDWATER WELL LOCATIONS
SHEET 8 OF 11

DESIGNED	DATE	SCALES
		A1 1:2000, A3 1:4000
DESIGN CHECK		CAD REFERENCE / DATE
		27K140A
DRAWN	10.7.98	PROJECT APPROVAL / DATE
BJB		
DRAWING CHECK	10.7.98	CLIENT APPROVAL / DATE
BJH		-
DRAWING No.		ISSUE
27K140A/08		-

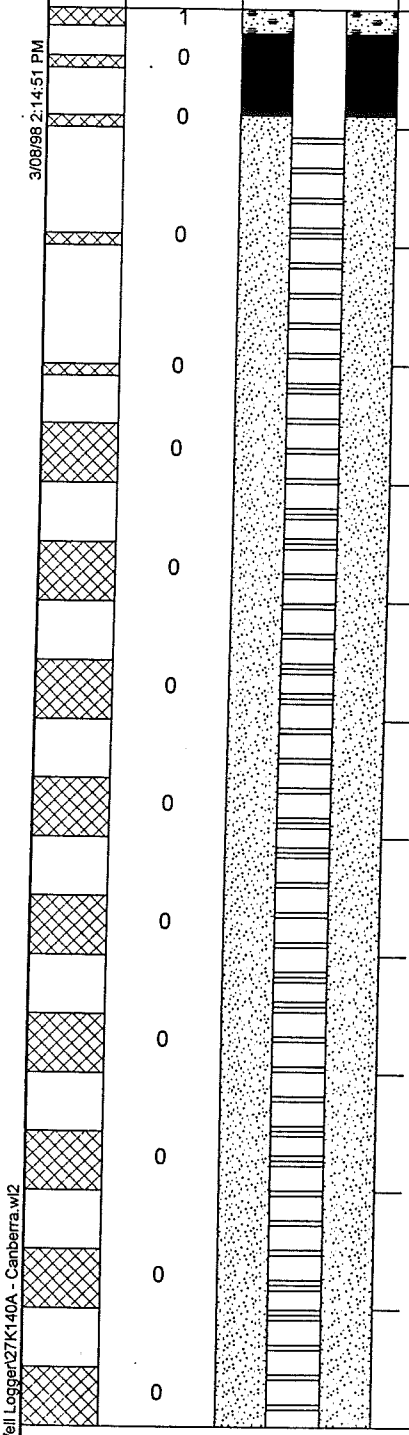
Appendix H

Well Construction Logs

Was groundwater actually intercepted?

PPK
Environment&Infrastructure

Drilling Co.: STRATA	Permit No.:	**GW1**	
Drill Method: Air	TOC Elevation: 564.480 AHD		
Boring Dia: 0.15 Meters	Water Struck At: Meters	Logged By:	
Date Drilled: 17/06/98	SWL: 6.615 Meters	B Harris	



Description
FILL. Sandy clay, brown, light brown, fine to medium sand, some gravel to 40 mm, fine roots (< PL).
Sandy CLAY. Dark brown, fine to medium sand, black ironstone mottling (< PL).
Sandy Silty CLAY. Mottled orange, light brown, black ironstone mottling, fine to medium sand, some fine ironstone gravel (< PL).
Sandy Clayey SILT. Pale grey and pale orange, fine sand, some ironstone gravel to 30 mm (< PL).
SILTSTONE. Orange and dull red.
SILTSTONE. Light purple, weak.
SILTSTONE. Yellow, pale red, becoming brown and more clayey below 10.5 m.

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Completion Notes:

Standpipe and Lock

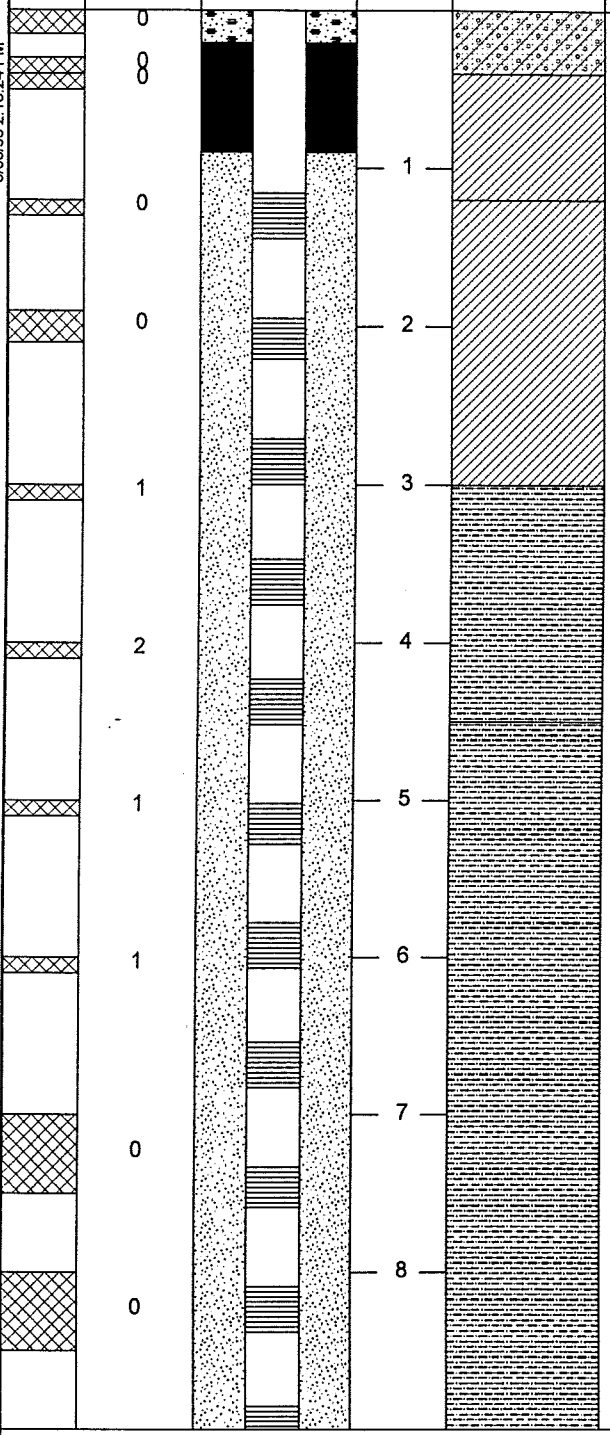
Site:
AN Canberra Phase 2 Investigations

Site Address:
Canberra Rail Yard
Canberra,

Project No.: **27K140A**

PPK
Environment & Infrastructure

Drilling Co.:	STRATA	Permit No.:	**GW2**
Drill Method:	Air	TOC Elevation:	564.633m AHDm
Boring Dia:	0.15 Meters	Water Struck At:	Meters
Date Drilled:	17/06/98	SWL:	6.465 Meters
			Logged By: B Harris



Description
FILL. Silty Sandy clay, mottled olive brown, some red, some black ironstone staining, some gravel to 30 mm (£ PL)
Sandy Silty CLAY. Mottled olive brown and black (ironstone staining) (£ PL).
Silty Gravelly CLAY. Mottled olive green, yellow, red and black ironstone, fine ironstone gravel (< PL)
SILTSTONE. Reddish grey over purple. Hydrocarbon odour 4.0-4.5 m
SILTSTONE/Clayey SILT. Yellow brown, very weak rock.

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
Canberra Rail Yard
Canberra,

Project No.: **27K140A** Page 1

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PPK
Environment&Infrastructure

Drilling Co.: STRATA	Permit No.:	**GW4**	
Drill Method: Air	TOC Elevation: 564.720m AHDm		
Boring Dia: 0.15 Meters	Water Struck At: Meters	Logged By: B Harris	
Date Drilled: 17/06/98	SWL: 7.18 Meters		

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	0				FILL. Silty clay, mottled brown, some fine sand, some fine gravel (>PL).
	0				Sandy Silty CLAY. Brown, fine to medium sand, fine roots (>PL).
	0		1		Silty Gravelly CLAY. Brown, orange brown, fine gravel.
					Silty Gravelly CLAY. Orange brown, mottled green, some ironstone staining, fine ironstone gravel, quartzitic sandstone gravel to 50 mm at 0.9m.
	0		2		Silty Gravelly CLAY. Mottled olive green, black ironstone staining decreasing with depth, fine gravel, some purple siltstone fragments below 2.5 m.
	1		3		SILTSTONE. Purple bands at 3m and 6.5 to 7.0 m, hydrocarbon odour strongest 4.0 m to 4.5 m.
	2		4		
	2		5		
	1		6		
	1		7		
	1				

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
Canberra Rail Yard
Canberra,

Project No.: **27K140A** Page 1

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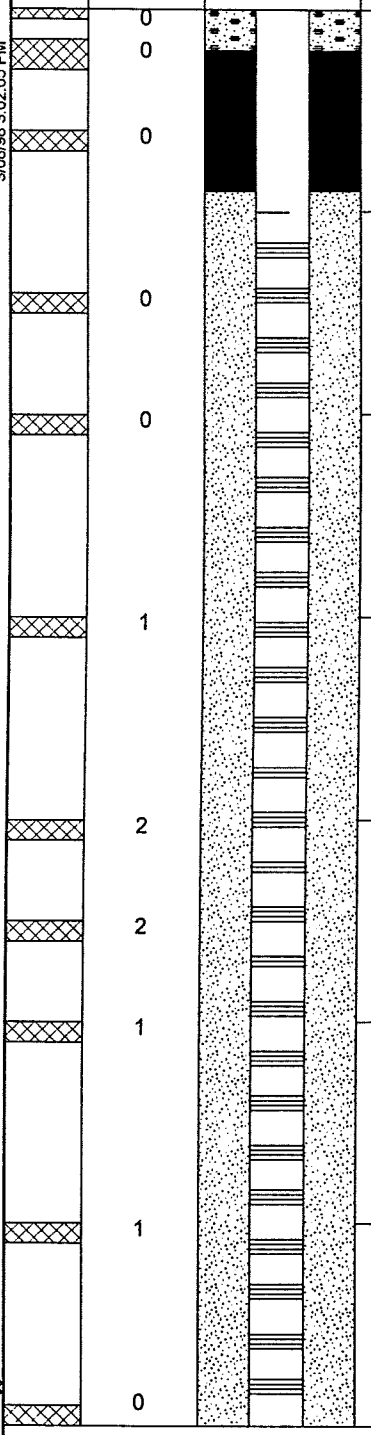
PPK
Environment&Infrastructure

Drilling Co.:	STRATA	Permit No.:	**GW5**
Drill Method:	Air	TOC Elevation:	563.338m AHDm
Boring Dia:	0.15 Meters	Water Struck At:	Meters
Date Drilled:	19/06/98	SWL:	5.585 Meters
			Logged By: B Harris



Sample	Field Class.	Depth Meters	Lithology	Description
	0			FILL. Sandy silty clay, brown, fine to medium sand, some rail ballast (> PL).
	0			Silty CLAY. Mottled orange and olive grey, some fine sand (> PL).
	0	1		Silty CLAY over Silty Gravelly CLAY. Mottled olive brown, some shale fragments towards base (> PL).
	0			Gravelly Silty CLAY/Clayey silty GRAVEL. Mottled brown, olive, grey, laminated shale fragments increasing with depth (> PL).
	0	2		Clayey SHALE over SHALE. Yellow brown, brown, becoming grey at base. Possible hydrocarbon staining below 2.5 m.
	1	3		SILTSTONE. Grey brown, hydrocarbon odour, probable staining.
	2	4		
	2			SILTSTONE. Dull red, orange over brown, faint hydrocarbon odour decreasing with depth.
	1	5		
	1	6		
	0			

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
Canberra Rail Yard
Canberra,

Project No.: **27K140A** Page 1

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PPK
Environment&Infrastructure

Drilling Co.: STRATA	Permit No.:	**GW6**	
Drill Method: Air	TOC Elevation: 563.491m AHDm		
Boring Dia: 0.15 Meters	Water Struck At: Meters	Logged By: B Harris	
Date Drilled: 19/06/98	SWL: 5.62 Meters		

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	0				FILL. Gravelly silty clay, brown, rail ballast, layer of off white gravelly clay at base, some fine to medium sand (> PL).
	0				Silty CLAY. Dark orange brown, some fine sand (> PL).
	0		1		Silty CLAY. Mottled orange, olive and brown, some shale/siltstone fragments.
	0				Gravelly Silty CLAY/Clayey silty GRAVEL. Mottled yellow and brown, shale/siltstone fragments.
	0		2		SILTSTONE. Yellow brown, some clay at top, faint hydrocarbon odour around 4 m.
	0		3		
	1		4		
	1		5		Silty CLAY. Black, very silty, some fine sand.
	0		6		
	0				

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
Canberra Rail Yard
Canberra,

Project No.: **27K140A** Page 1

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PPK Environment&Infrastructure

Drilling Co.: STRATA	Permit No.:	**GW8**	
Drill Method: Air	TOC Elevatio563.358m AHDm		
Boring Dia: 0.15 Meters	Water Struck At: Meters	Logged By:	
Date Drilled: 19/06/98	SWL: 5.44 Meters	B Harris	

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	1				FILL. Clayey silty sand, dark brown, occasional fine cinders/slag fragments.
	0				Sandy Clayey SILT. Brown, yellow brown, fine to medium sand, some fine roots.
					Silty Sandy CLAY. Mottled orange brown and yellow, shale/siltstone fragments towards base, thin powdery white seam at 0.65 m.
	0		1		Gravelly Silty CLAY. Mottled brown, yellow, red, siltstone fragments fine to coarse, very silty (waxy).
	0		2		Clayey Silty GRAVEL. Brown, light brown, siltstone fragments, considerable clay.
	0		3		Silty CLAY. Brown, some gravel.
	0		4		
	0				
	0		5		
	0		6		
	0				

Completion Notes:

Standpipe and Lock

Site:

AN Canberra Phase 2 Investigations

Site Address:

Canberra Rail Yard

Canberra,

Project No.: **27K140A** Page 1

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PPK
Environment&Infrastructure

Drilling Co.: STRATA	Permit No.:	**GW9**	
Drill Method: Air	TOC Elevation: 564.102m AHDm		
Boring Dia: 0.15 Meters	Water Struck At: Meters	Logged By: B Harris	
Date Drilled: 19/06/98	SWL: 6.65 Meters		

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	1				FILL. Silty gravelly clay, mottled brown, red, yellow, some rail ballast, some ash/coal.
	2				Silty SAND. Brown, fine to medium.
	0				Silty Sandy CLAY. Red brown, fine sand.
			1		
					Silty CLAY. Mottled brown, grey, red, very silty, some siltstone fragments towards base.
	0				Clayey SILTSTONE. Yellow brown and grey.
	0		2		
					SILTSTONE. Grey, yellow brown, some clay, some brown layers.
	0		3		
	0		4		
	0				
	0		5		
	0		6		
	0		7		
	0				

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

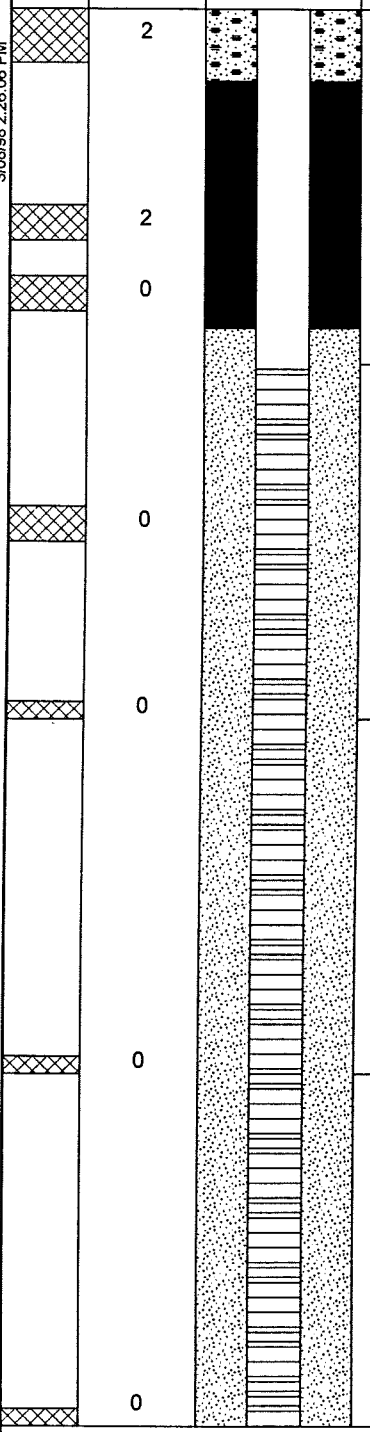
Site Address:
Canberra Rail Yard
Canberra,

Project No.: **27K140A** Page 1

PPK
Environment & Infrastructure

Drilling Co.:	STRATA	Permit No.:	**GW10**
Drill Method:	Air	TOC Elevation:	562.386m AHDm
Boring Dia:	0.15 Meters	Water Struck At:	Meters
Date Drilled:	19/06/98	SWL:	1.71 Meters

Logged By: B Harris



Sample	Field Class.	Depth Meters	Description
	2		FILL. Alternating layers of silty clay and ballast/ash/coal, black and brown, red brown
	2		
	0		Silty Sandy CLAY. Brown, fine sand.
		1	Silty CLAY/Silty Gravelly CLAY. Mottled yellow brown, orange brown.
	0		
	0	2	SILTSTONE. Light brown to pale grey, some clay near top.
	0	3	
	0		SILTSTONE. Light grey, strong.

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
Canberra Rail Yard
Canberra,

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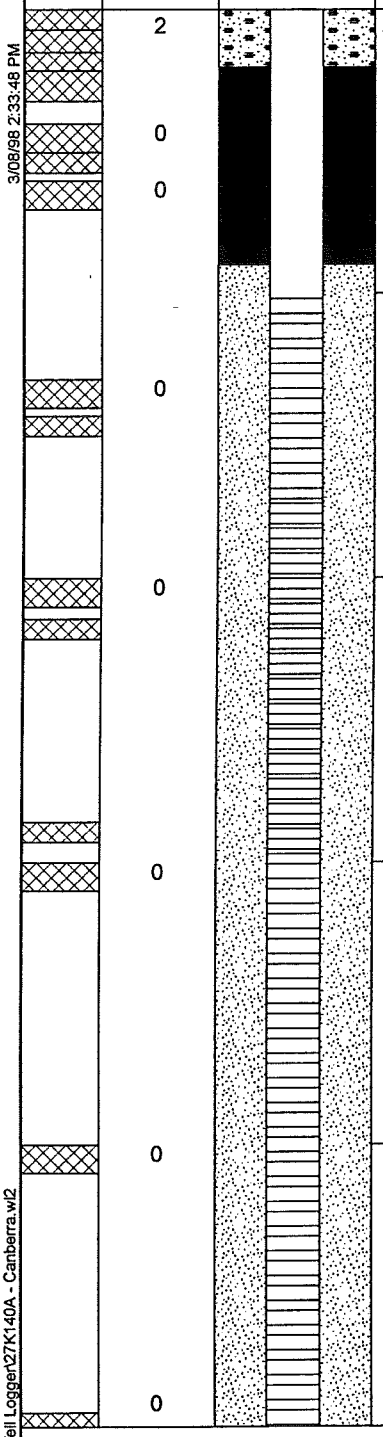
PPK
Environment&Infrastructure

Drilling Co.: STRATA	Permit No.:	**GW11**	
Drill Method: Air	TOC Elevation: 563.293m AHDm		
Boring Dia: 0.15 Meters	Water Struck At: Meters	Logged By: B Harris	
Date Drilled: 19/06/98	SWL: 3.45 Meters		



Description
FILL. Sandy silty clay, mottled black, brown, ash, some fine coal fragments.
FILL. Silty sandy clay, dark orange brown, some grey mottling (³ PL).
Silty Sandy CLAY. Brown, dark brown fine sand, some fine roots (> PL).
Silty CLAY. Brown, some fine sand (> PL).
Silty CLAY. Mottled orange brown, olive, some fine sand (³ PL).
Clayey SILTSTONE. Yellow brown, some grey, some fine to medium sand.
SILTSTONE. Grey, strong (similar to dolomite).

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
Canberra Rail Yard
Canberra,

Project No.: **27K140A** Page 1

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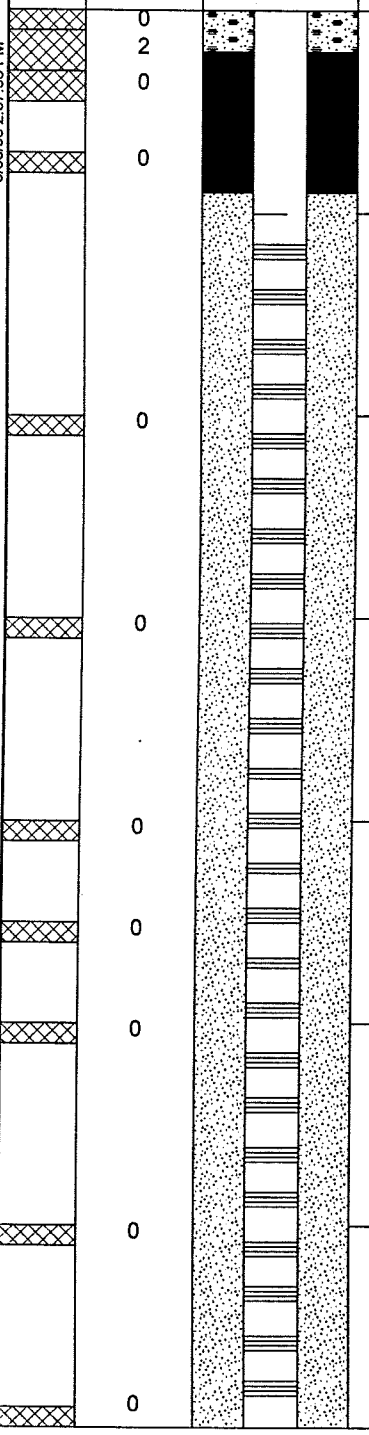
PPK Environment & Infrastructure

Drilling Co.:	STRATA	Permit No.:	**GW12**
Drill Method:	Air	TOC Elevation:	561.977m AHDm
Boring Dia:	0.15 Meters	Water Struck At:	Meters
Date Drilled:	19/06/98	SWL:	4.885 Meters
			Logged By: B Harris



Description
FILL. Silty sand, dark brown, fine to medium, fine roots.
FILL. Clayey sandy gravel, mottled brown, black, yellow, coal and cinders fine to 30 mm.
Clayey Sandy SILT. Dark brown, fine to medium sand, occasional fine ironstone gravel (possible disturbed natural).
Silty Sandy CLAY. Brown, fine sand.
Gravelly Silty CLAY. Mottled brown, red, yellow, siltstone fragments fine to 30 mm.
Silty GRAVEL/Gravelly SILT (weathered Siltstone). Yellow brown, some fine to medium sand.
SILTSTONE. Light grey and yellow brown, becoming brown at base, some clay.

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
Canberra Rail Yard
Canberra,

Project No.: **27K140A** Page 1

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PPK
Environment&Infrastructure

Drilling Co.: STRATA	Permit No.:	**GW13**	
Drill Method: Air	TOC Elevation: 563.091m AHDm		
Boring Dia: 0.15 Meters	Water Struck At: Meters	Logged By: B Harris	
Date Drilled: 19/06/98	SWL: 3 Meters		

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	0				Silty Sandy CLAY. Dark brown, fine to medium sand, fine roots (possible fill) (>PL).
	0				Silty CLAY. Mottled red, olive brown and yellow, some fine ironstone gravel, some fine sand. (>PL).
	0		1		Sandy Silty CLAY. Yellow brown, fine to medium sand, some fine gravel (>PL).
	0		2		Silty CLAY. Mottled grey and yellow brown, occasional fine ironstone gravel (>PL).
	0		3		Silty CLAY. Grey, some fine sand (>PL).
	0		4		Sandy CLAY. Grey and light orange, coarse sand, some fine quartzitic gravel.
	0				

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
Canberra Rail Yard
Canberra,

Project No.: **27K140A** Page 1

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PPK
Environment&Infrastructure

Drilling Co.:	STRATA	Permit No.:	**GW14**
Drill Method:	Air	TOC Elevation:	562.720m AHD m
Boring Dia:	0.15 Meters	Water Struck At:	Meters
Date Drilled:	19/06/98	SWL:	5.235 Meters
			Logged By: B Harris

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	0				FILL. Silty sand, brown, fine to medium grained, some fine roots.
	1				FILL. Silty gravelly clay, mottled grey, brown, orange, gravel fine to 20 mm, some ash.
	0				Silty CLAY/Clayey SILT. Orange brown, some fine to medium sand (<PL).
					Silty Sandy CLAY. Mottled pale brown and orange, some fine to medium sand, some fine gravel.
	0		1		
					Silty CLAY. Mottled olive brown, brown, some black ironstone staining, some fine sand.
	0		2		
					Silty Gravelly CLAY. Light orange brown, brown, siltstone fragments, very wet at base.
	0		3		
	0		4		
	0				
	0		5		
	0		6		
	0				

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
Canberra Rail Yard
Canberra,

Project No.: **27K140A** Page 1

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PPK
Environment&Infrastructure

Drilling Co.: STRATA	Permit No.:	**GW16**	
Drill Method: Air	TOC Elevation: 562.206m AHDm		
Boring Dia: 0.15 Meters	Water Struck At: Meters	Logged By: B Harris	
Date Drilled: 19/06/98	SWL: 5.64 Meters		

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	0				FILL. Sandy silt, brown, fine to medium sand, some fine gravel or coal, fine roots.
	0				FILL. Silty gravelly clay, mottled brown, yellow, red, mixed gravel fine to 50 mm.
	0		1		Silty CLAY. Mottled red, brown and yellow, some black ironstone staining, some fine siltstone and ironstone gravel (possible fill).
	0		2		SILTSTONE. Yellow brown, some brown, grey brown clay above 3.0 m.
	1		3		
	2		4		
	2				
	1		5		
	1		6		
	0				

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
Canberra Rail Yard
Canberra,

Project No.: **27K140A** Page 1

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PPK
Environment & Infrastructure

Drilling Co.: STRATA	Permit No.:	**GW17**	
Drill Method: Air	TOC Elevation: 575.278m AHDm		
Boring Dia: 0.15 Meters	Water Struck At: Meters	Logged By: B Harris	
Date Drilled: 19/06/98	SWL: 2.205 Meters		

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	1				FILL. Sandy gravel, grey brown, gravel fine to coarse, sand fine to coarse
	1				FILL. Silty clay, mottled grey brown, red, olive, some black, some fine gravel, some fine sand.
	0		1		FILL. Silty clay, mottled light grey, some ironstone staining, some fine to medium sand, possible disturbed natural.
					Silty Sandy CLAY. Mottled light brown, yellow, orange, some ironstone staining, gravelly below 1.0 m (fine sub angular to sub rounded gravel).
					Silty CLAY. Mottled orange brown, olive, some fine sand.
	0		2		Clayey SILTSTONE. Yellow brown.
	0		3		
	0		4		
	0				

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Completion Notes:

Standpipe and Lock

Site:

AN Canberra Phase 2 Investigations

Site Address:

Canberra Rail Yard

Canberra,

Project No.: **27K140A** Page 1

PPK
Environment&Infrastructure

Drilling Co.:	STRATA	Permit No.:	**GW19**
Drill Method:	Air	TOC Elevation:	574.006m AHDm
Boring Dia:	0.15 Meters	Water Struck At:	Meters
Date Drilled:	19/06/98	SWL:	1.72 Meters
			Logged By: B Harris

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	1				FILL. Silty sandy clay, brown, fine to medium sand, some fine coal fragments, fine roots.
					Silty sandy CLAY. Brown, fine to medium sand.
	0				Silty sandy CLAY. Mottled orange and brown, fine sand, some sub rounded gravel towards base.
	0		1		Silty CLAY. Mottled dark brown, yellow, some orange, some siltstone fragments fine to coarse.
	2		2		Clayey SILTSTONE. Pale orange to yellow brown, noticeable hydrocarbon odour 2-2.5 m, becoming fainter with depth.
	1		3		
	0		4		
	0				

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
Canberra Rail Yard
Canberra,

Project No.: **27K140A** Page 1

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PPK
Environment&Infrastructure

Drilling Co.: STRATA	Permit No.:	**GW21**	
Drill Method: Air	TOC Elevatio573.556m AHDm		
Boring Dia: 0.15 Meters	Water Struck At: Meters	Logged By: B Harris	
Date Drilled: 19/06/98	SWL: 1.79 Meters		

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	1				FILL. Silty gravelly clay, brown, orange, yellow, coal and gravel fine to 30 mm, fine roots.
	0				Sandy Clayey SILT. Brown, fine to medium sand.
	0		1		Silty Sandy CLAY. Mottled grey brown, orange, some yellow, fine to medium sand, some fine gravel.
	0		2		Silty Sandy CLAY. Reddish brown, some grey, fine to medium sand, some fine quartzitic gravel, some siltstone fragments.
	0		3		Clayey SILTSTONE. Orange.
	0		4		
	0				

Completion Notes:

Standpipe and Lock

Site:

AN Canberra Phase 2 Investigations

Site Address:

Canberra Rail Yard

Canberra,

Project No.: **27K140A** Page 1

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PPK
Environment&Infrastructure

Drilling Co.:	STRATA	Permit No.:	**GW22**
Drill Method:	Air	TOC Elevation:	73.337m AHDm
Boring Dia:	0.15 Meters	Water Struck At:	Meters
Date Drilled:	19/06/98	SWL:	2.235 Meters
			Logged By: B Harris

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	1				FILL. Silty gravelly clay, dark grey brown, light brown, some orange, ballast, some fine coal fragments.
	2				
	0		1		Silty Sandy CLAY. Light brown, fine to medium sand, becoming gravelly, some ironstone staining below 1.0 m.
					Silty CLAY. Red and grey, some gravel to 30 mm.
	0		2		Clayey SILT. Yellow brown (extremely weathered siltstone).
					SILTSTONE/Clayey SILTSTONE. Red.
	0		3		
	0		4		
	0				

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C:\Program Files\GBA Technologies\Well Logger\27K140A - Canberra.wl2

Completion Notes:

Standpipe and Lock

Site:

AN Canberra Phase 2 Investigations

Site Address:

Canberra Rail Yard

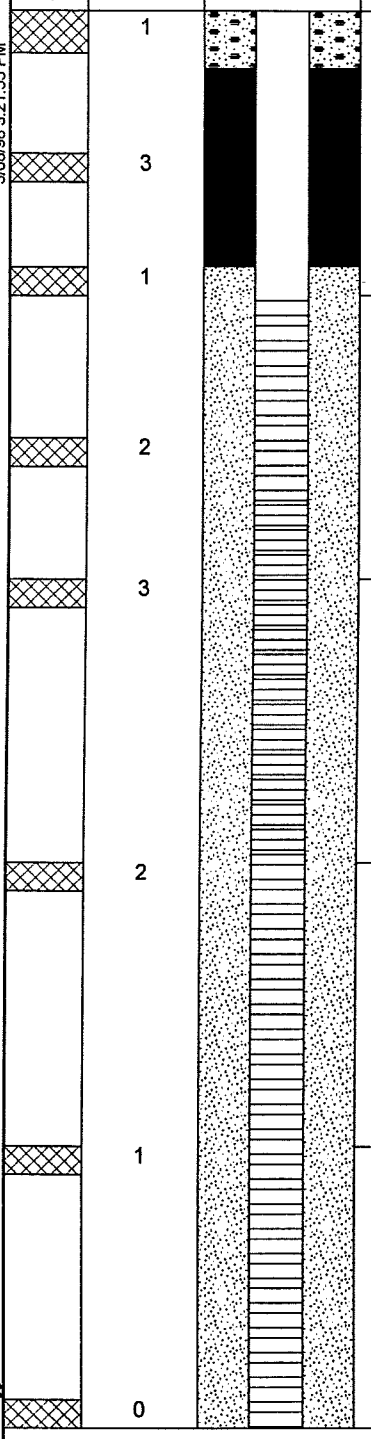
Canberra,

Project No.: **27K140A**

PPK Environment&Infrastructure

Drilling Co.:	STRATA	Permit No.:	**GW24**
Drill Method:	Air	TOC Elevation:	72.576m AHDm
Boring Dia:	0.15 Meters	Water Struck At:	Meters
Date Drilled:	19/06/98	SWL:	1.66 Meters

Logged By: B Harris



Description
FILL. Gravelly silty clay, mottled brown, grey, yellow, hydrocarbon/kero odour towards base, ballast, gravel fine to coarse.
Silty CLAY. Mottled grey, brown, ironstone mottling, some fine ironstone gravel, faint hydrocarbon/kero odour.
Silty CLAY. Grey brown, some fine sand.
Silty CLAY. Mottled orange brown, grey, brown, ironstone staining, hydrocarbon odour.
Clayey SILTSTONE. Greyish yellow brown, hydrocarbon odour decreasing with depth.
SILTSTONE. Orange, faint hydrocarbon odour.

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
Canberra Rail Yard
Canberra,

Project No.: **27K140A** Page 1

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PPK
Environment&Infrastructure

Drilling Co.: STRATA	Permit No.:	**GW26**	
Drill Method: Air	TOC Elevatio571.948m AHDm		
Boring Dia: 0.15 Meters	Water Struck At: Meters	Logged By: B Harris	
Date Drilled: 19/06/98	SWL: 2.16 Meters		

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	0				FILL. Silty sandy clay, brown, orange brown, fine sand (disturbed natural).
	0				Silty CLAY. Mottled olive brown, some fine sand, occasional gravelly lenses.
	0		1		
	0		2		
	0		3		
	0		4		Clayey SILTSTONE. Yellow brown over orange and yellow brown.
	0				

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
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PPK Environment & Infrastructure

Drilling Co.:	STRATA	Permit No.:	**GW28**
Drill Method:	Air	TOC Elevation:	571.774m AHDm
Boring Dia:	0.15 Meters	Water Struck At:	Meters
Date Drilled:	19/06/98	SWL:	3.255 Meters
			Logged By: B Harris

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	0				FILL. Silty clay, mottled brown, grey, some fine sand, some fine gravel.
	0				Silty Sandy CLAY. Brown, light brown over orange and olive green, fine to medium sand.
			1		Silty CLAY. Mottled brown, grey and orange, some ironstone staining, some fine gravel towards base.
	0				Silty CLAY. Olive brown, some fine sand, possible faint hydrocarbon odour.
	0		2		
	1		3		
	0		4		Clayey SILTSTONE. Red.
	0				

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
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Canberra,

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PPK
Environment&Infrastructure

Drilling Co.: STRATA	Permit No.:	**GW30**	
Drill Method: Air	TOC Elevatio574.315m AHDm		
Boring Dia: 0.15 Meters	Water Struck At: Meters	Logged By: B Harris	
Date Drilled: 19/06/98	SWL: 2.155 Meters		

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	2				FILL. Sandy clayey gravel, black, ballast and coal fine to coarse, fine to coarse sand.
	1				FILL. Silty clay, mottled orange brown and light brown, some fine gravel.
					Silty sandy CLAY. Light brown, fine to medium sand.
	0		1		Silty Sandy CLAY. Mottled brown, orange, some black ironstone staining, fine sand.
	0		2		Silty CLAY. Mottled grey, brown.
	1		3		Clayey SILT/Clayey SILTSTONE. Yellow brown, faint hydrocarbon odour around 3.5 m
	1		4		
	0				

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
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Canberra,

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PPK
Environment&Infrastructure

Drilling Co.:	STRATA	Permit No.:	**GW32**
Drill Method:	Air	TOC Elevatio	579.437m AHDm
Boring Dia:	0.15 Meters	Water Struck At:	Meters
Date Drilled:	19/06/98	SWL:	3.4 Meters

Logged By: B Harris

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	2				FILL. Sandy clayey gravel, grey, brown, black, gravel, ballast, ash, brick fragments fine to coarse, fine to coarse sand.
			1		Silty CLAY. Brown, light brown.
	2				
	0		2		Clayey SILTSTONE. Brown, light brown.
	0		3		
	0		4		
	0		5		
	0				

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Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

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Canberra,

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PPK
Environment&Infrastructure

Drilling Co.:	STRATA	Permit No.:	**GW33**
Drill Method:	Air	TOC Elevation:	568.195m AHDm
Boring Dia:	0.15 Meters	Water Struck At:	Meters
Date Drilled:	19/06/98	SWL:	Meters

Logged By: B Harris

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	0				FILL. Sandy silty clay, mottled brown, grey, fine to coarse sand, some fine gravel.
	0				FILL. Silty sandy clay, red brown, mottled yellow, fine to coarse sand.
			1		Silty CLAY. Brown, light grey, some fine sand.
	0				Clayey SILT. Light grey to light brown.
	0		2		
	0		3		
	0		4		Clayey SILT/SILTSTONE. Yellow brown to light brown.
	0				

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
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Canberra,

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PPK
Environment & Infrastructure

Drilling Co.:	STRATA	Permit No.:	**GW34**
Drill Method:	Air	TOC Elevation:	565.766m AHDm
Boring Dia:	0.15 Meters	Water Struck At:	Meters
Date Drilled:	19/06/98	SWL:	Meters

Logged By: B Harris

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	0				FILL. Silty clay, dark brown, fine gravel.
	0				Sandy Silty CLAY. Orange brown, fine to medium sand.
	0		1		Silty CLAY. Light brown, small gravel chips.
	0		2		Silty Gravelly CLAY. Olive brown, mottled orange, ironstone stained.
	0		3		SILTSTONE. Orange, yellow, consistent to depth, no hydrocarbon odour.
	0		4		
	0				

Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
Canberra Rail Yard
Canberra,

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PPK
Environment&Infrastructure

Drilling Co.: STRATA	Permit No.:	**GW35**	
Drill Method: Air	TOC Elevatio566.169m AHDm		
Boring Dia: 0.15 Meters	Water Struck At: Meters	Logged By: B Harris	
Date Drilled: 19/06/98	SWL: 2.02 Meters		

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	0				FILL. Sandy silty clay, brown, fine to medium sand, some rail ballast (> PL). Silty CLAY. Mottled orange and olive grey, some fine sand (> PL).
	0		1		Silty CLAY over Silty Gravelly CLAY. Mottled olive brown, some shale fragments towards base (> PL).
	0				Gravelly Silty CLAY/Clayey silty GRAVEL. Mottled brown, olive, grey, laminated shale fragments increasing with depth (> PL).
	0		2		Clayey SHALE over SHALE. Yellow brown, brown, becoming grey at base. Possible hydrocarbon staining below 2.5 m.
	1		3		
	2		4		
	2				

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Completion Notes:

Standpipe and Lock

Site:

AN Canberra Phase 2 Investigations

Site Address:

Canberra Rail Yard

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PPK
Environment & Infrastructure

Drilling Co.:	STRATA	Permit No.:	**GW36**
Drill Method:	Air	TOC Elevatio	568.562m AHDm
Boring Dia:	0.15 Meters	Water Struck At:	Meters
Date Drilled:	19/06/98	SWL:	Meters

Logged By: B Harris

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	0				FILL. Silty Clay, reddish brown, small gravel chips, fine root systems.
	0				Silty CLAY. Red brown, orange, yellow mottling turning yellow, medium stone chips, roots.
	0				Silty CLAY. Yellow, dry.
			1		Silty CLAY. Olive brown.
	0		2		Silty CLAY. Light brown, olive, medium gravel.
	0		3		SILTSTONE. Yellow purple, turning to yellow at depth (» 4.5).
	0		4		
	0				
	0				

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Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

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PPK
Environment&Infrastructure

Drilling Co.:	STRATA	Permit No.:	**GW37**
Drill Method:	Air	TOC Elevatio	556.562m AHDm
Boring Dia:	0.15 Meters	Water Struck At:	Meters
Date Drilled:	19/06/98	SWL:	1.405 Meters

Logged By: B Harris

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	0				Silty CLAY. Dark brown/black, small gravel, very moist.
	0		1		Silty CLAY. Dark grey/black, very moist, small stones.
	0		2		Silty Clayey SAND. Olive grey, turning lighter brown at depth, fine gravel, sand » 50%.
	1		3		Sandy Silty CLAY. Light brown, very wet, fine to medium sand » 80%.
	2				

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Completion Notes:

Standpipe and Lock

Site:
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PPK
Environment & Infrastructure

Drilling Co.: STRATA	Permit No.:	**GW38**	
Drill Method: Air	TOC Elevation: 561.464m AHDm		
Boring Dia: 0.15 Meters	Water Struck At: Meters	Logged By: B Harris	
Date Drilled: 19/06/98	SWL: 5.735 Meters		

Sample	Field Class.	Completion	Depth Meters	Lithology	Description
	0				Silty CLAY. Red/brown, small gravel chips, orange mottling, small root systems.
	0				Silty CLAY. Orange/yellow mottling, small roots system.
	0		1		Silty CLAY. Orange/brown, yellow mottling, ironstone staining, small gravel and ironstone chips.
	0		2		
	0		3		Silty CLAY. Brown/red, ironstone chips, small gravel.
	0		4		
	0				

Completion Notes:

Standpipe and Lock

Site:
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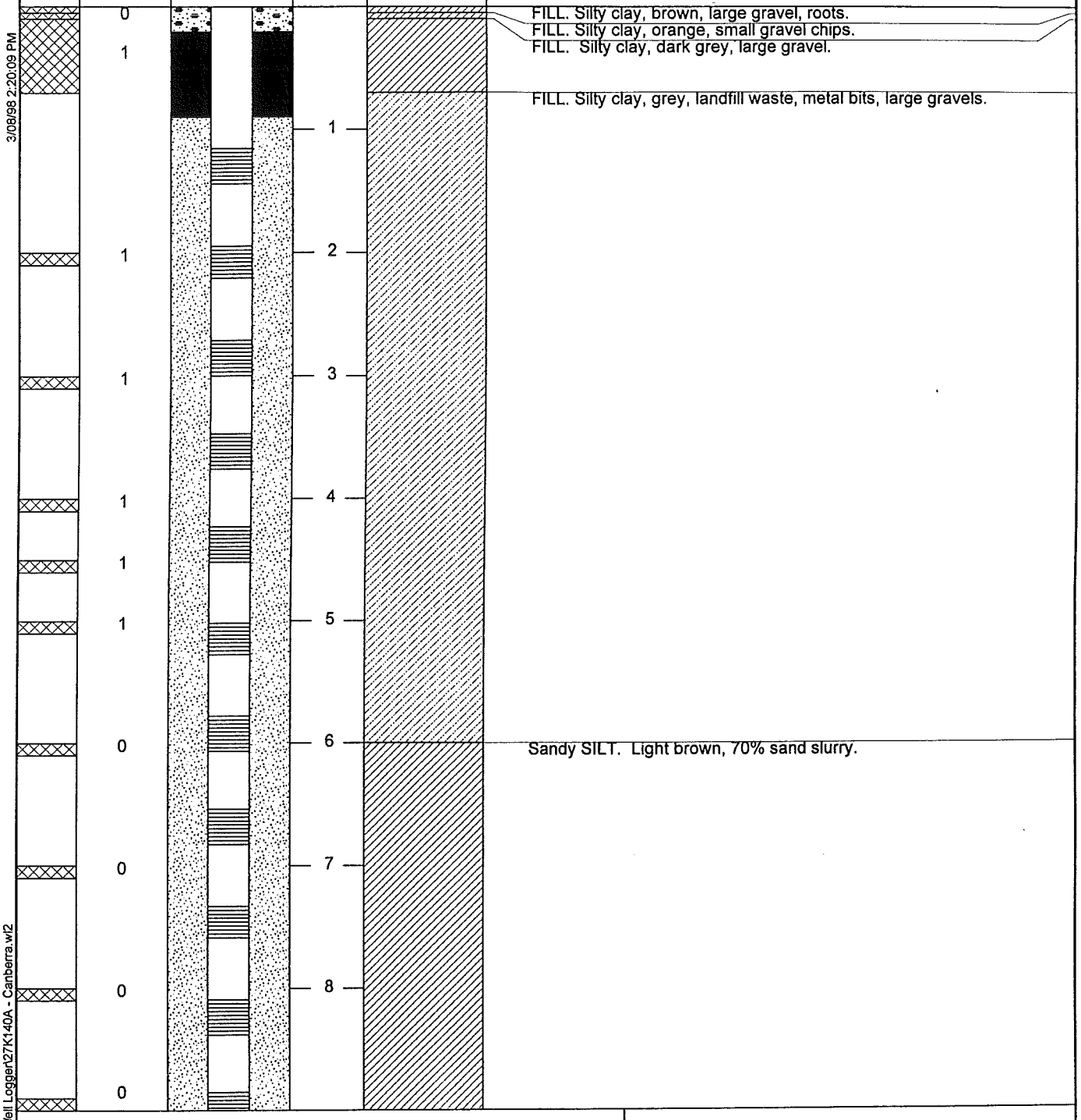
PPK
Environment&Infrastructure

Drilling Co.: STRATA	Permit No.:	**GW39**	
Drill Method: Air	TOC Elevation:		
Boring Dia: 0.15 Meters	Water Struck At: Meters	Logged By: B Harris	
Date Drilled: 19/06/98	SWL: 5.325 Meters		



Completion Notes:

Standpipe and Lock

Site:
AN Canberra Phase 2 Investigations

Site Address:
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Canberra,

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Appendix I

Field Sampling Records

PPK
Environment & Infrastructure

Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 1 / 7 /1998
Project: Canberra Rail Yards	**Well ID No.** GW1
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	12.120
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	6.615
Product thickness (mm)		Depth to be purged (m)	5.505

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☑		Tubing material HDPE ☐ PVC ☐ S/Steel ☑	
Start time (2400hr)		Elapsed time (hours)	25 mins
One purge volume = (2.85 x depth to be purged) m^3 x 1000			15.5 litres
No. of times purged	1.7	Total purge volume	27 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.70	0.81		2.2	15.2
After two purge volume					
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.82	1.46		2.2	15.9
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☑	Tubing material HDPE ☐ PVC ☐ S/Steel ☑

Sample Description

Odour	Nil	Colour	Brown	Turbidity	L (M) H

Weather Conditions

Rain	Nil	Temperature	9 °C	Cloud cover	10 %

Other comments and observations:

Purged dry after 27 Litres.

Purgers name	BJH	Date & signature	1/7/98	BJH
Samplers name	BJH	Date & signature	2/7/98	BJH

PPK
Environment & Infrastructure

Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 1 / 7 /1998
Project: Canberra Rail Yards	**Well ID No.** GW2
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	9.780
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	6.465
Product thickness (mm)		Depth to be purged (m)	3.315

Purging Information

Method/pump type waterra ☐ whaler ☒ bailer ☐		Tubing material HDPE ☐ PVC ☒ S/Steel ☐	
Start time (2400hr)		Elapsed time (hours)	
One purge volume = (2.85 x depth to be purged) m^3 x 1000			9.5 litres
No. of times purged	2	Total purge volume	19 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.27	1.13	\	1.5	15.3
After two purge volume	7.31	1.12	\	1.5	14.7
After three purge volume			\		

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.52	1.64	\	3.4	15.4
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	

Sample Description

Odour	Nil / faint h-c	Colour	brown	Turbidity	L	(M)	H

Weather Conditions

Rain	Nil	Temperature	10 °C	Cloud cover	10 %

Other comments and observations:

Fuel odour in air due to refuelling at Shell facility

Purged dry after 19 L

Duplicate BDW3 taken

Purgers name	BJH	Date & signature	1/7/98	BJH
Samplers name	BJH	Date & signature	2/7/98	BJH

PPK
Environment & Infrastructure

Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 30/6/1998
Project: Canberra Rail Yards	**Well ID No.** GW4
Location: Canberra	

Casing Diameter (mm)	50	Well depth from TOC / ~~TOSP~~ (m)	8.615
Depth to floating product (m)		Depth to groundwater from TOC / ~~TOSP~~ (m)	7.180
Product thickness (mm)		Depth to be purged (m)	1.435

Purging Information

Method/pump type waterra ☐ whaler ☒ bailer ☐		Tubing material HDPE ☐ PVC ☒ S/Steel ☐	
Start time (2400hr)		Elapsed time (hours)	
One purge volume = (2.85 x depth to be purged) m^3 x 1000			4.0 litres
No. of times purged	1.8	Total purge volume	7 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.40	2.04		2.3	14.7
After two purge volume					
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.53	2.96		1.6	14.7
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒	Tubing material HDPE ☐ PVC ☐ S/Steel ☒

Sample Description

Odour	Hydrocarbon	Colour	pink/light brown	Turbidity	L	(M)	H

Weather Conditions

Rain	Nil	Temperature	10 °C	Cloud cover	80 %

Other comments and observations:

Purged dry after 7 L.
Almost went dry during sampling.

Purgers name	BJH	Date & signature	30/6/98	BJH
Samplers name	BJH	Date & signature	2/7/98	BJH

PPK
Environment & Infrastructure

Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 29 / 6 /1998
Project: Canberra Rail Yards	**Well ID No.** GW5
Location: Canberra	

Casing Diameter (mm)	50	Well depth from TOC / ~~TOSP~~ (m)	7.535
Depth to floating product (m)		Depth to groundwater from TOC / ~~TOSP~~ (m)	5.585
Product thickness (mm)		Depth to be purged (m)	1.950

Purging Information

Method/pump type waterra ☐ whaler ☒ bailer ☐		Tubing material HDPE ☐ PVC ☒ S/Steel ☐	
Start time (2400hr)	11.25	Elapsed time (hours)	20 mins
One purge volume = (2.85 x depth to be purged) m^3 x 1000			5.5 litres
No. of times purged	1.9	Total purge volume	10.5 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.51	2.22		3.3	17.2
After two purge volume	7.59	2.14		3.6	17.7
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.63	2.62		1.8	17.1
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	

Sample Description

Odour	Hydrocarbon	Colour	brown	Turbidity	L (M) H

Weather Conditions

Rain	Nil	Temperature	10 °C	Cloud cover	90 %

Other comments and observations:

Not much sheen on surface, but noticeable hydrocarbon odour.
Purged dry after 10.5L.

Purgers name	BJH	Date & signature	29/6/98	BJH
Samplers name	BJH	Date & signature	1/7/98	BJH

PPK
Environment&Infrastructure

Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 29/6/1998
Project: Canberra Rail Yards	**Well ID No.** GW6
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	7.540
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	5.620
Product thickness (mm)		Depth to be purged (m)	1.920

Purging Information

Method/pump type waterra ☐ whaler ☒ bailer ☐		Tubing material HDPE ☐ PVC ☒ S/Steel ☐	
Start time (2400hr)	11.00	Elapsed time (hours)	20 mins
One purge volume = (2.85 x depth to be purged) m^3 x 1000			5.5 litres
No. of times purged	1.3	Total purge volume	7.0 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.54	1.37		3.2	17.1
After two purge volume					
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.73	1.84		2.3	17.6
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒	Tubing material HDPE ☐ PVC ☐ S/Steel ☒

Sample Description

Odour	Nil	Colour	light brown	Turbidity	(L)	M	H

Weather Conditions

Rain	Nil	Temperature	10 °C	Cloud cover	100 %

Other comments and observations:

Purged dry after 7L

Purgers name	BJH	Date & signature	29/6/98	BJH
Samplers name	BJH	Date & signature	1/7/98	BJH

PPK
Environment&Infrastructure

Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 29 / 6 /1998
Project: Canberra Rail Yards	**Well ID No.** GW8
Location: Canberra	

Casing Diameter (mm)	50	Well depth from TOC / ~~TOSP~~ (m)	7.035
Depth to floating product (m)		Depth to groundwater from TOC / ~~TOSP~~ (m)	5.435
Product thickness (mm)		Depth to be purged (m)	1.600

Purging Information

Method/pump type waterra ☐ whaler ☒ bailer ☐		Tubing material HDPE ☐ PVC ☒ S/Steel ☐	
Start time (2400hr)	10.30	Elapsed time (hours)	20 mins
One purge volume = (2.85 x depth to be purged) m^3 x 1000			4.5 litres
No. of times purged	1.1	Total purge volume	5.0 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.59	1.14	\	3.1	16.9
After two purge volume					
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.83	1.52	\	2.4	16.1
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒ Tubing material HDPE ☐ PVC ☐ S/Steel ☒

Sample Description

Odour	Nil	Colour	brown	Turbidity	L (M) H

Weather Conditions

Rain	Nil	Temperature	9 °C	Cloud cover	100 %

Other comments and observations:

Purged dry after 5.0L
Went dry during sampling

Purgers name	BJH	Date & signature	29/6/98	BJH
Samplers name	BJH	Date & signature	1/7/98	BJH

PPK
Environment&Infrastructure

Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 29 / 6 /1998
Project: Canberra Rail Yards	**Well ID No.** GW9
Location: Canberra	

Casing Diameter (mm)	50	Well depth from TOC / ~~TOSP~~ (m)	9.010
Depth to floating product (m)		Depth to groundwater from TOC / ~~TOSP~~ (m)	6.645
Product thickness (mm)		Depth to be purged (m)	2.365

Purging Information

Method/pump type waterra ☐ whaler ☒ bailer ☐		Tubing material HDPE ☐ PVC ☒ S/Steel ☐	
Start time (2400hr)	10.00	Elapsed time (hours)	20 mins
One purge volume = (2.85 x depth to be purged) m^3 x 1000			7.0 litres
No. of times purged	3	Total purge volume	21 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.34	0.96	\	3.5	17.7
After two purge volume	7.36	0.97		2.6	18.0
After three purge volume	7.37	0.96		3.1	18.2

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.63	1.50	\	3.4	18.2
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒ Tubing material HDPE ☐ PVC ☐ S/Steel ☒

Sample Description

Odour	N:l	Colour	light brown	Turbidity	(L)	M	H

Weather Conditions

Rain	N:l	Temperature	9 °C	Cloud cover	100 %

Other comments and observations:

Purgers name	BJH	Date & signature	29/6/98	BJH
Samplers name	BJH	Date & signature	30/6/98	BJH

PPK
Environment&Infrastructure

Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 29 / 6 /1998
Project: Canberra Rail Yards	**Well ID No.** GW 10
Location: Canberra	

Casing Diameter (mm)	50	Well depth from TOC / ~~TOSP~~ (m)	4.530
Depth to floating product (m)		Depth to groundwater from TOC / ~~TOSP~~ (m)	1.710
Product thickness (mm)		Depth to be purged (m)	2.820

Purging Information

Method/pump type waterra ☐ whaler ☒ bailer ☐		Tubing material HDPE ☐ PVC ☒ S/Steel ☐	
Start time (2400hr)	9.00	Elapsed time (hours)	20 mins
One purge volume = (2.85 x depth to be purged) m^3 x 1000			8.0 litres
No. of times purged	1.6	Total purge volume	13 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.10	0.80	\	2.3	16.1
After two purge volume	7.12	0.77		3.3	16.5
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.67	1.37	\	2.3	16.2
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	

Sample Description

Odour	Nil	Colour	colourless / light brown	Turbidity	(L)	M	H

Weather Conditions

Rain	Nil	Temperature	7 °C	Cloud cover	90 %

Other comments and observations:

Purged dry after 13L.

Purgers name	BJH	Date & signature	29/6/98	BJH
Samplers name	BJH	Date & signature	30/6/98	BJH

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Environment & Infrastructure

Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 25 / 6 /1998
Project: Canberra Rail Yards	**Well ID No.** GW 11
Location: Canberra	

Casing Diameter (mm)	50	Well depth from TOC / ~~TOSP~~ (m)	5.690
Depth to floating product (m)		Depth to groundwater from TOC / ~~TOSP~~ (m)	3.450
Product thickness (mm)		Depth to be purged (m)	2.250

Purging Information

Method/pump type waterra ☐ whaler ☒ bailer ☐		Tubing material HDPE ☐ PVC ☒ S/Steel ☐	
Start time (2400hr)		Elapsed time (hours)	
One purge volume = (2.85 x depth to be purged) m^3 x 1000			6.5 litres
No. of times purged	1.2	Total purge volume	8.0 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.58	0.44		4.8	17.4
After two purge volume					
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample					
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒ Tubing material HDPE ☐ PVC ☐ S/Steel ☒

Sample Description

Odour	Nil	Colour	colourless/light brown	Turbidity	(L)	M	H

Weather Conditions

Rain	Nil	Temperature	8 °C	Cloud cover	90 %

Other comments and observations:

Purged dry after 8L.

Purgers name	~~BJH~~ MBR	Date & signature	25/6/98	~~BJH~~ MBR
Samplers name	BJH	Date & signature	30/6/98	BJH

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 29 / 6 /1998
Project: Canberra Rail Yards	**Well ID No.** GW 12
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	7.810
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	4.885
Product thickness (mm)		Depth to be purged (m)	2.925

Purging Information

Method/pump type waterra ☐ whaler ☒ bailer ☐		Tubing material HDPE ☐ PVC ☒ S/Steel ☐	
Start time (2400hr)	9.30	Elapsed time (hours)	20 mins
One purge volume = (2.85 x depth to be purged) m^3 x 1000			8.5 litres
No. of times purged	1.3	Total purge volume	11.5 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.31	0.36	\	3.2	15.7
After ~~two purge volume~~ 11.5 L	7.24	0.33	\	2.0	15.9
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.60	0.91	\	1.9	15.0
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	

Sample Description

Odour	Nil	Colour	light brown	Turbidity	L	(M)	H

Weather Conditions

Rain	Nil	Temperature	7 °C	Cloud cover	90 %

Other comments and observations:

Purged dry after 11.5 L

Purgers name	BJH	Date & signature	29/6/98	BJH
Samplers name	BJH	Date & signature	30/6/98	BJH

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Environment & Infrastructure

Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 29 / 6 /1998
Project: Canberra Rail Yards	**Well ID No.** GW 13
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	5.665
Depth to floating product (m)		Depth to groundwater from TOC / TOSP (m)	Nil
Product thickness (mm)		Depth to be purged (m)	0

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☐		Tubing material HDPE ☐ PVC ☐ S/Steel ☐	
Start time (2400hr)		Elapsed time (hours)	
One purge volume = (x depth to be purged) m^3 x 1000			litres
No. of times purged		Total purge volume	litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume					
After two purge volume					
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample					
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☐	Tubing material HDPE ☐ PVC ☐ S/Steel ☐

Sample Description

Odour		Colour		Turbidity	L	M	H

Weather Conditions

Rain		Temperature	°C	Cloud cover	%

Other comments and observations:

Well dry on 29/6/98
Well dry on 30/6/98

Purgers name	BJH	Date & signature	29-30/6/98	
Samplers name		Date & signature		

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 29 / 6 /1998
Project: Canberra Rail Yards	**Well ID No.** G.W 14
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	7.890
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	5.235
Product thickness (mm)		Depth to be purged (m)	2.655

Purging Information

Method/pump type waterra ☐ whaler ☒ bailer ☐		Tubing material HDPE ☐ PVC ☒ S/Steel ☐	
Start time (2400hr)	14.00	Elapsed time (hours)	15 mins
One purge volume = (2.85 x depth to be purged) m^3 x 1000			7.5 litres
No. of times purged	0.8	Total purge volume	6 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.84	1.15		6.0	18.8
After two purge volume					
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.80	1.66		1.9	18.6
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	

Sample Description

Odour	Nil	Colour	Brown	Turbidity	L	M	(H)

Weather Conditions

Rain	Nil	Temperature	12 °C	Cloud cover	60 %

Other comments and observations:

Purged dry after 6 L.

Purgers name	BJH	Date & signature	29/6/98	BJH
Samplers name	BJH	Date & signature	30/6/98	BJH

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 29 / 6 /1998
Project: Canberra Rail Yards	**Well ID No.** GW 16
Location: Canberra	

Casing Diameter (mm)	50	Well depth from TOC / ~~TOSP~~ (m)	7.525
Depth to floating product (m)		Depth to groundwater from TOC / ~~TOSP~~ (m)	5.640
Product thickness (mm)		Depth to be purged (m)	1.885

Purging Information

Method/pump type waterra ☐ whaler ☒ bailer ☐		Tubing material HDPE ☐ PVC ☒ S/Steel ☐	
Start time (2400hr)	14.25	Elapsed time (hours)	
One purge volume = (2.85 x depth to be purged) m^3 x 1000			5.5 litres
No. of times purged	1.2	Total purge volume	6.5 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.43	2.56	\	3.1	16.6
After two purge volume			\		
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.39	3.02	\	2.6	16.2
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒	Tubing material HDPE ☐ PVC ☐ S/Steel ☒

Sample Description

Odour	Nil	Colour	light brown	Turbidity	L	(M)	H

Weather Conditions

Rain	Nil	Temperature	10 °C	Cloud cover	80 %

Other comments and observations:

Purged dry after 6.5 L.

Almost went dry during sampling

Purgers name	BJH	Date & signature	29/6/98	BJH
Samplers name	BJH	Date & signature	30/6/98	BJH

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 1 / 7 /1998
Project: Canberra Rail Yards	**Well ID No.** GW17
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~/ TOSP (m)	5.930
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	2.025
Product thickness (mm)		Depth to be purged (m)	3.905

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	
Start time (2400hr)	14.05	Elapsed time (hours)	
One purge volume = (2.85 x depth to be purged) m^3 x 1000			11.0 litres
No. of times purged	1.3	Total purge volume	14 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.87	1.90	\	3.8	17.5
After two purge volume			\		
After three purge volume			\		

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.67	1.67	~	1.8	16.1
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒	Tubing material HDPE ☐ PVC ☐ S/Steel ☒

Sample Description

Odour	Nil	Colour	light brown	Turbidity	L	(M)	H

Weather Conditions

Rain	Nil	Temperature	12 °C	Cloud cover	10 %

Other comments and observations:

Purged dry after 14 L.

Purgers name	BJH	Date & signature	1/7/98	BJH
Samplers name	BJH	Date & signature	2/7/98	BJH

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 1 / 7 /1998
Project: Canberra Rail Yards	**Well ID No.** GW 19
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	6.030
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	1.720
Product thickness (mm)		Depth to be purged (m)	4.310

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	
Start time (2400hr)	1345	Elapsed time (hours)	
One purge volume = (2.85 x depth to be purged) m^3 x 1000			12.5 litres
No. of times purged	1.2	Total purge volume	15.5 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.78	1.74	\	4.5	16.9
After two purge volume			\		
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.60	1.41	\	2.9	14.9
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒	Tubing material HDPE ☐ PVC ☐ S/Steel ☒

Sample Description

Odour	Nil	Colour	light brown	Turbidity	(L)	(M)	H

Weather Conditions

Rain	Nil	Temperature	15 °C	Cloud cover	10 %

Other comments and observations:

Purged dry after 15.5 L

Purgers name	BJH	Date & signature	1/7/98	BJH
Samplers name	BJH	Date & signature	2/7/98	BJH

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 1 / 7 /1998
Project: Canberra Rail Yards	**Well ID No.** GW 21
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	5.830
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	1.790
Product thickness (mm)		Depth to be purged (m)	4.040

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	
Start time (2400hr)	1325	Elapsed time (hours)	15 mins
One purge volume = (2.85 x depth to be purged) m^3 x 1000			11.5 litres
No. of times purged	1.4	Total purge volume	16 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.85	1.67	\	3.7	16.6
After two purge volume			\		
After three purge volume			\		

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.54	1.33	\	3.2	14.2
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒	Tubing material HDPE ☐ PVC ☐ S/Steel ☒

Sample Description

Odour	Nil / faint hydrocarbon	Colour	light brown	Turbidity	L	(M)	H

Weather Conditions

Rain	Nil	Temperature	15 °C	Cloud cover	10 %

Other comments and observations:

Purged dry after 16L

Purgers name	BJH	Date & signature	1/7/98	BJH
Samplers name	BJH	Date & signature	2/7/98	BJH

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 1 / 7 /1998
Project: Canberra Rail Yards	**Well ID No.** GW 22
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	6.020
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	2.235
Product thickness (mm)		Depth to be purged (m)	3.785

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	
Start time (2400hr)	12.40	Elapsed time (hours)	
One purge volume = (2.85 x depth to be purged) m^3 x 1000			11.0 litres
No. of times purged	1.4	Total purge volume	15.5 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.60	1.65	\	2.7	18.8
After two purge volume			\		
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.55	1.74	\	4.1	16.7
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒	Tubing material HDPE ☐ PVC ☐ S/Steel ☒

Sample Description

Odour	faint hydrocarbon	Colour	brown/red brown	Turbidity	L	(M)	H

Weather Conditions

Rain	Nil	Temperature	15 °C	Cloud cover	10 %

Other comments and observations:

Purged dry after 15.5L

Duplicate BDW1 taken.

Purgers name	BJH	Date & signature	1/7/98	BJH
Samplers name	BJH	Date & signature	2/7/98	BJH

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 1 / 7 /1998
Project: Canberra Rail Yards	**Well ID No.** GW24
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	6.145
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	1.660
Product thickness (mm)		Depth to be purged (m)	4.485

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	
Start time (2400hr)	11.00	Elapsed time (hours)	40 mins
One purge volume = (2.85 x depth to be purged) m^3 x 1000			13.0 litres
No. of times purged	3	Total purge volume	39 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.63	1.26		2.1	16.2
After two purge volume	7.57	1.23		1.8	16.1
After three purge volume	7.52	1.23		1.4	16.5

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample					
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	

Sample Description

Odour	hydrocarbon	Colour	light brown	Turbidity	L	(M)	H

Weather Conditions

Rain	Nil	Temperature	12 °C	Cloud cover	10 %

Other comments and observations:

Purgers name	BJH	Date & signature	1/7/98	BJH
Samplers name	BJH	Date & signature	1/7/98	BJH

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 1 / 7 /1998
Project: Canberra Rail Yards	**Well ID No.** GW26
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	5.960
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	2.160
Product thickness (mm)		Depth to be purged (m)	3.800

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	
Start time (2400hr)	10.20	Elapsed time (hours)	
One purge volume = (2.85 x depth to be purged) m^3 x 1000			11.0 litres
No. of times purged	2.7	Total purge volume	30 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	8.10	1.18		1.7	16.9
After two purge volume	7.97	1.16		1.5	17.2
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	8.04	1.76		2.8	16.5
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒	Tubing material HDPE ☐ PVC ☐ S/Steel ☒

Sample Description

Odour	Nil	Colour	Brown	Turbidity	L (M) H

Weather Conditions

Rain	Nil	Temperature	10 °C	Cloud cover	5 %

Other comments and observations:

Purged dry after 30 L

Purgers name	BJH	Date & signature	1/7/98	BJH
Samplers name	BJH	Date & signature	1/7/98	BJH

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 1 / 7 /1998
Project: Canberra Rail Yards	**Well ID No.** GW 28
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	6.120
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	3.255
Product thickness (mm)		Depth to be purged (m)	2.865

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	
Start time (2400hr)	9.50	Elapsed time (hours)	
One purge volume = (2.85 x depth to be purged) m^3 x 1000			8.5 litres
No. of times purged	1.3	Total purge volume	11 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.92	1.67	\	1.5	15.8
After two purge volume			\		
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.92	2.19	\	3.5	16.3
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	

Sample Description

Odour	Nil / faint hydrocarbon	Colour	reddish brown	Turbidity	L	(M)	H

Weather Conditions

Rain	Nil	Temperature	10 °C	Cloud cover	5 %

Other comments and observations:

Purged dry after 11L.

Purgers name	BJH	Date & signature	1/7/98	BJH
Samplers name	BJH	Date & signature	1/7/98	BJH

PPK
Environment & Infrastructure

Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 30 / 6 /1998
Project: Canberra Rail Yards	**Well ID No.** GW 30
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	6.205
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	2.155
Product thickness (mm)		Depth to be purged (m)	4.050

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	
Start time (2400hr)	16.30	Elapsed time (hours)	
One purge volume = (2.85 x depth to be purged) m^3 x 1000			11.5 litres
No. of times purged	2.4	Total purge volume	27.5 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.94	0.98	\	2.1	15.7
After two purge volume	7.74	0.99	\	1.8	15.6
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.70	2.22	~	1.6	15.9
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	

Sample Description

Odour	Nil	Colour	light brown	Turbidity	L	(M)	H

Weather Conditions

Rain	Nil	Temperature	8 °C	Cloud cover	95 %

Other comments and observations:

Purged dry after 27.5 L.

Purgers name	BJH	Date & signature	30/6/98	BJH
Samplers name	BJH	Date & signature	1/7/98	BJH

PPK
Environment&Infrastructure

Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 1 / 7 /1998
Project: Canberra Rail Yards	**Well ID No.** GW 32
Location: Canberra	

Casing Diameter (mm)	50	Well depth from TOC / ~~TOSP~~ (m)	6.000
Depth to floating product (m)		Depth to groundwater from TOC / ~~TOSP~~ (m)	3.400
Product thickness (mm)		Depth to be purged (m)	2.600

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	
Start time (2400hr)	7.30	Elapsed time (hours)	
One purge volume = (2.85 x depth to be purged) m^3 x 1000			7.5 litres
No. of times purged	3	Total purge volume	22.5 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.99	0.96		3.4	16.5
After two purge volume	8.05	0.93		2.3	16.7
After three purge volume	8.06	0.90		2.0	16.2

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	8.09	1.04		2.4	15.7
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	

Sample Description

Odour	Nil	Colour	Brown	Turbidity	L	(M)	H

Weather Conditions

Rain	Nil	Temperature	8 °C	Cloud cover	15 %

Other comments and observations:

Almost purged dry.

Duplicate BDW2 taken

Purgers name	BJH	Date & signature	1/7/98	BJH
Samplers name	BJH	Date & signature	2/7/98	BJH

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 30 / 6 /1998
Project: Canberra Rail Yards	**Well ID No.** GW 33
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	6.135
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	N.I
Product thickness (mm)		Depth to be purged (m)	0

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☐		Tubing material HDPE ☐ PVC ☐ S/Steel ☐	
Start time (2400hr)		Elapsed time (hours)	
One purge volume = (x depth to be purged) m^3 x 1000			litres
No. of times purged		Total purge volume	litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume					
After two purge volume					
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample					
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☐	Tubing material HDPE ☐ PVC ☐ S/Steel ☐

Sample Description

Odour		Colour		Turbidity	L	M	H

Weather Conditions

Rain		Temperature	°C	Cloud cover	%

Other comments and observations:

Well dry 30/6/98

Purgers name		Date & signature		
Samplers name		Date & signature		

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 30/6/1998
Project: Canberra Rail Yards	**Well ID No.** GW 34
Location: Canberra	

Casing Diameter (mm)	50	Well depth from TOC / ~~TOSP~~ (m)	6.020
Depth to floating product (m)		Depth to groundwater from TOC / ~~TOSP~~ (m)	Nil
Product thickness (mm)		Depth to be purged (m)	0

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☐		Tubing material HDPE ☐ PVC ☐ S/Steel ☐	
Start time (2400hr)		Elapsed time (hours)	
One purge volume = (x depth to be purged) m^3 x 1000			litres
No. of times purged		Total purge volume	litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume					
After two purge volume					
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample					
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☐		Tubing material HDPE ☐ PVC ☐ S/Steel ☐	

Sample Description

Odour		Colour		Turbidity	L	M	H

Weather Conditions

Rain		Temperature	°C	Cloud cover	%

Other comments and observations:

Well dry 30/6/98

Purgers name		Date & signature		
Samplers name		Date & signature		

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 30/6/1998
Project: Canberra Rail Yards	**Well ID No.** GW35
Location: Canberra	

Casing Diameter (mm)	50	Well depth from TOC / ~~TOSP~~ (m)	5.160
Depth to floating product (m)		Depth to groundwater from TOC / ~~TOSP~~ (m)	2.020
Product thickness (mm)		Depth to be purged (m)	3.140

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	
Start time (2400hr)	14.55	Elapsed time (hours)	
One purge volume = (2.85 x depth to be purged) m^3 x 1000			9.0 litres
No. of times purged	1-3	Total purge volume	11.5 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.35	1.04	\	1.9	17.5
After two purge volume			\		
After three purge volume			\		

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.45	2.08	~	1.7	18.6
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒	Tubing material HDPE ☐ PVC ☐ S/Steel ☒

Sample Description

Odour	faint hydrocarbon	Colour	pale pink/brown	Turbidity	L	(M)	H

Weather Conditions

Rain	Nil	Temperature	10 °C	Cloud cover	60 %

Other comments and observations:

Purged dry after 11.5 L.

Purgers name	BJH	Date & signature	30/6/98	BJH
Samplers name	BJH	Date & signature	2/7/98	BJH

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 30 / 6 /1998
Project: Canberra Rail Yards	**Well ID No.** GW 36
Location: Canberra	

Casing Diameter (mm)	50	Well depth from TOC / ~~TOSP~~ (m)	6.020
Depth to floating product (m)		Depth to groundwater from TOC / ~~TOSP~~ (m)	Nil
Product thickness (mm)		Depth to be purged (m)	0

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☐		Tubing material HDPE ☐ PVC ☐ S/Steel ☐	
Start time (2400hr)		Elapsed time (hours)	
One purge volume = (x depth to be purged) m^3 x 1000			litres
No. of times purged		Total purge volume	litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume					
After two purge volume					
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample					
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☐	Tubing material HDPE ☐ PVC ☐ S/Steel ☐

Sample Description

Odour		Colour		Turbidity	L	M	H

Weather Conditions

Rain		Temperature	°C	Cloud cover	%

Other comments and observations:

Well dry 30/6/98

Purgers name		Date & signature		
Samplers name		Date & signature		

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 30 / 6 /1998
Project: Canberra Rail Yards	**Well ID No.** GW 37
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	4.565
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	1.405
Product thickness (mm)		Depth to be purged (m)	3.160

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	
Start time (2400hr)	16.30	Elapsed time (hours)	
One purge volume = (2.85 x depth to be purged) m^3 x 1000			9.0 litres
No. of times purged	3	Total purge volume	27 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.75	0.65		3.1	12.0
After two purge volume	7.68	0.58		2.3	12.5
After three purge volume	7.69	0.55		2.0	12.5

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample					
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒	Tubing material HDPE ☐ PVC ☐ S/Steel ☒

Sample Description

Odour	Nil	Colour	Brown	Turbidity	L	M	(H)

Weather Conditions

Rain	Nil	Temperature	9 °C	Cloud cover	10 %

Other comments and observations:

Purgers name	BJH	Date & signature	30/6/98	BJH
Samplers name	BJH	Date & signature	30/6/98	BJH

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 30 / 6 /1998
Project: Canberra Rail Yards	**Well ID No.** GW 38
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	6.965
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	5.735
Product thickness (mm)		Depth to be purged (m)	1.230

Purging Information

Method/pump type waterra ☐ whaler ☒ bailer ☐		Tubing material HDPE ☐ PVC ☒ S/Steel ☐	
Start time (2400hr)		Elapsed time (hours)	
One purge volume = (2.85 x depth to be purged) m^3 x 1000			3.5 litres
No. of times purged	0.3	Total purge volume	1 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume					
After two purge volume					
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample					
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☐	Tubing material HDPE ☐ PVC ☐ S/Steel ☐

Sample Description

Odour		Colour		Turbidity	L	M	H

Weather Conditions

Rain		Temperature	°C	Cloud cover	%

Other comments and observations:

Purged dry after approx 1L. Insufficient water to sample.

Purgers name	BJH	Date & signature	30/6/98	BJH
Samplers name		Date & signature		

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Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 29 / 6 /1998
Project: Canberra Rail Yards	**Well ID No.** 6W39
Location: Canberra	

Casing Diameter (mm)	50	Well depth from ~~TOC~~ / TOSP (m)	7.360
Depth to floating product (m)		Depth to groundwater from ~~TOC~~ / TOSP (m)	5.325
Product thickness (mm)		Depth to be purged (m)	2.035

Purging Information

Method/pump type waterra ☐ whaler ☒ bailer ☐		Tubing material HDPE ☐ PVC ☒ S/Steel ☐	
Start time (2400hr)	14.55	Elapsed time (hours)	20 mins
One purge volume = (2.85 x depth to be purged) m^3 x 1000			6.0 litres
No. of times purged	1.8	Total purge volume	10.5 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.49	0.73		2.8	17.2
After two purge volume	7.48	0.73		2.5	16.4
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.35	1.13		1.7	16.4
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	

Sample Description

Odour	Nil / faint	Colour	light grey brown	Turbidity	L M (H)	

Weather Conditions

Rain	Nil	Temperature	10 °C	Cloud cover	80 %

Other comments and observations:

Purged dry after 10.5 L

Purgers name	BJH	Date & signature	29/6/98	BJH
Samplers name	BJH	Date & signature	30/6/98	BJH

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Environment & Infrastructure

Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 1 / 7 /1998
Project: Canberra Rail Yards	**Well ID No.** PMW1
Location: Canberra	

Casing Diameter (mm)	50	Well depth from TOC / ~~TOSP~~ (m)	2.325
Depth to floating product (m)		Depth to groundwater from TOC / ~~TOSP~~ (m)	1.060
Product thickness (mm)		Depth to be purged (m)	1.265

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	
Start time (2400hr)	11.50	Elapsed time (hours)	
One purge volume = (5.105 x depth to be purged) m^3 x 1000			6.5 litres
No. of times purged	1.6	Total purge volume	10.5 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.52	1.16		2.7	14.7
After two purge volume					
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.32	1.40		2.2	14.9
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒	Tubing material HDPE ☐ PVC ☐ S/Steel ☒

Sample Description

Odour	hydrocarbon	Colour	grey	Turbidity	L	(M)	H

Weather Conditions

Rain	N:1	Temperature	12 °C	Cloud cover	10 %

Other comments and observations:

PVC cap only

Purged dry after 10.5 L.

Purgers name	BJH	Date & signature	1/7/98	BJH
Samplers name	BJH	Date & signature	1/7/98	BJH

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Environment&Infrastructure

Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 1 / 7 /1998
Project: Canberra Rail Yards	**Well ID No.** PMW2
Location: Canberra	

Casing Diameter (mm)	50	Well depth from TOC / ~~TOSP~~ (m)	2.350
Depth to floating product (m)		Depth to groundwater from TOC / ~~TOSP~~ (m)	1.145
Product thickness (mm)		Depth to be purged (m)	1.205

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	
Start time (2400hr)	12.00	Elapsed time (hours)	15 mins
One purge volume = (5.105 x depth to be purged) m^3 x 1000			6.5 litres
No. of times purged	1.4	Total purge volume	9 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	7.36	1.19	\	3.6	15.2
After two purge volume			\		
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	7.43	1.34	\	2.2	14.7
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒	Tubing material HDPE ☐ PVC ☐ S/Steel ☒

Sample Description

Odour	hydrocarbon	Colour	light grey	Turbidity	L	(M)	H

Weather Conditions

Rain	Nil	Temperature	12 °C	Cloud cover	10 %

Other comments and observations:

Adjacent Mobil fence (gatic cover)

Purged dry after 9L.

Purgers name	BJH	Date & signature	1/7/98	BJH
Samplers name	BJH	Date & signature	1/7/98	BJH

PPK
Environment&Infrastructure

Groundwater Field Parameters

Job Number: 27K140A

Client Indec Consulting	**Date** 1 / 7 /1998
Project: Canberra Rail Yards	**Well ID No.** PMW 3
Location: Canberra	

Casing Diameter (mm)	50	Well depth from TOC / ~~TOSP~~ (m)	2.140
Depth to floating product (m)		Depth to groundwater from TOC / ~~TOSP~~ (m)	0.450
Product thickness (mm)		Depth to be purged (m)	1.690

Purging Information

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	
Start time (2400hr)	12.25	Elapsed time (hours)	
One purge volume = (5.105 x depth to be purged) m^3 x 1000			8.5 litres
No. of times purged	1.4	Total purge volume	12 litres

Field Results While Purging

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
After one purge volume	8.08	0.91		3.8	15.0
After two purge volume					
After three purge volume					

When measurements for pH are within 0.1 pH units ; conductivity,salinity,and dissolved oxygen are within 10% and temperature is within 0.5 °C the well sampled is stable and purging may cease.

Field Results While Sampling

	pH	Conductivity mS/cm	Redox m/V	DO (ppM)	Temp. °C
First Sample	8.01	1.22		1.9	13.3
Second Sample					
Third Sample					

Sampling Method

Method/pump type waterra ☐ whaler ☐ bailer ☒		Tubing material HDPE ☐ PVC ☐ S/Steel ☒	

Sample Description

Odour	hydrocarbon	Colour	brown	Turbidity	(L)	(M)	H

Weather Conditions

Rain	N:1	Temperature	12 °C	Cloud cover	10 %

Other comments and observations:

Adjacent north shunt line (gatic cover)
Purged dry after 12 L.

Purgers name	BJH	Date & signature	1/7/98	BJH
Samplers name	BJH	Date & signature	1/7/98	BJH

Appendix J

Chain of Custody Documentation
(Groundwater)

PPK Environment&Infrastructure
ACN 078 004 798

White Page - Laboratory Copy
Yellow Page - Project File Copy
Green Page - Remains in Book

Please deliver the goods and/or ices to the office indicated:

☐ **Adelaide** 101 Pirie Street Adelaide SA 5000 Tel: (08) 8405 4300 Fax: (08) 8405 4301
☐ **Brisbane** 348 Edward Street, Brisbane QLD 4000 Tel: (07) 3218 2222 Fax: (07) 3831 4223
☐ **Melbourne** 163 Eastern Road, South Melbourne VIC 3205 Tel: (03) 9686 1166 Fax: (03) 9686 1110
☐ **Perth** 97 Broadway, Nedlands WA 6009 Tel: (08) 9389 8668 Fax: (08) 9389 8447
☐ **Sydney** 9 Blaxland Road, Rhodes NSW 2138 Tel: (02) 9743 0333 Fax: (02) 9736 1568

Chain of Custody

Order No: 1934

Job Title: AN Canberra
Laboratory Name: AMDEL
Address: 5 Kelray Place Asquith NSW
Fax Number: 02 9482 1734
Phone Number: 02 9482 1922
Contact Name:
Delivery Method: Courier
Quote Number:

PPK Job Number: 27K140A
Job Location: Canberra Rail Yards

Project Manager: Stuart Taylor
Results Expected by/on:
Fax Results to: Stuart Taylor
Fax Number: 08 8405 4301
Phone Number: 08 8405 4300
Spreadsheet of Results Required: Y / N
Format:
Turnaround Time Required:
Invoice to: PPK
Comments: 1 of 4

Date Sampled	Time	Sample I.D.	Container Size	Sample Location	Medium*	Preservative Type	Filtered (X)	TPH	BTEX	PAH's	OC/OP/PCB's	Metals**							Initials	Comments/Additional Information and/or Analysis Required
2/7/98		GW1 6 samples			W	4°C													GTH	All locations: 2 x [illegible]
2/7/98		GW2 6 samples			↓	↓													↓	1 x 1L glass
2/7/98		GW2D 6 samples																		1 x [illegible]
2/7/98		GW4 "																		1 x [illegible] glass
1/7/98		GW5 "																		1 x [illegible] L plastic
1/7/98		GW6 "																		all metal samples filtered
1/7/98		GW8 "																		
30/6/98		GW9 "																		
30/6/98		GW10 "																		
30/6/98		GW11 "																		
30/6/98		GW12 "																		
30/6/98		GW14 "			↓	↓													↓	

Relinquished by: Brenton Harris	Relinquished by:	Relinquished by:
Date & Time: 2/7/98	Date & Time:	Date & Time:
Company: PPK	Company:	Company:
Signature: [illegible]	Signature:	Signature:
Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):
Date & Time:	Date & Time:	Date & Time:
Company:	Company:	Company:
Signature:	Signature:	Signature:

Medium*: S = Soil, W = Water, V = Vapour

Legend**: (circle the following to be tested)

Metals: Al As Be Cd Co Cr Cu Fe Hg Li Mg Mn Ni Pb Se Sn V Zn

Samples on Ice: ☑ Yes ☐ No

Please fax back a signed copy when samples are received at the laboratory

PPK
Environment&Infrastructure
ACN 078 004 798

White Page - Laboratory Copy
Yellow Page - Project File Copy
Green Page - Remains in Book

Please deliver the goods and/or services to the office indicated:

☑ **Adelaide**
101 Pirie Street Adelaide SA 5000
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348 Edward Street, Brisbane QLD 4000
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Tel: (08) 9389 8668 Fax: (08) 9389 8447

☐ **Sydney**
9 Blaxland Road, Rhodes NSW 2138
Tel: (02) 9743 0333 Fax: (02) 9736 1568

Chain of Custody

Order No: 1935

Job Title:	AN Canberra
Laboratory Name:	ANDEL
Address:	5 Kelray Place Asquith NSW
Fax Number:	
Phone Number:	
Contact Name:	
Delivery Method:	Courier
Quote Number:	

PPK Job Number:	27K140A
Job Location:	Canberra Rail Yards

Project Manager:	Stuart Taylor
Results Expected by/on:	
Fax Results to:	Stuart Taylor
Fax Number:	08 8405 4301
Phone Number:	08 8405 4300
Spreadsheet of Results Required:	Y / N
Format:	
Turnaround Time Required:	
Invoice to:	PPK
Comments:	1 of 4

Date Sampled	Time	Sample I.D.	Container Size	Sample Location	Medium*	Preservative Type	Filtered (X)	TPH	BTEX	PAH's	OC/OP/PCB's	Metals**	Initials	Comments/Additional Information and/or Analysis Required
30/6/98		GW16 6 samples			W	<4°C							BJH	
2/7/98		GW17 "												
2/7/98		GW19 "												
2/7/98		GW21 "												
2/7/98		GW22 "												
2/7/98		GW22D "												
1/7/98		GW24 "												
1/7/98		GW26 "												
1/7/98		GW28 "												
1/7/98		GW30 "												
2/7/98		GW32 "												
2/7/98		GW32D "												

Relinquished by:	Brenton Harris	Relinquished by:	Relinquished by:
Date & Time:	2/7/98 16:00	Date & Time:	Date & Time:
Company:	PPK	Company:	Company:
Signature:		Signature:	Signature:
Received in Good Order & Condition by (Name):		Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):
Date & Time:		Date & Time:	Date & Time:
Company:		Company:	Company:
Signature:		Signature:	Signature:

Medium*: S = Soil, W = Water, V = Vapour

Legend**: (circle the following to be tested)

Metals: Al As Be Cd Co Cr Cu Fe Hg Li Mg Mn Ni Pb Se Sn V Zn

Samples on Ice: ☑ Yes ☐ No

Please fax back a signed copy when samples are received at the laboratory

PPK
Environment&Infrastructure
ACN 078 004 798

White Page - Laboratory Copy
Yellow Page - Project File Copy
Green Page - Remains in Book

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☐ **Perth**
97 Broadway, Nedlands WA 6009
Tel: (08) 9389 8668 Fax: (08) 9389 8447

☐ **Sydney**
9 Blaxland Road, Rhodes NSW 2138
Tel: (02) 9743 0333 Fax: (02) 9736 1568

Chain of Custody

Order No: 1936

Job Title: AN Canberra

Laboratory Name: AMDEL

Address: 5 Kelray Place
Asquith NSW

Fax Number:

Phone Number:

Contact Name:

Delivery Method: Courier

Quote Number:

PPK Job Number: 27K1404

Job Location: Canberra Rail Yards

Project Manager: Stuart Taylor

Results Expected by/on:

Fax Results to: Stuart Taylor

Fax Number: 08 8405 4301

Phone Number: 08 8405 4300

Spreadsheet of Results Required: Y / N

Format:

Turnaround Time Required:

Invoice to: PPK

Comments: 3 of 4

Date Sampled	Time	Sample I.D.	Container Size	Sample Location	Medium*	Preservative Type	Filtered (X)	TPH	BTEX	PAH's	OC/OP/PCB's	Metals**	Initials	Comments/Additional Information and/or Analysis Required
2/7/98		GW35 6 samples			W	4°C							BTEX	
30/6/98		GW37 "												
30/6/98		GW39 "												
1/7/98		PMW1 "												
1/7/98		PMW2 "												
1/7/98		PMW3 "												
2/7/98		BDW1 "												
2/7/98		BDW2 "												
2/7/98		BDW3 "												
2/7/98		RB PMW3 "												

Relinquished by: Brenton Lewis	Relinquished by:	Relinquished by:
Date & Time: 2/7/98 11:00	Date & Time:	Date & Time:
Company: PPK	Company:	Company:
Signature:	Signature:	Signature:
Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):
Date & Time:	Date & Time:	Date & Time:
Company:	Company:	Company:
Signature:	Signature:	Signature:

Medium*: S = Soil, W = Water, V = Vapour

Legend**: (circle the following to be tested)

Metals: Al As Be Cd Co Cr Cu Fe Hg Li Mg Mn Ni Pb Se Sn V Zn

Samples on Ice: ☑ Yes ☐ No

Please fax back a signed copy when samples are received at the laboratory

PPK
Environment&Infrastructure
ACN 078 004 798

V ...e Page - Laboratory Copy
Yellow Page - Project File Copy
Green Page - Remains in Book

Please deliver the goods and/or services to the office indicated:

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Tel: (07) 3218 2222 Fax: (07) 3831 4223

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☐ **Perth**
97 Broadway, Nedlands WA 6009
Tel: (08) 9389 8668 Fax: (08) 9389 8447

☐ **Sydney**
9 Blaxland Road, Rhodes NSW 2138
Tel: (02) 9743 0333 Fax: (02) 9736 1568

Chain of Custody

Order No: 1937

Job Title: AN Canberra

Laboratory Name: AMDEL

Address: 5 Kelvin Place
Asquith NSW

Fax Number:

Phone Number:

Contact Name:

Delivery Method: Courier

Quote Number:

PPK Job Number: 27K140A

Job Location: Canberra Rail Yards

Project Manager: Stuart Taylor

Results Expected by/on:

Fax Results to: Stuart Taylor

Fax Number: 08 8405 4301

Phone Number: 08 8405 4300

Spreadsheet of Results Required: Y / N

Format:

Turnaround Time Required:

Invoice to: PPK

Comments: 4 of 16

Date Sampled	Time	Sample I.D.	Container Size	Sample Location	Medium*	Preservative Type	Filtered (X)	TPH	BTEX	PAH's	OC/OP/PCB's	Metals**	Initials	Comments/Additional Information and/or Analysis Required
17/6/98		BD1	125mL		S								BJH	
17/6/98		BD2	↓		↓								↓	
19/6/98		BD3												
19/6/98		BD4	↓		↓								↓	

Relinquished by:	Brent [illegible]	Relinquished by:	Relinquished by:
Date & Time:	2/7/98 1600	Date & Time:	Date & Time:
Company:	PPK	Company:	Company:
Signature:		Signature:	Signature:
Received in Good Order & Condition by (Name):		Received in Good Order & Condition by (Name):	Received in Good Order & Condition by (Name):
Date & Time:		Date & Time:	Date & Time:
Company:		Company:	Company:
Signature:		Signature:	Signature:

Medium*: S = Soil, W = Water, V = Vapour

Legend**: (circle the following to be tested)

Metals: Al As Be Cd Co Cr Cu Fe Hg
Li Mg Mn Ni Pb Se Sn V Zn

Samples on Ice: ☑ Yes ☐ No

Please fax back a signed copy when samples are received at the laboratory

Facsimile

PPK
Environment&Infrastructure

Organisation:	**Amdel Environmental Laboratories**
Attention:	**Andrew Spencer / Brad Orange**
Fax No:	**02 9482 1734**
From:	Stuart Taylor
Date:	6 July 1998
No of Pages (incl cover):	2
Our Reference:	27K140A
Re:	**Analytical Requests for Canberra Groundwater Samples**

URGENT

Andrew/Brad

Please find attached a spreadsheet detailing our analytical requirements for the groundwater samples recovered from the Canberra Railyards.

Required turn around time is two weeks.

Please batch and invoice along with our earlier submission.

If you require any further information, please do not hesistate to call me on (08) 8405 4300.

Regards

STUART TAYLOR

RECEIVED
06 JUL 1998
8E01179

ACN 078 004 798
A NATA Certified Company

PPK Environment & Infrastructure Pty Ltd
101 Piric Street
Adelaide SA 5000
GPO Box 398
Adelaide SA 5001
Australia

Tel: + 61 8 8405 4300
Fax: + 61 8 8405 4301
Email: ppkadel@ozemail.com.au

Environment & Infrastructure Services

- Planning, investigation, design, project management;
- Operational & maintenance;
- Outsourcing & partnering;
- Financing & equity participation

Industry Sectors:

- Mining & Resources
- Transport
- Urban Development & Building
- Water & Wastewater

Please phone this office if any part of this transmission failed or was misdirected

Sheet2

Sample ID		Analysis Required			
GW1		TDS,pH,TPH,BTEX,Metals,PAH's			
GW2		TDS,pH, SVOC SCREEN, VOC			
GW2D		TDS,pH, SVOC SCREEN, VOC			
GW4		TDS,pH,TPH,BTEX,Metals,PAH's			
GW5		TDS,pH,TPH,BTEX,Metals,PAH's			
GW6		TDS,pH,TPH,BTEX,Metals,PAH's			
GW8		TDS,pH,TPH,BTEX,Metals,PAH's			
GW9		TDS,pH,TPH,BTEX,Metals,PAH's			
GW10		TDS,pH,TPH,BTEX,Metals,PAH's			
GW11		TDS,pH,TPH,BTEX,Metals,PAH's			
GW12		TDS,pH,TPH,BTEX,Metals,PAH's			
GW14		TDS,pH,TPH,BTEX,Metals,PAH's			
GW16		TDS,pH,TPH,BTEX,Metals,PAH's			
GW17		TDS,pH,TPH,BTEX,Metals,PAH's			
GW19		TDS,pH,TPH,BTEX,Metals,PAH's			
GW21		TDS,pH,TPH,BTEX,Metals,PAH's			
GW22		TDS,pH, SVOC SCREEN, VOC			
GW22D		TDS,pH, SVOC SCREEN, VOC			
GW24		TDS,pH,TPH,BTEX,Metals,PAH's			
GW26		TDS,pH,TPH,BTEX,Metals,PAH's			
GW28		TDS,pH,TPH,BTEX,Metals,PAH's			
GW30		TDS,pH,TPH,BTEX,Metals,PAH's			
GW32		TDS,pH, SVOC SCREEN, VOC			
GW32D		TDS,pH, SVOC SCREEN, VOC			
GW35		TDS,pH,TPH,BTEX,Metals,PAH's			
GW37		TDS,pH,TPH,BTEX,Metals,PAH's			
GW39		TDS,pH,TPH,BTEX,Metals,PAH's			
PMW1		TDS,pH,TPH,BTEX,Metals,PAH's			
PMW2		TDS,pH,TPH,BTEX,Metals,PAH's			
PMW3		TDS,pH,TPH,BTEX,Metals,PAH's			
BDW1		TDS,pH,TPH,BTEX,Metals,PAH's			
BDW2		TDS,pH, SVOC SCREEN, VOC			
BDW3		TDS,pH,TPH,BTEX,Metals,PAH's			
RBPMW3		TDS,pH,TPH,BTEX,Metals,PAH's			
*METALS = As, Cd, Cu, Cr, Pb, Hg, Zn					

E49275
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RECEIVED
06 JUL 1998
8E01179

Appendix K

Certified Laboratory Results
(Groundwater)

Accreditation No. 1464

ENVIRONMENTAL AND INDUSTRIAL SERVICES DIVISION
Trading as Australian Analytical Laboratories Pty Ltd
ACN 001 491 667

Correspondence to:
PO BOX 514
HORNSBY NSW 2077

5 Kelray Place
ASQUITH NSW 2077
Telephone: (02) 9482 1922
Facsimile: (02) 9482 1734

CERTIFICATE OF ANALYSIS

Contents :
1) Cover Page
2) Analysis Report Pages
3) QA/QC Appendix

REPORT No : 8E01179

ATTENTION : Mr Stuart Taylor

CLIENT : PPK Adelaide

SAMPLES : 34

REFERENCE : 27K140A

DATE RECEIVED : 03/07/98

DATE REPORTED : 22/07/98

Method	Description	Extracted	Analysed
E2690	Total Dissolved Solids	17/07/98	22/07/98
E2600	pH	08/07/98	08/07/98
E0220	Total Petroleum Hydrocarbons	08/07/98	21/07/98
E0010	Benzene,Toluene,Ethylbenzene & Xylene	21/07/98	21/07/98
E0110	Polynuclear Aromatic Hydrocarbons	10/07/98	20/07/98
E0180	Semivolatile Organic Compounds	07/07/98	22/07/98
E0290	Volatile Organic Compounds	09/07/98	21/07/98
E4870	Dissolved Metals by ICP-MS	16/07/98	22/07/98
E48501	Mercury low level	14/07/98	17/07/98

RESULTS

All samples were analysed as received. This report relates specifically to the samples received.
Results relate to the source material only to the extent that the samples as supplied are truly representative of the sample source. This report replaces any preliminary results issued.
Note that for schemes indicated with * NATA accreditation does not cover the performance of this service.

PLEASE SEE ATTACHED PAGES FOR RESULTS

per G.W. ANDERSON
Manager Environmental Sydney

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49275	E49276	E49277	E49278	E49279
	Sample Id	GW1	GW2	GW2D	GW4	GW5
	PQL					
E2690 Total Dissolved Solids in Water						
TDS	**1**	278	626	618	1492	1890
E2600 pH in Water						
pH	**0.1**	6.9	6.8	6.8	7.2	7.4

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49280	E49281	E49282	E49283	E49284
	Sample Id	GW6	GW8	GW9	GW10	GW11
	PQL					
E2690 Total Dissolved Solids in Water						
TDS	**1**	1221	948	916	658	475
E2600 pH in Water						
pH	**0.1**	7.3	7.6	7.3	7.1	7.4

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49285	E49286	E49287	E49288	E49289
	Sample Id	GW12	GW14	GW16	GW17	GW19
	PQL					
E2690 Total Dissolved Solids in Water						
TDS	**1**	294	987	2287	793	563
E2600 pH in Water						
pH	**0.1**	7.3	7.4	7.2	7.6	7.4

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49290	E49291	E49292	E49293	E49294
	Sample Id	GW21	GW22	GW22D	GW24	GW26
	PQL					
E2690 Total Dissolved Solids in Water						
TDS	**1**	464	729	722	452	506
E2600 pH in Water						
pH	**0.1**	7.4	7.7	7.6	7.1	7.7

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
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-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49295	E49296	E49297	E49298	E49299
	Sample Id	GW28	GW30	GW32	GW32D	GW35
	PQL					
E2690 Total Dissolved Solids in Water						
TDS	**1**	1039	352	257	260	513
E2600 pH in Water						
pH	**0.1**	7.9	6.9	7.6	7.7	6.9

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49300	E49301	E49302	E49303	E49304
	Sample Id	GW37	GW39	PMW1	PMW2	PMW3
	PQL					
E2690 Total Dissolved Solids in Water						
TDS	**1**	505	661	456	464	149
E2600 pH in Water						
pH	**0.1**	7.4	6.9	7.0	7.0	7.1

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49305	E49306	E49307	E49308	
	Sample Id	BDW1	BDW2	BDW3	RBPMW3	
	PQL					
E2690 Total Dissolved Solids in Water						
TDS	**1**	712	269	625	8	
E2600 pH in Water						
pH	**0.1**	7.4	7.6	6.8	6.8	

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49275	E49278	E49279	E49280	E49281
	Sample Id	GW1	GW4	GW5	GW6	GW8
	PQL					
E0220 TPH in Water (µg/L)						
Total C6-C36	-	nd	95700	122000	nd	nd
C6-C9 Fraction	20	nd	49240	90	nd	nd
C10-C14 Fraction	20	nd	32660	44546	nd	nd
C15-C28 Fraction	100	nd	10240	76057	nd	nd
C29-C36 Fraction	100	nd	3600	1084	nd	nd
E0010 BTEX (P&T) in Water (µg/L)						
Benzene	0.5	nd	202	20.0	nd	1.0
Toluene	1	nd	248	32	nd	nd
Ethylbenzene	1	nd	528	4	nd	nd
Total Xylenes	3	nd	1117	23	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49282	E49283	E49284	E49285	E49286
	Sample Id	GW9	GW10	GW11	GW12	GW14
	PQL					
E0220 TPH in Water (µg/L)						
Total C6-C36	-	nd	nd	nd	nd	nd
C6-C9 Fraction	**20**	nd	nd	nd	nd	nd
C10-C14 Fraction	**20**	nd	nd	nd	nd	nd
C15-C28 Fraction	**100**	nd	nd	nd	nd	nd
C29-C36 Fraction	**100**	nd	nd	nd	nd	nd
E0010 BTEX (P&T) in Water (µg/L)						
Benzene	**0.5**	nd	nd	nd	nd	nd
Toluene	**1**	nd	nd	nd	nd	nd
Ethylbenzene	**1**	nd	nd	nd	nd	nd
Total Xylenes	**3**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49287	E49288	E49289	E49290	E49293
	Sample Id	GW16	GW17	GW19	GW21	GW24
	PQL					
E0220 TPH in Water (µg/L)						
Total C6-C36	-	nd	nd	296	nd	255000
C6-C9 Fraction	20	nd	nd	120	nd	555
C10-C14 Fraction	20	nd	nd	176	nd	112968
C15-C28 Fraction	100	nd	nd	nd	nd	140933
C29-C36 Fraction	100	nd	nd	nd	nd	650
E0010 BTEX (P&T) in Water (µg/L)						
Benzene	0.5	nd	nd	6.0	nd	54.0
Toluene	1	nd	nd	1	nd	35
Ethylbenzene	1	nd	nd	18	nd	28
Total Xylenes	3	nd	nd	85	nd	46

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49294	E49295	E49296	E49299	E49300
	Sample Id	GW26	GW28	GW30	GW35	GW37
	PQL					
E0220 TPH in Water (µg/L)						
Total C6-C36	-	nd	nd	nd	31200	nd
C6-C9 Fraction	20	nd	nd	nd	18400	nd
C10-C14 Fraction	20	nd	nd	nd	12805	nd
C15-C28 Fraction	100	nd	nd	nd	nd	nd
C29-C36 Fraction	100	nd	nd	nd	nd	nd
E0010 BTEX (P&T) in Water (µg/L)						
Benzene	0.5	nd	nd	nd	2216	nd
Toluene	1	nd	nd	nd	4312	nd
Ethylbenzene	1	nd	nd	nd	1633	nd
Total Xylenes	3	nd	nd	nd	10152	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49301	E49302	E49303	E49304	E49305
	Sample Id	GW39	PMW1	PMW2	PMW3	BDW1
	PQL					
E0220 TPH in Water (µg/L)						
Total C6-C36	-	nd	34900	18700	nd	nd
C6-C9 Fraction	**20**	nd	1556	1191	nd	nd
C10-C14 Fraction	**20**	nd	17135	10074	nd	nd
C15-C28 Fraction	**100**	nd	16250	7416	nd	nd
C29-C36 Fraction	**100**	nd	nd	nd	nd	nd
E0010 BTEX (P&T) in Water (µg/L)						
Benzene	**0.5**	nd	66.0	*<20	nd	nd
Toluene	**1**	nd	32	25	nd	1
Ethylbenzene	**1**	nd	388	148	nd	nd
Total Xylenes	**3**	nd	103	46	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49307	E49308			
	Sample Id	BDW3	RBPMW3			
	PQL					
E0220 TPH in Water (µg/L)						
Total C6-C36	-	27200	10			
C6-C9 Fraction	**20**	2150	nd			
C10-C14 Fraction	**20**	nd	nd			
C15-C28 Fraction	**100**	21394	nd			
C29-C36 Fraction	**100**	3620	nd			
E0010 BTEX (P&T) in Water (µg/L)						
Benzene	**0.5**	703	nd			
Toluene	**1**	825	1			
Ethylbenzene	**1**	93	nd			
Total Xylenes	**3**	507	8			

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
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Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49275	E49278	E49279	E49280	E49281
	Sample Id	GW1	GW4	GW5	GW6	GW8
	PQL					
E0110 PAH's in Water (µg/L)						
Naphthalene	1	nd	1349	nd	nd	nd
Acenaphthylene	1	nd	nd	nd	nd	nd
Acenaphthene	1	nd	nd	nd	nd	nd
Fluorene	1	nd	nd	10	nd	nd
Phenanthrene	1	nd	48	11	nd	nd
Anthracene	1	nd	nd	nd	nd	nd
Fluoranthene	1	nd	2	nd	nd	nd
Pyrene	1	nd	3	nd	nd	nd
Benz(a)anthracene	1	nd	nd	nd	nd	nd
Chrysene	1	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	2	nd	nd	nd	nd	nd
Benzo(a)pyrene	1	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	1	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	1	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	1	nd	nd	nd	nd	nd
Total PAH		nd	1402	21	nd	nd
2-Fluorobiphenyl-SURROGATE	1	91%	109%	89%	92%	84%
Anthracene-d10-SURROGATE	1	91%	112%	101%	95%	98%
p-Terphenyl-D14-SURROGATE	1	95%	93%	89%	106%	98%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
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Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49282	E49283	E49284	E49285	E49286
	Sample Id	GW9	GW10	GW11	GW12	GW14
	PQL					
E0110 PAH's in Water (µg/L)						
Naphthalene	1	nd	nd	nd	nd	nd
Acenaphthylene	1	nd	nd	nd	nd	nd
Acenaphthene	1	nd	nd	nd	nd	nd
Fluorene	1	nd	nd	nd	nd	nd
Phenanthrene	1	nd	nd	nd	nd	nd
Anthracene	1	nd	nd	nd	nd	nd
Fluoranthene	1	nd	nd	nd	nd	nd
Pyrene	1	nd	nd	nd	nd	nd
Benz(a)anthracene	1	nd	nd	nd	nd	nd
Chrysene	1	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	2	nd	nd	nd	nd	nd
Benzo(a)pyrene	1	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	1	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	1	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	1	nd	nd	nd	nd	nd
Total PAH		nd	nd	nd	nd	nd
2-Fluorobiphenyl-SURROGATE	1	102%	92%	84%	71%	103%
Anthracene-d10-SURROGATE	1	96%	91%	89%	79%	104%
p-Terphenyl-D14-SURROGATE	1	101%	99%	93%	93%	107%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49287	E49288	E49289	E49290	E49293
	Sample Id	GW16	GW17	GW19	GW21	GW24
	PQL					
E0110 PAH's in Water (µg/L)						
Naphthalene	1	nd	nd	nd	nd	125
Acenaphthylene	1	nd	nd	nd	nd	nd
Acenaphthene	1	nd	nd	nd	nd	nd
Fluorene	1	nd	nd	nd	nd	nd
Phenanthrene	1	nd	nd	nd	nd	84
Anthracene	1	nd	nd	nd	nd	4
Fluoranthene	1	nd	nd	nd	nd	53
Pyrene	1	nd	nd	nd	nd	33
Benz(a)anthracene	1	nd	nd	nd	nd	nd
Chrysene	1	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	2	nd	nd	nd	nd	nd
Benzo(a)pyrene	1	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	1	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	1	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	1	nd	nd	nd	nd	nd
Total PAH		nd	nd	nd	nd	299
2-Fluorobiphenyl-SURROGATE	1	86%	99%	92%	93%	121%
Anthracene-d10-SURROGATE	1	102%	113%	101%	101%	118%
p-Terphenyl-D14-SURROGATE	1	111%	116%	102%	104%	106%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49294	E49295	E49296	E49299	E49300
	Sample Id	GW26	GW28	GW30	GW35	GW37
	PQL					
E0110 PAH's in Water (µg/L)						
Naphthalene	1	nd	nd	nd	144	nd
Acenaphthylene	1	nd	nd	nd	nd	nd
Acenaphthene	1	nd	nd	nd	nd	nd
Fluorene	1	nd	nd	nd	nd	nd
Phenanthrene	1	nd	nd	nd	nd	nd
Anthracene	1	nd	nd	nd	nd	nd
Fluoranthene	1	nd	nd	nd	nd	nd
Pyrene	1	nd	nd	nd	nd	nd
Benz(a)anthracene	1	nd	nd	nd	nd	nd
Chrysene	1	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	2	nd	nd	nd	nd	nd
Benzo(a)pyrene	1	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	1	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	1	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	1	nd	nd	nd	nd	nd
Total PAH		nd	nd	nd	144	nd
2-Fluorobiphenyl-SURROGATE	1	80%	74%	71%	77%	72%
Anthracene-d10-SURROGATE	1	89%	101%	99%	99%	103%
p-Terphenyl-D14-SURROGATE	1	98%	116%	115%	105%	114%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

Analyte	Lab No	E49301	E49302	E49303	E49304	E49305
	Sample Id	GW39	PMW1	PMW2	PMW3	BDW1
	PQL					
E0110 PAH's in Water (µg/L)						
Naphthalene	1	nd	96	28	nd	nd
Acenaphthylene	1	nd	nd	nd	nd	nd
Acenaphthene	1	nd	7	nd	nd	nd
Fluorene	1	nd	nd	nd	nd	nd
Phenanthrene	1	nd	nd	nd	nd	nd
Anthracene	1	nd	nd	nd	nd	nd
Fluoranthene	1	nd	2	nd	nd	nd
Pyrene	1	nd	3	nd	nd	nd
Benz(a)anthracene	1	nd	nd	nd	nd	nd
Chrysene	1	nd	nd	nd	nd	nd
Benzo(b) & (k)fluoranthene	2	nd	nd	nd	nd	nd
Benzo(a)pyrene	1	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	1	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	1	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	1	nd	nd	nd	nd	nd
Total PAH		nd	108	28	nd	nd
2-Fluorobiphenyl-SURROGATE	1	70%	99%	105%	79%	73%
Anthracene-d10-SURROGATE	1	85%	111%	109%	107%	93%
p-Terphenyl-D14-SURROGATE	1	92%	99%	116%	115%	96%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

Analyte	Lab No	E49307	E49308			
	Sample Id	BDW3	RBPMW3			
	PQL					
E0110 PAH's in Water (µg/L)						
Naphthalene	1	1	1			
Acenaphthylene	1	nd	nd			
Acenaphthene	1	nd	nd			
Fluorene	1	nd	nd			
Phenanthrene	1	nd	nd			
Anthracene	1	nd	nd			
Fluoranthene	1	nd	nd			
Pyrene	1	nd	nd			
Benz(a)anthracene	1	nd	nd			
Chrysene	1	nd	nd			
Benzo(b) & (k)fluoranthene	2	nd	nd			
Benzo(a)pyrene	1	nd	nd			
Indeno(1.2.3-cd)pyrene	1	nd	nd			
Dibenz(a.h)anthracene	1	nd	nd			
Benzo(g.h.i)perylene	1	nd	nd			
Total PAH		1	1			
2-Fluorobiphenyl-SURROGATE	1	103%	82%			
Anthracene-d10-SURROGATE	1	110%	110%			
p-Terphenyl-D14-SURROGATE	1	113%	112%			

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49276	E49277	E49291	E49292	E49297
	Sample Id	GW2	GW2D	GW22	GW22D	GW32
	PQL					
E0180 Semivolatile Organic Compounds	**(µg/L)**					
Phenol	**10**	nd	nd	nd	nd	nd
Aniline	**100**	nd	nd	nd	nd	nd
Bis(2-chloroethyl) ether	**10**	nd	nd	nd	nd	nd
2-Chlorophenol	**10**	nd	nd	nd	nd	nd
1.3-Dichlorobenzene	**10**	nd	nd	nd	nd	nd
1.4-Dichlorobenzene	**10**	nd	nd	nd	nd	nd
1.2-Dichlorobenzene	**10**	nd	nd	nd	nd	nd
Benzyl Alcohol	**10**	nd	nd	nd	nd	nd
2-Methylphenol	**10**	nd	nd	nd	nd	nd
N-Nitrosodi-n-propylamine	**10**	nd	nd	nd	nd	nd
Bis(2-chloroisopropyl) ether	**10**	nd	nd	nd	nd	nd
4-Methylphenol	**10**	nd	nd	nd	nd	nd
3-Methylphenol	**10**	nd	nd	nd	nd	nd
Hexachloroethane	**10**	nd	nd	nd	nd	nd
Nitrobenzene	**10**	nd	nd	nd	nd	nd
Isophorone	**10**	nd	nd	nd	nd	nd
2-Nitrophenol	**10**	nd	nd	nd	nd	nd
2.4-Dimethylphenol	**10**	nd	nd	nd	nd	nd
Bis(2-chloroethoxy) methane	**10**	nd	nd	nd	nd	nd
Benzoic Acid	**100**	nd	nd	nd	nd	nd
2.4-Dichlorophenol	**10**	nd	nd	nd	nd	nd
1.2.4-Trichlorobenzene	**10**	nd	nd	nd	nd	nd
Naphthalene	**10**	nd	nd	nd	nd	nd
4-Chloroaniline	**10**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

Analyte	Lab No	E49276	E49277	E49291	E49292	E49297
	Sample Id	GW2	GW2D	GW22	GW22D	GW32
	PQL					
Hexachlorobutadiene	**10**	nd	nd	nd	nd	nd
4-Chloro-3-methylphenol	**10**	nd	nd	nd	nd	nd
2-Methylnaphthalene	**10**	nd	nd	nd	nd	nd
Hexachlorocyclopentadiene	**10**	nd	nd	nd	nd	nd
2.4.6-Trichlorophenol	**10**	nd	nd	nd	nd	nd
2.4.5-Trichlorophenol	**10**	nd	nd	nd	nd	nd
2-Chloronaphthalene	**10**	nd	nd	nd	nd	nd
2-Nitroaniline	**10**	nd	nd	nd	nd	nd
Dimethyl phthalate	**10**	nd	nd	nd	nd	nd
2.6-Dinitrotoluene	**10**	nd	nd	nd	nd	nd
Acenaphthylene	**10**	nd	nd	nd	nd	nd
3-Nitroaniline	**10**	nd	nd	nd	nd	nd
Acenaphthene	**10**	nd	nd	nd	nd	nd
2.4-Dinitrophenol	**10**	nd	nd	nd	nd	nd
4-Nitrophenol	**10**	nd	nd	nd	nd	nd
Dibenzofuran	**10**	nd	nd	nd	nd	nd
Diethyl phthalate	**10**	nd	nd	nd	nd	nd
Fluorene	**10**	nd	nd	nd	nd	nd
4-Chlorophenyl phenyl ether	**10**	nd	nd	nd	nd	nd
4-Nitroaniline	**10**	nd	nd	nd	nd	nd
4.6-Dinitro-2-methylphenol	**10**	nd	nd	nd	nd	nd
Azobenzene	**100**	nd	nd	nd	nd	nd
N-Nitrosodiphenylamine	**100**	nd	nd	nd	nd	nd
a-BHC	**10**	nd	nd	nd	nd	nd
4-Bromophenyl phenyl ether	**10**	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

Analyte	Lab No	E49276	E49277	E49291	E49292	E49297
	Sample Id	GW2	GW2D	GW22	GW22D	GW32
	PQL					
Hexachlorobenzene	**10**	nd	nd	nd	nd	nd
b-BHC	**10**	nd	nd	nd	nd	nd
Pentachlorophenol	**10**	nd	nd	nd	nd	nd
g-BHC	**10**	nd	nd	nd	nd	nd
Phenanthrene	**10**	nd	nd	nd	nd	nd
Anthracene	**10**	nd	nd	nd	nd	nd
d-BHC	**10**	nd	nd	nd	nd	nd
Heptachlor	**10**	nd	nd	nd	nd	nd
Di-n-butyl phthalate	**10**	nd	nd	nd	nd	nd
Aldrin	**10**	nd	nd	nd	nd	nd
Heptachlor epoxide	**10**	nd	nd	nd	nd	nd
Fluoranthene	**10**	nd	nd	nd	nd	nd
Pyrene	**10**	nd	nd	nd	nd	nd
Endosulfan 1	**10**	nd	nd	nd	nd	nd
4.4-DDE	**10**	nd	nd	nd	nd	nd
Dieldrin	**10**	nd	nd	nd	nd	nd
Endrin	**10**	nd	nd	nd	nd	nd
Endosulfan 2	**10**	nd	nd	nd	nd	nd
4.4-DDD	**10**	nd	nd	nd	nd	nd
Endrin aldehyde	**10**	nd	nd	nd	nd	nd
Butyl benzyl phthalate	**10**	nd	nd	nd	nd	nd
Endosulfan sulfate	**10**	nd	nd	nd	nd	nd
4.4-DDT	**10**	nd	nd	nd	nd	nd
3.3-Dichlorobenzidine	**100**	nd	nd	nd	nd	nd
Benz(a)anthracene	**10**	nd	nd	nd	nd	nd

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Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

Analyte	Lab No	E49276	E49277	E49291	E49292	E49297
	Sample Id	GW2	GW2D	GW22	GW22D	GW32
	PQL					
Chrysene	**10**	nd	nd	nd	nd	nd
Bis(2-ethylhexyl) phthalate	**10**	nd	nd	nd	nd	nd
Di-n-octylphthalate	**10**	nd	nd	nd	nd	nd
Benzo(b)fluoranthene	**10**	nd	nd	nd	nd	nd
Benzo(k)fluoranthene	**10**	nd	nd	nd	nd	nd
Benzo(a)pyrene	**10**	nd	nd	nd	nd	nd
Indeno(1.2.3-cd)pyrene	**10**	nd	nd	nd	nd	nd
Dibenz(a.h)anthracene	**10**	nd	nd	nd	nd	nd
Benzo(g.h.i)perylene	**10**	nd	nd	nd	nd	nd
2-Fluorophenol-SURROGATE	**1**	51%	50%	54%	53%	58%
Phenol-D5-SURROGATE	**1**	50%	50%	50%	50%	53%
Nitrobenzene-D5-SURROGATE	**1**	89%	73%	78%	84%	84%
2-Fluorobiphenyl-SURROGATE	**1**	101%	84%	78%	84%	84%
2.4.6-Tribromophenol-SURROGATE	**1**	91%	79%	73%	75%	85%
p-Terphenyl-D14-SURROGATE	**1**	117%	114%	94%	97%	100%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49298	E49306			
	Sample Id	GW32D	BDW2			
	PQL					
E0180 Semivolatile Organic Compounds(µg/L)						
Phenol	**10**	nd	nd			
Aniline	**100**	nd	nd			
Bis(2-chloroethyl) ether	**10**	nd	nd			
2-Chlorophenol	**10**	nd	nd			
1.3-Dichlorobenzene	**10**	nd	nd			
1.4-Dichlorobenzene	**10**	nd	nd			
1.2-Dichlorobenzene	**10**	nd	nd			
Benzyl Alcohol	**10**	nd	nd			
2-Methylphenol	**10**	nd	nd			
N-Nitrosodi-n-propylamine	**10**	nd	nd			
Bis(2-chloroisopropyl) ether	**10**	nd	nd			
4-Methylphenol	**10**	nd	nd			
3-Methylphenol	**10**	nd	nd			
Hexachloroethane	**10**	nd	nd			
Nitrobenzene	**10**	nd	nd			
Isophorone	**10**	nd	nd			
2-Nitrophenol	**10**	nd	nd			
2.4-Dimethylphenol	**10**	nd	nd			
Bis(2-chloroethoxy) methane	**10**	nd	nd			
Benzoic Acid	**100**	nd	nd			
2.4-Dichlorophenol	**10**	nd	nd			
1.2.4-Trichlorobenzene	**10**	nd	nd			
Naphthalene	**10**	nd	nd			
4-Chloroaniline	**10**	nd	nd			

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49298	E49306			
	Sample Id	GW32D	BDW2			
	PQL					
Hexachlorobutadiene	**10**	nd	nd			
4-Chloro-3-methylphenol	**10**	nd	nd			
2-Methylnaphthalene	**10**	nd	nd			
Hexachlorocyclopentadiene	**10**	nd	nd			
2.4.6-Trichlorophenol	**10**	nd	nd			
2.4.5-Trichlorophenol	**10**	nd	nd			
2-Chloronaphthalene	**10**	nd	nd			
2-Nitroaniline	**10**	nd	nd			
Dimethyl phthalate	**10**	nd	nd			
2.6-Dinitrotoluene	**10**	nd	nd			
Acenaphthylene	**10**	nd	nd			
3-Nitroaniline	**10**	nd	nd			
Acenaphthene	**10**	nd	nd			
2.4-Dinitrophenol	**10**	nd	nd			
4-Nitrophenol	**10**	nd	nd			
Dibenzofuran	**10**	nd	nd			
Diethyl phthalate	**10**	nd	nd			
Fluorene	**10**	nd	nd			
4-Chlorophenyl phenyl ether	**10**	nd	nd			
4-Nitroaniline	**10**	nd	nd			
4.6-Dinitro-2-methylphenol	**10**	nd	nd			
Azobenzene	**100**	nd	nd			
N-Nitrosodiphenylamine	**100**	nd	nd			
a-BHC	**10**	nd	nd			
4-Bromophenyl phenyl ether	**10**	nd	nd			

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49298	E49306			
	Sample Id	GW32D	BDW2			
	PQL					
Hexachlorobenzene	**10**	nd	nd			
b-BHC	**10**	nd	nd			
Pentachlorophenol	**10**	nd	nd			
g-BHC	**10**	nd	nd			
Phenanthrene	**10**	nd	nd			
Anthracene	**10**	nd	nd			
d-BHC	**10**	nd	nd			
Heptachlor	**10**	nd	nd			
Di-n-butyl phthalate	**10**	nd	nd			
Aldrin	**10**	nd	nd			
Heptachlor epoxide	**10**	nd	nd			
Fluoranthene	**10**	nd	nd			
Pyrene	**10**	nd	nd			
Endosulfan 1	**10**	nd	nd			
4.4-DDE	**10**	nd	nd			
Dieldrin	**10**	nd	nd			
Endrin	**10**	nd	nd			
Endosulfan 2	**10**	nd	nd			
4.4-DDD	**10**	nd	nd			
Endrin aldehyde	**10**	nd	nd			
Butyl benzyl phthalate	**10**	nd	nd			
Endosulfan sulfate	**10**	nd	nd			
4.4-DDT	**10**	nd	nd			
3.3-Dichlorobenzidine	**100**	nd	nd			
Benz(a)anthracene	**10**	nd	nd			

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

amdel

Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49298	E49306			
	Sample Id	GW32D	BDW2			
	PQL					
Chrysene	**10**	nd	nd			
Bis(2-ethylhexyl) phthalate	**10**	nd	nd			
Di-n-octylphthalate	**10**	nd	nd			
Benzo(b)fluoranthene	**10**	nd	nd			
Benzo(k)fluoranthene	**10**	nd	nd			
Benzo(a)pyrene	**10**	nd	nd			
Indeno(1.2.3-cd)pyrene	**10**	nd	nd			
Dibenz(a.h)anthracene	**10**	nd	nd			
Benzo(g.h.i)perylene	**10**	nd	nd			
2-Fluorophenol-SURROGATE	**1**	54%	53%			
Phenol-D5-SURROGATE	**1**	50%	50%			
Nitrobenzene-D5-SURROGATE	**1**	71%	74%			
2-Fluorobiphenyl-SURROGATE	**1**	70%	74%			
2.4.6-Tribromophenol-SURROGATE	**1**	70%	73%			
p-Terphenyl-D14-SURROGATE	**1**	88%	92%			

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

Analyte	Lab No	E49276	E49277	E49291	E49292	E49297
	Sample Id	GW2	GW2D	GW22	GW22D	GW32
	PQL					
E0290 Volatile Organic Compounds (µg/L)						
Benzene	5	901	878	nd	nd	nd
Bromobenzene	5	nd	nd	nd	nd	nd
Bromochloromethane	5	nd	nd	nd	nd	nd
Bromodichloromethane	5	nd	nd	nd	nd	nd
Bromoform	5	nd	nd	nd	nd	nd
Bromomethane	5	nd	nd	nd	nd	nd
n-Butylbenzene	5	nd	nd	nd	nd	nd
sec-Butylbenzene	5	nd	nd	nd	nd	nd
tert-Butylbenzene	5	nd	nd	nd	nd	nd
Carbon tetrachloride	5	nd	nd	nd	nd	nd
Chlorobenzene	5	nd	nd	nd	nd	nd
Chloroethane	5	nd	nd	nd	nd	nd
Chloroform	5	nd	nd	nd	nd	nd
Chloromethane	5	nd	nd	nd	nd	nd
2-Chlorotoluene	5	nd	nd	nd	nd	nd
4-Chlorotoluene	5	nd	nd	nd	nd	nd
Dibromochloromethane	5	nd	nd	nd	nd	nd
1.2-Dibromo-3-chloropropane	5	nd	nd	nd	nd	nd
1.2-Dibromoethane (EDB)	5	nd	nd	nd	nd	nd
Dibromomethane	5	nd	nd	nd	nd	nd
1.2-Dichlorobenzene	5	nd	nd	nd	nd	nd
1.3-Dichlorobenzene	5	nd	nd	nd	nd	nd
1.4-Dichlorobenzene	5	nd	nd	nd	nd	nd
Dichlorodifluoromethane	5	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

Analyte	Lab No	E49276	E49277	E49291	E49292	E49297
	Sample Id	GW2	GW2D	GW22	GW22D	GW32
	PQL					
1.1-Dichloroethene	5	nd	nd	nd	nd	nd
1.2-Dichloroethane	5	nd	nd	nd	nd	nd
1.1-Dichloroethane	5	nd	nd	nd	nd	nd
cis-1.2-Dichloroethene	5	nd	nd	nd	nd	nd
trans-1.2-Dichloroethene	5	nd	nd	nd	nd	nd
1.2-Dichloropropane	5	nd	nd	nd	nd	nd
1.3-Dichloropropane	5	nd	nd	nd	nd	nd
2.2-Dichloropropane	5	nd	nd	nd	nd	nd
1.1-Dichloropropylene	5	nd	nd	nd	nd	nd
cis-1.3-Dichloropropylene	5	nd	nd	nd	nd	nd
trans-1.3-Dichloropropylene	5	nd	nd	nd	nd	nd
Ethylbenzene	5	88	87	nd	nd	nd
Hexachlorobutadiene	5	nd	nd	nd	nd	nd
Isopropylbenzene	5	nd	nd	nd	nd	nd
p-Isopropyltoluene	5	nd	nd	nd	nd	nd
Methylene chloride	5	nd	nd	nd	nd	nd
Naphthalene	5	nd	nd	nd	nd	nd
n-Propylbenzene	5	5	6	nd	nd	nd
Styrene	5	nd	nd	nd	nd	nd
1.1.1.2-Tetrachloroethane	5	nd	nd	nd	nd	nd
1.1.2.2-Tetrachloroethane	5	nd	nd	nd	nd	nd
Tetrachloroethene	5	nd	nd	nd	nd	nd
Toluene	5	906	864	nd	nd	nd
1.2.3-Trichlorobenzene	5	nd	nd	nd	nd	nd
1.2.4-Trichlorobenzene	5	nd	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

Analyte	Lab No	E49276	E49277	E49291	E49292	E49297
	Sample Id	GW2	GW2D	GW22	GW22D	GW32
	PQL					
1.1.1-Trichloroethane	**5**	nd	nd	nd	nd	nd
1.1.2-Trichloroethane	**5**	nd	nd	nd	nd	nd
Trichloroethene	**5**	nd	nd	nd	nd	nd
Trichlorofluoromethane	**5**	nd	nd	nd	nd	nd
1.2.3-Trichloropropane	**5**	nd	nd	nd	nd	nd
1.2.4-Trimethylbenzene	**5**	38	40	nd	nd	nd
1.3.5-Trimethylbenzene	**5**	11	11	nd	nd	nd
Vinyl chloride	**5**	nd	nd	nd	nd	nd
ortho-Xylene	**5**	128	128	nd	nd	nd
meta- & para-Xylene	**10**	346	345	nd	nd	nd
2-Butanone (MEK)	**2**	nd	nd	nd	nd	nd
4-Methyl-2-pentanone (MIBK)	**2**	nd	nd	nd	nd	nd
Pentafluorobenzene-SURROGATE	**1**	114%	110%	100%	99%	99%
Toluene-D8-SURROGATE	**1**	98%	95%	94%	95%	97%
4-Bromofluorobenzene-SURROGATE	**1**	94%	96%	93%	94%	96%

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

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Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49298	E49306			
	Sample Id	GW32D	BDW2			
	PQL					
E0290 Volatile Organic Compounds (µg/L)						
Benzene	5	nd	nd			
Bromobenzene	5	nd	nd			
Bromochloromethane	5	nd	nd			
Bromodichloromethane	5	nd	nd			
Bromoform	5	nd	nd			
Bromomethane	5	nd	nd			
n-Butylbenzene	5	nd	nd			
sec-Butylbenzene	5	nd	nd			
tert-Butylbenzene	5	nd	nd			
Carbon tetrachloride	5	nd	nd			
Chlorobenzene	5	nd	nd			
Chloroethane	5	nd	nd			
Chloroform	5	nd	nd			
Chloromethane	5	nd	nd			
2-Chlorotoluene	5	nd	nd			
4-Chlorotoluene	5	nd	nd			
Dibromochloromethane	5	nd	nd			
1.2-Dibromo-3-chloropropane	5	nd	nd			
1.2-Dibromoethane (EDB)	5	nd	nd			
Dibromomethane	5	nd	nd			
1.2-Dichlorobenzene	5	nd	nd			
1.3-Dichlorobenzene	5	nd	nd			
1.4-Dichlorobenzene	5	nd	nd			
Dichlorodifluoromethane	5	nd	nd			

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

Analyte	Lab No	E49298	E49306			
	Sample Id	GW32D	BDW2			
	PQL					
1.1-Dichloroethene	5	nd	nd			
1.2-Dichloroethane	5	nd	nd			
1.1-Dichloroethane	5	nd	nd			
cis-1.2-Dichloroethene	5	nd	nd			
trans-1.2-Dichloroethene	5	nd	nd			
1.2-Dichloropropane	5	nd	nd			
1.3-Dichloropropane	5	nd	nd			
2.2-Dichloropropane	5	nd	nd			
1.1-Dichloropropylene	5	nd	nd			
cis-1.3-Dichloropropylene	5	nd	nd			
trans-1.3-Dichloropropylene	5	nd	nd			
Ethylbenzene	5	nd	nd			
Hexachlorobutadiene	5	nd	nd			
Isopropylbenzene	5	nd	nd			
p-Isopropyltoluene	5	nd	nd			
Methylene chloride	5	nd	nd			
Naphthalene	5	nd	nd			
n-Propylbenzene	5	nd	nd			
Styrene	5	nd	nd			
1.1.1.2-Tetrachloroethane	5	nd	nd			
1.1.2.2-Tetrachloroethane	5	nd	nd			
Tetrachloroethene	5	nd	nd			
Toluene	5	nd	nd			
1.2.3-Trichlorobenzene	5	nd	nd			
1.2.4-Trichlorobenzene	5	nd	nd			

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

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Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49298	E49306			
	Sample Id	GW32D	BDW2			
	PQL					
1.1.1-Trichloroethane	**5**	nd	nd			
1.1.2-Trichloroethane	**5**	nd	nd			
Trichloroethene	**5**	nd	nd			
Trichlorofluoromethane	**5**	nd	nd			
1.2.3-Trichloropropane	**5**	nd	nd			
1.2.4-Trimethylbenzene	**5**	nd	nd			
1.3.5-Trimethylbenzene	**5**	nd	nd			
Vinyl chloride	**5**	nd	nd			
ortho-Xylene	**5**	nd	nd			
meta- & para-Xylene	**10**	nd	nd			
2-Butanone (MEK)	**2**	nd	nd			
4-Methyl-2-pentanone (MIBK)	**2**	nd	nd			
Pentafluorobenzene-SURROGATE	**1**	99%	101%			
Toluene-D8-SURROGATE	**1**	98%	99%			
4-Bromofluorobenzene-SURROGATE	**1**	95%	96%			

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

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Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49275	E49278	E49279	E49280	E49281
	Sample Id	GW1	GW4	GW5	GW6	GW8
	PQL					
E4870 Dissolved Metals in Waters						
Arsenic	**0.001**	nd	*nd	*0.048	*nd	*nd
Cadmium	**0.0001**	nd	0.0001	nd	nd	nd
Copper	**0.001**	0.002	0.001	0.003	0.003	0.003
Lead	**0.001**	0.020	0.007	0.017	0.036	0.022
Zinc	**0.002**	0.067	0.034	0.082	0.057	0.149
Chromium	**0.001**	0.001	0.001	0.001	0.003	0.003
E48501 Dissolved Mercury in Waters						
Mercury	**0.00005**	0.0031	nd	nd	nd	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header
* : Arsenic PQLs raised to 0.005mg/L due to high TDS.

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Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

	Lab No	E49282	E49283	E49284	E49285	E49286
	Sample Id	GW9	GW10	GW11	GW12	GW14
Analyte	PQL					
E4870 Dissolved Metals in Waters						
Arsenic	**0.001**	*nd	nd	nd	nd	*nd
Cadmium	**0.0001**	nd	nd	nd	nd	nd
Copper	**0.001**	0.001	0.004	0.002	0.002	0.006
Lead	**0.001**	0.046	0.068	0.167	0.018	0.011
Zinc	**0.002**	0.015	0.082	0.038	0.054	0.041
Chromium	**0.001**	0.001	0.002	0.002	nd	0.004
E48501 Dissolved Mercury in Waters						
Mercury	**0.00005**	nd	0.0002	0.0002	0.0002	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header
* : Arsenic PQLs raised to 0.005mg/L due to high TDS.

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Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49287	E49288	E49289	E49290	E49293
	Sample Id	GW16	GW17	GW19	GW21	GW24
	PQL					
E4870 Dissolved Metals in Waters						
Arsenic	**0.001**	0.001	*nd	nd	nd	nd
Cadmium	**0.0001**	0.0001	nd	nd	nd	nd
Copper	**0.001**	0.034	0.002	0.001	0.001	nd
Lead	**0.001**	0.022	0.031	0.030	0.020	0.002
Zinc	**0.002**	0.209	0.022	0.033	0.026	0.009
Chromium	**0.001**	0.002	0.001	nd	0.001	nd
E48501 Dissolved Mercury in Waters						
Mercury	**0.00005**	0.0003	0.0022	0.0024	0.0024	nd

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header
* : Arsenic PQLs raised to 0.005mg/L due to high TDS.

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Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49294	E49295	E49296	E49299	E49300
	Sample Id	GW26	GW28	GW30	GW35	GW37
	PQL					
E4870 Dissolved Metals in Waters						
Arsenic	**0.001**	nd	*nd	nd	0.001	nd
Cadmium	**0.0001**	nd	nd	nd	nd	nd
Copper	**0.001**	0.002	0.009	0.003	0.004	0.004
Lead	**0.001**	0.006	0.010	0.037	0.052	0.001
Zinc	**0.002**	0.044	0.080	0.049	0.023	0.026
Chromium	**0.001**	0.001	0.001	0.001	0.001	0.004
E48501 Dissolved Mercury in Waters						
Mercury	**0.00005**	nd	0.0001	nd	nd	0.0004

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header
* : Arsenic PQLs raised to 0.005mg/L due to high TDS.

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Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49301	E49302	E49303	E49304	E49305
	Sample Id	GW39	PMW1	PMW2	PMW3	BDW1
	PQL					
E4870 Dissolved Metals in Waters						
Arsenic	**0.001**	0.001	0.002	0.002	nd	0.001
Cadmium	**0.0001**	nd	nd	nd	nd	nd
Copper	**0.001**	0.008	0.002	0.002	0.001	0.003
Lead	**0.001**	0.018	0.007	0.005	nd	0.028
Zinc	**0.002**	0.125	0.050	0.046	0.015	0.040
Chromium	**0.001**	nd	0.001	nd	nd	0.001
E48501 Dissolved Mercury in Waters						
Mercury	**0.00005**	nd	nd	nd	nd	0.0029

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

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Job Number : 8E01179
Client : PPK Adelaide
Reference : 27K140A

Analyte	Lab No	E49307	E49308			
	Sample Id	BDW3	RBPMW3			
	PQL					
E4870 Dissolved Metals in Waters						
Arsenic	**0.001**	0.001	nd			
Cadmium	**0.0001**	0.0002	nd			
Copper	**0.001**	0.002	0.001			
Lead	**0.001**	0.010	nd			
Zinc	**0.002**	0.034	0.011			
Chromium	**0.001**	0.001	nd			
E48501 Dissolved Mercury in Waters						
Mercury	**0.00005**	0.0024	0.0028			

PQL = Practical Quantitation Limit
LNR = Samples Listed not Received
nd = <PQL
-- = Not Applicable

Soils : mg/kg (ppm) dry weight unless otherwise specified
Waters : mg/L (ppm) unless otherwise specified in Method Header
Leachates : mg/L (ppm) in leachate unless otherwise specified in Method Header

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QA/QC APPENDIX NO. 8E01179

Method	Description
E2690	Total Dissolved Solids
E2600	pH
E0220	Total Petroleum Hydrocarbons
E0010	Benzene,Toluene,Ethylbenzene & Xylene
E0110	Polynuclear Aromatic Hydrocarbons
E0180	Semivolatile Organic Compounds
E0290	Volatile Organic Compounds
E4870	Dissolved Metals by ICP-MS
E48501	Mercury low level

Chromatography QA/QC

	Yes	No	N/A
Retention Time Window Within Acceptance Criteria(±2%)	√		
Check Standard Within Acceptance Criteria(±10%)	√		
Recalibration Within Acceptance Criteria(±15%)	√		

Other QA/QC

Holding time conforming With Method Specification	√		
Chain of Custody Attached	√		

N/A=Not Applicable

Comments

1. Laboratory QA/QC including Method Blanks, Duplicates, Matrix Spike Duplicates, Laboratory Control Samples or CRM's are included in this QA/QC appendix. (Where applicable)
2. Inter-Laboratory proficiency trial results available on request. (Where applicable)
3. Surrogate description and recoveries are recorded in the Report. (Where applicable)
4. Acceptance criteria for specific analytes are available upon request (Refer to SPM-01).
5. Practical Quantitation Limit (PQL is typically 2-10 x method detection limit (MDL)).
6. PQL's are matrix dependent and are increased accordingly where sample extracts are diluted.
7. Results are uncorrected for matrix spike or surrogate recoveries.

per G.W. ANDERSON
Manager Environmental Sydney

amdel

Job Number : 8E01179

QAQC : Laboratory Control Sample

Analyte	Level	Level	Detected	Recovery Details			
		Result1	Result2	Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E2690 Total Dissolved Solids in Water							
TDS	293	307		105%			
E2600 pH in Water							
pH	7.4	7.3	7.3	99%	99%	99%	0%

PQL = Practical Quantitation Limit

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

nd = <PQL

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

amdel

Job Number : 8E01179

QAQC : Laboratory Duplicates

Analyte	PQL	Dupl 1	Dupl 2	Average	RPD (%)
E2690 Total Dissolved Solids in Water					
TDS	**1**	811	793	802	2%
E2600 pH in Water					
pH	**0.1**	7.3	7.3	7.3	0%

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/L (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
E2690 Total Dissolved Solids in Water						
TDS	**1**	nd				
E2600 pH in Water						
pH	**0.1**	6.7				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

amdel

Job Number : 8E01179

QAQC : Spike Recoveries

Analyte	Spike Level	Level Spike 1	Detected Spike 2	Recovery Details Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E0220 TPH in Water (µg/L)							
Total C6-C36	9500	10200	9600	107%	101%	104%	6%
C6-C9 Fraction	4000	3690	3540	92%	89%	90%	4%
C15-C28 Fraction	5500	6501	6064	118%	110%	114%	7%
E0010 BTEX (P&T) in Water (µg/L)							
Benzene	10	10.0	12.0	100%	120%	110%	18%
Toluene	10	10	12	100%	120%	110%	18%
Ethylbenzene	10	10	11	100%	110%	105%	10%
Total Xylenes	30	30	33	100%	110%	105%	10%

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

amdel

Job Number : 8E01179

QAQC : Laboratory Duplicates

Analyte	PQL	Dupl 1	Dupl 2	Average	RPD (%)
E0220 TPH in Water (µg/L)					
Total C6-C36	-	nd	nd		
C6-C9 Fraction	**20**	nd	nd		
C10-C14 Fraction	**20**	nd	nd		
C15-C28 Fraction	**100**	nd	nd		
C29-C36 Fraction	**100**	nd	nd		

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/L (ppm) unless otherwise specified

All results are within the acceptance criteria:
Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

* Insufficient sample to run a set of duplicates for BTEX.

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
E0220 TPH in Water (µg/L)						
Total C6-C36	-	nd				
C6-C9 Fraction	**20**	nd				
C10-C14 Fraction	**20**	nd				
C15-C28 Fraction	**100**	nd				
C29-C36 Fraction	**100**	nd				
E0010 BTEX (P&T) in Water (µg/L)						
Benzene	**0.5**	nd				
Toluene	**1**	nd				
Ethylbenzene	**1**	nd				
Total Xylenes	**3**	nd				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

amdel

Job Number : 8E01179

QAQC : Spike Recoveries

Analyte	Spike Level	Level Detected		Recovery Details			
		Spike 1	Spike 2	Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E0110 PAH's in Water (µg/L)							
Naphthalene	10	8	8	83%	82%	83%	1%
Acenaphthylene	10	8	9	82%	85%	84%	4%
Acenaphthene	10	9	9	90%	88%	89%	2%
Fluorene	10	9	8	86%	84%	85%	2%
Phenanthrene	10	10	10	96%	97%	97%	1%
Anthracene	10	9	9	93%	91%	92%	2%
Fluoranthene	10	10	9	95%	92%	94%	3%
Pyrene	10	10	10	98%	96%	97%	2%
Benz(a)anthracene	10	9	9	93%	89%	91%	4%
Chrysene	10	10	10	103%	101%	102%	2%
Benzo(b) & (k)fluoranthene	20	19	18	94%	91%	92%	3%
Benzo(a)pyrene	10	8	8	83%	80%	82%	4%
Indeno(1.2.3-cd)pyrene	10	8	8	82%	81%	82%	1%
Dibenz(a.h)anthracene	10	9	8	85%	82%	84%	4%
Benzo(g.h.i)perylene	10	9	9	91%	87%	89%	4%

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

amdel

Job Number : 8E01179

QAQC : Laboratory Duplicates

Analyte	PQL	Dupl 1	Dupl 2	Average	RPD (%)
E0110 PAH's in Water (µg/L)					
Naphthalene	1	1081	1349	1215	22%
Acenaphthylene	1	nd	nd		
Acenaphthene	1	nd	nd		
Fluorene	1	nd	nd		
Phenanthrene	1	29	48	38.5	*49%
Anthracene	1	nd	nd		
Fluoranthene	1	1	2	1.5	66%
Pyrene	1	2	3	2.5	40%
Benz(a)anthracene	1	nd	nd		
Chrysene	1	nd	nd		
Benzo(b) & (k)fluoranthene	2	nd	nd		
Benzo(a)pyrene	1	nd	nd		
Indeno(1.2.3-cd)pyrene	1	nd	nd		
Dibenz(a.h)anthracene	1	nd	nd		
Benzo(g.h.i)perylene	1	nd	nd		
Total PAH		1113	1402		
2-Fluorobiphenyl-SURROGATE	1	105%	109%		
Anthracene-d10-SURROGATE	1	103%	112%		
p-Terphenyl-D14-SURROGATE	1	90%	93%		

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/L (ppm) unless otherwise specified

All results are within the acceptance criteria:
Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

* Duplicate RPD outside recommended acceptance criteria. Further review indicates the cause as sample inhomogeneity.

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
E0110 PAH's in Water (µg/L)						
Naphthalene	1	nd				
Acenaphthylene	1	nd				
Acenaphthene	1	nd				
Fluorene	1	nd				
Phenanthrene	1	nd				
Anthracene	1	nd				
Fluoranthene	1	nd				
Pyrene	1	nd				
Benz(a)anthracene	1	nd				
Chrysene	1	nd				
Benzo(b) & (k)fluoranthene	2	nd				
Benzo(a)pyrene	1	nd				
Indeno(1.2.3-cd)pyrene	1	nd				
Dibenz(a.h)anthracene	1	nd				
Benzo(g.h.i)perylene	1	nd				
Total PAH		nd				
2-Fluorobiphenyl-SURROGATE	1	106%				
Anthracene-d10-SURROGATE	1	115%				
p-Terphenyl-D14-SURROGATE	1	115%				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

amdel

Job Number : 8E01179

QAQC : Laboratory Control Sample

Analyte	Spike Level	Level Spike 1	Detected Spike 2	Recovery Details Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E0180 Semivolatile Organic Compounds(µg/L)							
Phenol	400	416		104%			
2-Chlorophenol	400	458		115%			
1.4-Dichlorobenzene	400	374		94%			
N-Nitrosodi-n-propylamine	400	452		113%			
1.2.4-Trichlorobenzene	400	384		96%			
4-Chloro-3-methylphenol	400	376		94%			
Acenaphthene	400	360		90%			

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
E0180 Semivolatile Organic Compounds(µg/L)						
Phenol	**10**	nd				
Aniline	**100**	nd				
Bis(2-chloroethyl) ether	**10**	nd				
2-Chlorophenol	**10**	nd				
1.3-Dichlorobenzene	**10**	nd				
1.4-Dichlorobenzene	**10**	nd				
1.2-Dichlorobenzene	**10**	nd				
Benzyl Alcohol	**10**	nd				
2-Methylphenol	**10**	nd				
N-Nitrosodi-n-propylamine	**10**	nd				
Bis(2-chloroisopropyl) ether	**10**	nd				
4-Methylphenol	**10**	nd				
3-Methylphenol	**10**	nd				
Hexachloroethane	**10**	nd				
Nitrobenzene	**10**	nd				
Isophorone	**10**	nd				
2-Nitrophenol	**10**	nd				
2.4-Dimethylphenol	**10**	nd				
Bis(2-chloroethoxy) methane	**10**	nd				
Benzoic Acid	**100**	nd				
2.4-Dichlorophenol	**10**	nd				
1.2.4-Trichlorobenzene	**10**	nd				
Naphthalene	**10**	nd				
4-Chloroaniline	**10**	nd				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID	Blank				
	PQL					
Hexachlorobutadiene	**10**	nd				
4-Chloro-3-methylphenol	**10**	nd				
2-Methylnaphthalene	**10**	nd				
Hexachlorocyclopentadiene	**10**	nd				
2.4.6-Trichlorophenol	**10**	nd				
2.4.5-Trichlorophenol	**10**	nd				
2-Chloronaphthalene	**10**	nd				
2-Nitroaniline	**10**	nd				
Dimethyl phthalate	**10**	nd				
2.6-Dinitrotoluene	**10**	nd				
Acenaphthylene	**10**	nd				
3-Nitroaniline	**10**	nd				
Acenaphthene	**10**	nd				
2.4-Dinitrophenol	**10**	nd				
4-Nitrophenol	**10**	nd				
Dibenzofuran	**10**	nd				
Diethyl phthalate	**10**	nd				
Fluorene	**10**	nd				
4-Chlorophenyl phenyl ether	**10**	nd				
4-Nitroaniline	**10**	nd				
4.6-Dinitro-2-methylphenol	**10**	nd				
Azobenzene	**100**	nd				
N-Nitrosodiphenylamine	**100**	nd				
a-BHC	**10**	nd				
4-Bromophenyl phenyl ether	**10**	nd				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
Hexachlorobenzene	**10**	nd				
b-BHC	**10**	nd				
Pentachlorophenol	**10**	nd				
g-BHC	**10**	nd				
Phenanthrene	**10**	nd				
Anthracene	**10**	nd				
d-BHC	**10**	nd				
Heptachlor	**10**	nd				
Di-n-butyl phthalate	**10**	nd				
Aldrin	**10**	nd				
Heptachlor epoxide	**10**	nd				
Fluoranthene	**10**	nd				
Pyrene	**10**	nd				
Endosulfan 1	**10**	nd				
4.4-DDE	**10**	nd				
Dieldrin	**10**	nd				
Endrin	**10**	nd				
Endosulfan 2	**10**	nd				
4.4-DDD	**10**	nd				
Endrin aldehyde	**10**	nd				
Butyl benzyl phthalate	**10**	nd				
Endosulfan sulfate	**10**	nd				
4.4-DDT	**10**	nd				
3.3-Dichlorobenzidine	**100**	nd				
Benz(a)anthracene	**10**	nd				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
Chrysene	**10**	nd				
Bis(2-ethylhexyl) phthalate	**10**	nd				
Di-n-octylphthalate	**10**	nd				
Benzo(b)fluoranthene	**10**	nd				
Benzo(k)fluoranthene	**10**	nd				
Benzo(a)pyrene	**10**	nd				
Indeno(1.2.3-cd)pyrene	**10**	nd				
Dibenz(a.h)anthracene	**10**	nd				
Benzo(g.h.i)perylene	**10**	nd				
2-Fluorophenol-SURROGATE	**1**	50%				
Phenol-D5-SURROGATE	**1**	50%				
Nitrobenzene-D5-SURROGATE	**1**	81%				
2-Fluorobiphenyl-SURROGATE	**1**	92%				
2.4.6-Tribromophenol-SURROGATE	**1**	79%				
p-Terphenyl-D14-SURROGATE	**1**	118%				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

amdel

Job Number : 8E01179

QAQC : Spike Recoveries

Analyte	Spike Level	Level Detected		Recovery Details			
		Spike 1	Spike 2	Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E0290 Volatile Organic Compounds (µg/L)							
Benzene	25	23	23	91%	91%	91%	0%
Chlorobenzene	25	25	25	99%	100%	99%	0%
1.1-Dichloroethene	25	28	26	110%	102%	106%	7%
Toluene	25	24	24	95%	96%	96%	1%
Trichloroethene	25	25	25	100%	101%	101%	1%

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
E0290 Volatile Organic Compounds (µg/L)						
Benzene	5	nd				
Bromobenzene	5	nd				
Bromochloromethane	5	nd				
Bromodichloromethane	5	nd				
Bromoform	5	nd				
Bromomethane	5	nd				
n-Butylbenzene	5	nd				
sec-Butylbenzene	5	nd				
tert-Butylbenzene	5	nd				
Carbon tetrachloride	5	nd				
Chlorobenzene	5	nd				
Chloroethane	5	nd				
Chloroform	5	nd				
Chloromethane	5	nd				
2-Chlorotoluene	5	nd				
4-Chlorotoluene	5	nd				
Dibromochloromethane	5	nd				
1.2-Dibromo-3-chloropropane	5	nd				
1.2-Dibromoethane (EDB)	5	nd				
Dibromomethane	5	nd				
1.2-Dichlorobenzene	5	nd				
1.3-Dichlorobenzene	5	nd				
1.4-Dichlorobenzene	5	nd				
Dichlorodifluoromethane	5	nd				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
1.1-Dichloroethene	**5**	nd				
1.2-Dichloroethane	**5**	nd				
1.1-Dichloroethane	**5**	nd				
cis-1.2-Dichloroethene	**5**	nd				
trans-1.2-Dichloroethene	**5**	nd				
1.2-Dichloropropane	**5**	nd				
1.3-Dichloropropane	**5**	nd				
2.2-Dichloropropane	**5**	nd				
1.1-Dichloropropylene	**5**	nd				
cis-1.3-Dichloropropylene	**5**	nd				
trans-1.3-Dichloropropylene	**5**	nd				
Ethylbenzene	**5**	nd				
Hexachlorobutadiene	**5**	nd				
Isopropylbenzene	**5**	nd				
p-Isopropyltoluene	**5**	nd				
Methylene chloride	**5**	nd				
Naphthalene	**5**	nd				
n-Propylbenzene	**5**	nd				
Styrene	**5**	nd				
1.1.1.2-Tetrachloroethane	**5**	nd				
1.1.2.2-Tetrachloroethane	**5**	nd				
Tetrachloroethene	**5**	nd				
Toluene	**5**	nd				
1.2.3-Trichlorobenzene	**5**	nd				
1.2.4-Trichlorobenzene	**5**	nd				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
1.1.1-Trichloroethane	**5**	nd				
1.1.2-Trichloroethane	**5**	nd				
Trichloroethene	**5**	nd				
Trichlorofluoromethane	**5**	nd				
1.2.3-Trichloropropane	**5**	nd				
1.2.4-Trimethylbenzene	**5**	nd				
1.3.5-Trimethylbenzene	**5**	nd				
Vinyl chloride	**5**	nd				
ortho-Xylene	**5**	nd				
meta- & para-Xylene	**10**	nd				
2-Butanone (MEK)	**2**	nd				
4-Methyl-2-pentanone (MIBK)	**2**	nd				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

amdel

Job Number : 8E01179

QAQC : Spike Recoveries

Analyte	Spike Level	Level Spike 1	Detected Spike 2	Recovery Details Rec 1 (%)	Rec 2 (%)	Average (%)	RPD (%)
E4870 Dissolved Metals in Waters							
Arsenic	0.100	0.100	0.107	100%	107%	104%	7%
Cadmium	0.1000	0.119	0.118	119%	118%	119%	1%
Copper	0.100	0.116	0.116	116%	116%	116%	0%
Lead	0.100	0.107	0.107	107%	107%	107%	0%
Zinc	0.100	0.106	0.109	106%	109%	108%	3%
Chromium	0.100	0.119	0.119	119%	119%	119%	0%
E48501 Dissolved Mercury in Waters							
Mercury	0.001	0.0009	0.0009	100%	100%	100%	0%

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

amdel

Job Number : 8E01179

QAQC : Laboratory Duplicates

Analyte	PQL	Dupl 1	Dupl 2	Average	RPD (%)
E4870 Dissolved Metals in Waters					
Arsenic	**0.001**	nd	nd		
Cadmium	**0.0001**	nd	nd		
Copper	**0.001**	0.002	0.001	0.002	66%
Lead	**0.001**	0.033	0.030	0.031	9%
Zinc	**0.002**	0.037	0.033	0.035	11%
Chromium	**0.001**	nd	nd		
E48501 Dissolved Mercury in Waters					
Mercury	**0.00005**	0.0002	0.0002	0.0002	0%

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/L (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

QAQC : Method Blank

ANALYTE	SAMPLE ID PQL	Blank				
E4870 Dissolved Metals in Waters						
Arsenic	**0.001**	nd				
Cadmium	**0.0001**	nd				
Copper	**0.001**	nd				
Lead	**0.001**	nd				
Zinc	**0.002**	nd				
Chromium	**0.001**	nd				
E48501 Dissolved Mercury in Waters						
Mercury	**0.00005**	nd				

PQL = Practical Quantitation Limit
nd = <PQL
-- = Not Applicable

(S) Soils : mg/kg (ppm) dry weight
(W) Waters : mg/l (ppm) unless otherwise specified

All results are within the acceptance criteria:

Refer to Amdel-Sydney Quality Control Manual SPM-01 5th Edition 1/6/98

Australian National, Canberra Railyards

Summary of Quality Control Duplicates (Groundwater).

Sample ID	TDS					pH				
	Actual	Duplicate	RPD (%)	Norm. Val.	Norm. Rep.	Actual	Duplicate	RPD (%)	Norm. Val.	Norm. Rep.
GW2 (blind)	626	625	0	1.00	1.00	6.8	6.8	0	1.00	1.00
GW2	626	618	1	1.01	0.99	6.8	6.8	0	1.00	1.00
GW22 (blind)	729	712	2	1.01	0.99	7.7	7.4	4	1.02	0.98
GW22	729	722	1	1.00	1.00	7.7	7.6	1	1.01	0.99
GW32 (blind)	257	269	5	0.98	1.02	7.6	7.6	0	1.00	1.00
GW32	257	260	1	0.99	1.01	7.6	7.7	1	0.99	1.01
				RSD (%)	1				RSD (%)	1

Sample ID	Total SVOC					Benzene				
	Actual	Duplicate	RPD (%)	Norm. Val.	Norm. Rep.	Actual	Duplicate	RPD (%)	Norm. Val.	Norm. Rep.
GW2 GW32	< LOR	< LOR	0	1.00	1.00	901	703	25	1.12	0.88
				RSD (%)	0				RSD (%)	17

Appendix L

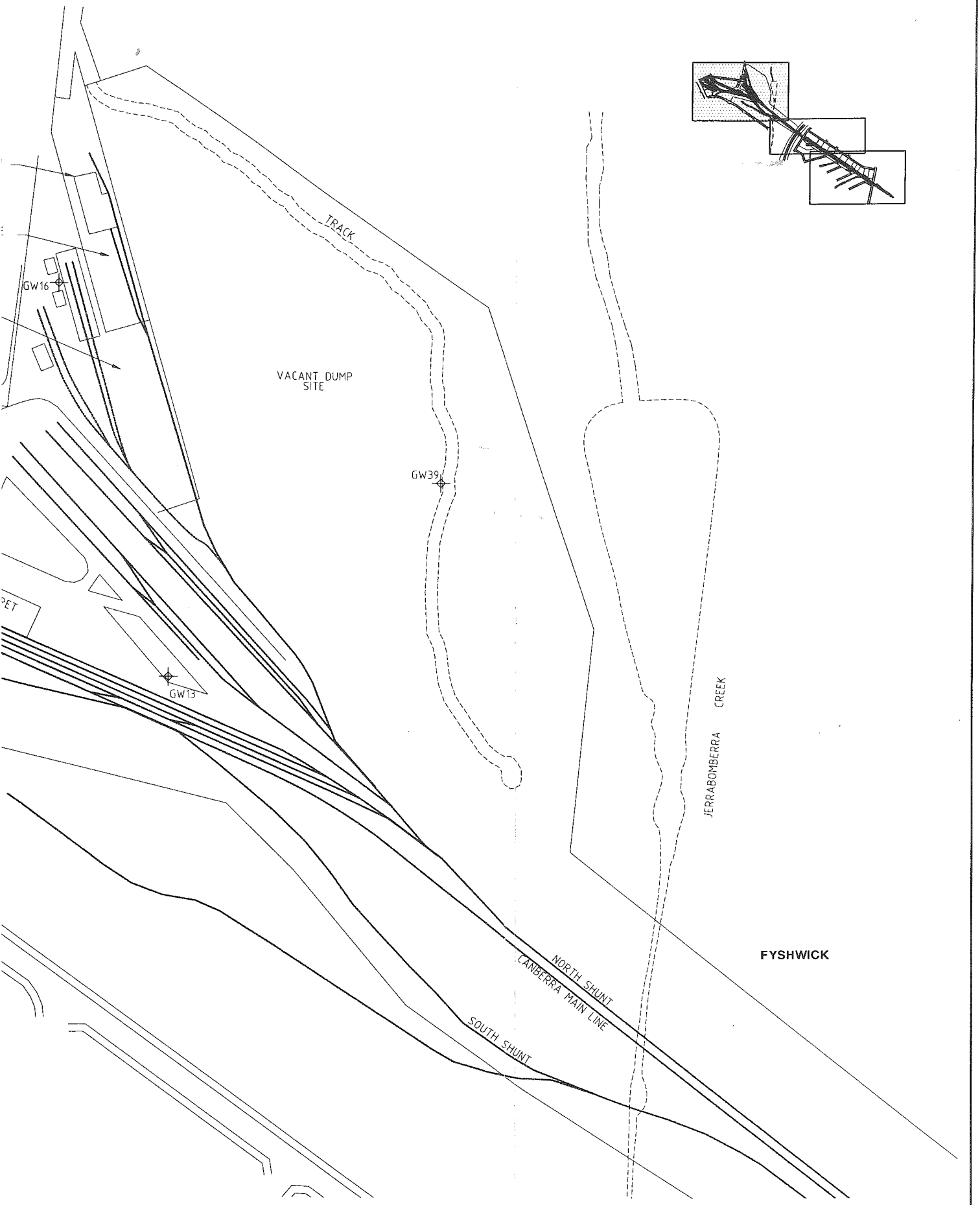
Well Gauging Data

Groundwater Monitoring Well Survey Data and Field Observations

Groundwater Well	Relative Level at TOC/TOSP (m AHD)	Depth of Groundwater below TOC/ TOSP (m)	Relative Level of Groundwater (m AHD)	Conductivity (mS/cm)	Field Observations
GW1	564.560	6.615	557.945	1.46	no obvious odour/discolouration
GW2	564.760	6.465	558.295	1.64	minor odour present
GW4	564.720	7.180	557.540	2.96	no obvious odour/discolouration
GW5	563.338	5.585	557.753	2.62	slight sheen at surface, odour
GW6	563.709	5.620	558.089	1.84	no obvious odour/discolouration
GW8	563.358	5.435	557.923	1.52	no obvious odour/discolouration
GW9	564.102	6.645	557.457	1.50	no obvious odour/discolouration
GW10	562.386	1.710	560.676	1.37	no obvious odour/discolouration
GW11	563.293	3.450	559.843	0.44	no obvious odour/discolouration
GW12	562.265	4.885	557.380	0.91	no obvious ocour/discolouration
GW13	563.241				well dry
GW14	562.878	5.235	557.643	1.66	no obvious odour/discolouration
GW16	563.206	5.640	557.556	3.02	no obvious odour/discolouration
GW17	575.396	2.025	573.371	1.67	no obvious odour/discolouration
GW19	574.234	1.720	572.514	1.41	no obvious odour/discolouration
GW21	573.755	1.790	571.965	1.33	no obvious odour/discolouration
GW22	573.527	2.235	571.292	1.74	no obvious odour/discolouration
GW24	572.695	1.660	571.035	1.23	no obvious odour/discolouration
GW26	572.102	2.160	569.942	1.76	no obvious odour/discolouration
GW28	571.878	3.255	568.623	2.19	no obvious odour/discolouration
GW30	574.496	2.155	572.341	2.22	no obvious odour/discolouration
GW32	579.437	3.400	576.037	1.04	no obvious odour/discolouration
GW33	568.304				well dry
GW34	565.854				well dry
GW35	566.169	2.020	564.149	2.08	no obvious odour/discolouration
GW36	568.286				well dry
GW37	556.594	1.405	555.189	0.55	no obvious odour/discolouration
GW38	561.689	5.735	555.954		EC not tested
GW39		5.325		1.13	well elevation not surveyed
PMW1	572.290	1.060	571.230	1.40	no obvious odour/discolouration
PMW2	572.341	1.145	571.196	1.34	no obvious odour/discolouration
PMW3	572.012	0.450	571.562	1.22	no obvious odour/discolouration

Appendix M

Groundwater Flow Contours



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PROJECT
CANBERRA RAIL YARDS

TITLE
PHASE 2 INVESTIGATION
GROUNDWATER CONTOURS
SHEET 9 OF 11

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