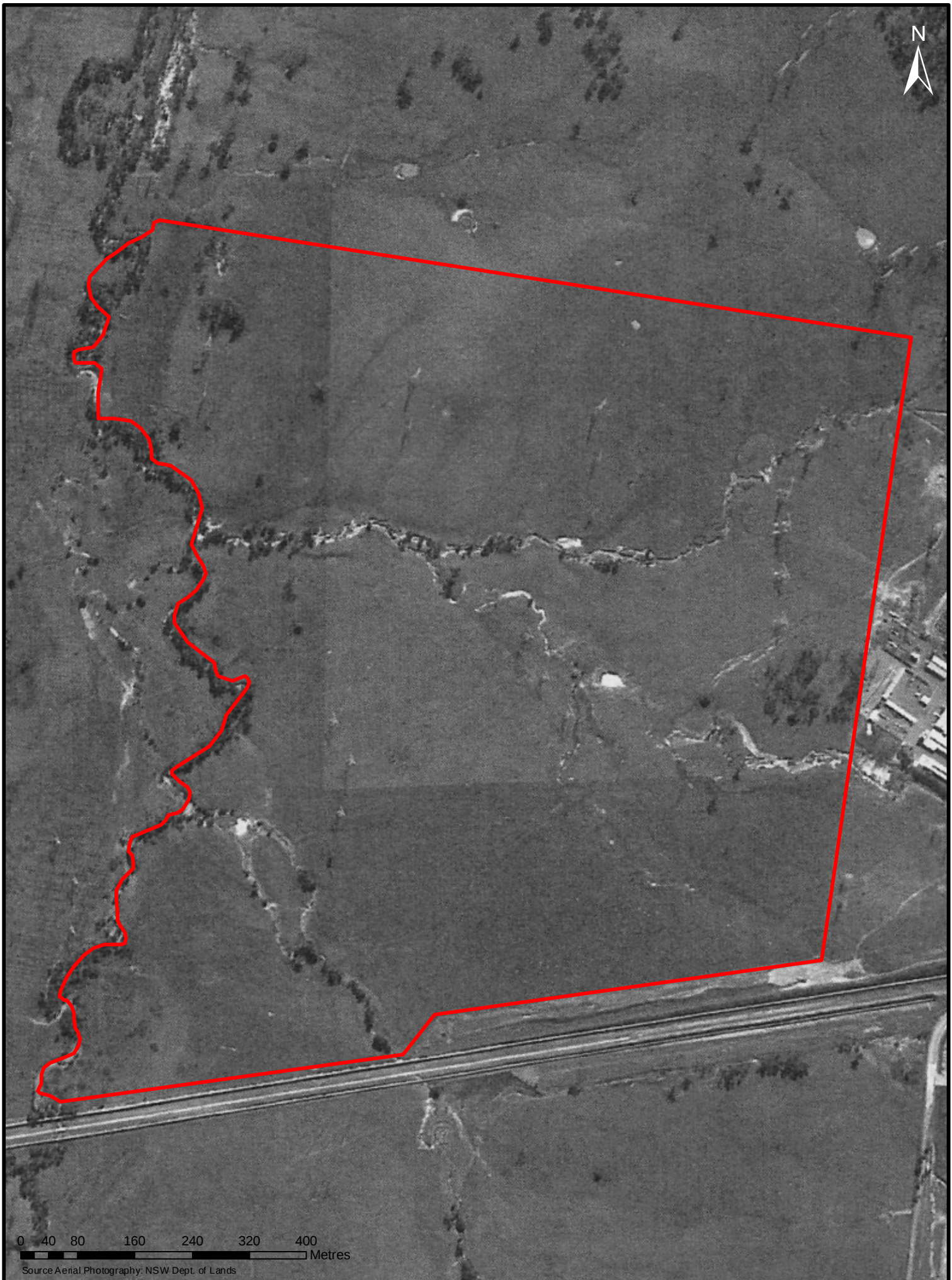




0 40 80 160 240 320 400
Metres

Source Aerial Photography: NSW Dept. of Lands



Consulting
Earth
Scientists
Jones Bay Wharf 19/21, Suite 55
26-32 Pittwater Road, Pyrmont, NSW, 2009
ph 9559 2200 fax 9552 4399

Title

**Appendix 5.6 - Lot 5 DP 262213
Ropes Creek Employment Precinct (1978)**

CES Project ID:

CES100604-JBA

Date:

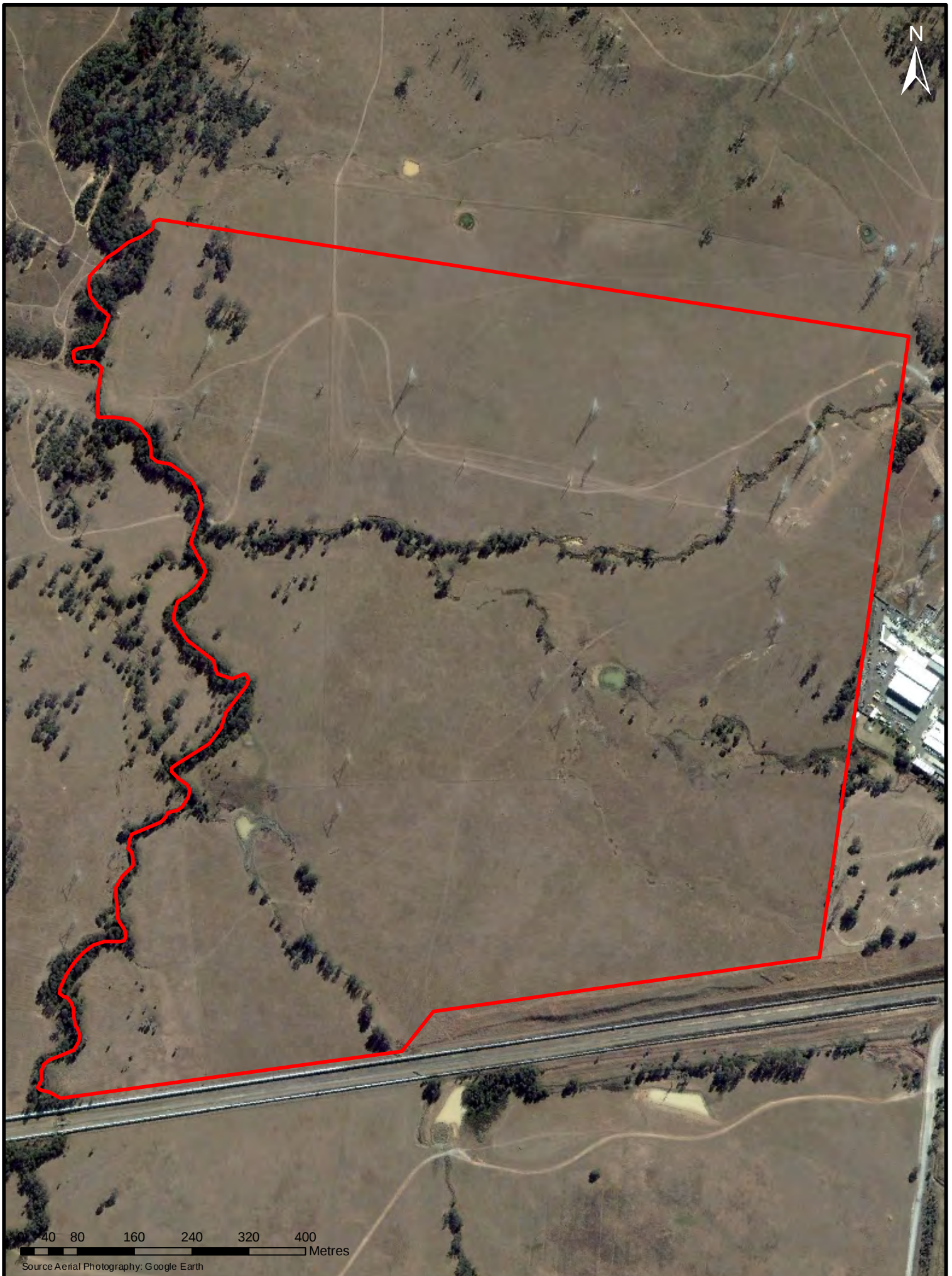
23/07/2010

Prepared By:

M.Howden

Checked By:

L.Jenkins



40 80 160 240 320 400
Metres

Source Aerial Photography: Google Earth



Jones Bay Wharf 19/21, Suite 55
26-32 Pittwater Road, Pyrmont, NSW, 2009
ph 9559 2200 fax 9552 4399

Title

Appendix 5.7 - Lot 5 DP 262213 **Ropes Creek Employment Precinct (2005)**

CES Project ID:
CES100604-JBA

Date:
23/07/2010

Prepared By:
M.Howden

Checked By:
L.Jenkins



**APPENDIX 5:
SITE PHOTOGRAPHS**



Photograph 01: Looking east along tributary of Ropes Creek.



Photograph 02: Looking west towards the western boundary and Ropes Creek in the northern section of the site.



Photograph 03: Looking south from the northern portion of the site.



Photograph 04: North eastern corner of the site cattle/ sheep pen and water tank (looking south).

APPENDIX 6:
LABORATORY REPORTS



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

CERTIFICATE OF ANALYSIS 43537

Client:

Consulting Earth Scientists

Suite 53, Upper Level
26-32 Pirrama Rd
Pyrmont
NSW 2009

Attention: Caroline Aylott / Luke Jenkins

Sample log in details:

Your Reference:

CES100604-JBA, Ropes Creek

No. of samples:

33 Soils

Date samples received:

15/07/10

Date completed instructions received:

15/07/10

Analysis Details:

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

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

Report Details:

Date results requested by:

21/07/10

Date of Preliminary Report:

Not Issued

Issue Date:

21/07/10

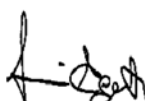
NATA accreditation number 2901. This document shall not be reproduced except in full.

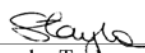
This document is issued in accordance with NATA's accreditation requirements.

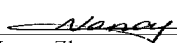
Accredited for compliance with ISO/IEC 17025.

Tests not covered by NATA are denoted with *.

Results Approved By:


Giovanni Agosti
Technical Manager


Sandra Taylor
Senior Organic Chemist


Nancy Zhang
Chemist


Matt Mansfield
Approved Signatory

Envirolab Reference: 43537
Revision No: R 00



vTPH & BTEX in Soil Our Reference: Your Reference	UNITS -----	43537-5 130710-05-M P	43537-6 130710-06-M P	43537-9 130710-09-M P	43537-14 130710-14-M P	43537-15 130710-15-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date extracted	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Date analysed	-	17/7/2010	17/7/2010	17/7/2010	17/7/2010	17/7/2010
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	94	97	92	93	94

vTPH & BTEX in Soil Our Reference: Your Reference	UNITS -----	43537-17 130710-17-M P	43537-18 130710-18-M P	43537-19 130710-19-M P	43537-20 140710-20-M P	43537-25 140710-26-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	14/07/2010	14/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date extracted	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Date analysed	-	17/7/2010	17/7/2010	17/7/2010	17/7/2010	17/7/2010
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0
Surrogate aaa-Trifluorotoluene	%	85	94	97	93	94

vTPH & BTEX in Soil					
Our Reference:	UNITS	43537-28	43537-30	43537-32	43537-33
Your Reference	-----	140710-29-M P	140710-31-M P	Trip Blank-RC	Trip Spike-RC
Date Sampled	-----	14/07/2010	14/07/2010	14/07/2010	14/07/2010
Type of sample		Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00
Date extracted	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Date analysed	-	17/7/2010	17/7/2010	17/7/2010	17/7/2010
vTPH C ₆ - C ₉	mg/kg	<25	<25	<25	[NA]
Benzene	mg/kg	<0.5	<0.5	<0.5	97%
Toluene	mg/kg	<0.5	<0.5	<0.5	98%
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	97%
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	99%
o-Xylene	mg/kg	<1.0	<1.0	<1.0	99%
Surrogate aaa-Trifluorotoluene	%	98	91	100	101

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	43537-5	43537-6	43537-9	43537-14	43537-15
Your Reference	-----	130710-05-M P	130710-06-M P	130710-09-M P	130710-14-M P	130710-15-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date extracted	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Date analysed	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
TPH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TPH C29 - C36	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	91	90	89	89	91

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	43537-17	43537-18	43537-19	43537-20	43537-25
Your Reference	-----	130710-17-M P	130710-18-M P	130710-19-M P	140710-20-M P	140710-26-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	14/07/2010	14/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date extracted	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Date analysed	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
TPH C10 - C14	mg/kg	<50	<50	<50	<50	<50
TPH C15 - C28	mg/kg	<100	<100	<100	<100	<100
TPH C29 - C36	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	93	92	91	92	92

sTPH in Soil (C10-C36)			
Our Reference:	UNITS	43537-28	43537-30
Your Reference	-----	140710-29-M P	140710-31-M P
Date Sampled	-----	14/07/2010	14/07/2010
Type of sample		Soil	Soil
Sample Matrix Code		SO	SO
Time Sampled		00:00	00:00
Date extracted	-	16/7/2010	16/7/2010
Date analysed	-	16/7/2010	16/7/2010
TPH C10 - C14	mg/kg	<50	<50
TPH C15 - C28	mg/kg	<100	<100
TPH C29 - C36	mg/kg	<100	<100
Surrogate o-Terphenyl	%	90	91

PAHs in Soil Our Reference: Your Reference	UNITS -----	43537-5 130710-05-M P	43537-6 130710-06-M P	43537-9 130710-09-M P	43537-14 130710-14-M P	43537-15 130710-15-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date extracted	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	17/07/2010	17/07/2010	17/07/2010	17/07/2010	17/07/2010
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p- Terphenyl-d14	%	72	72	72	71	74

PAHs in Soil Our Reference: Your Reference	UNITS -----	43537-17 130710-17-M P	43537-18 130710-18-M P	43537-19 130710-19-M P	43537-20 140710-20-M P	43537-25 140710-26-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	14/07/2010	14/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date extracted	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	17/07/2010	17/07/2010	17/07/2010	17/07/2010	17/07/2010
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p- Terphenyl-d14	%	74	74	73	74	70

PAHs in Soil Our Reference: Your Reference	UNITS -----	43537-28 140710-29-M P	43537-30 140710-31-M P
Date Sampled	-----	14/07/2010	14/07/2010
Type of sample		Soil	Soil
Sample Matrix Code		SO	SO
Time Sampled		00:00	00:00
Date extracted	-	16/07/2010	16/07/2010
Date analysed	-	17/07/2010	17/07/2010
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Surrogate p- Terphenyl-d14	%	74	72

Organochlorine Pesticides in soil						
Our Reference:	UNITS	43537-1	43537-2	43537-3	43537-4	43537-5
Your Reference	-----	130710-01-M P	130710-02-M P	130710-03-M P	130710-04-M P	130710-05-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date extracted	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	17/07/2010	17/07/2010	17/07/2010	17/07/2010	17/07/2010
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	101	96	88	114	93

Organochlorine Pesticides in soil						
Our Reference:	UNITS	43537-6	43537-7	43537-8	43537-9	43537-10
Your Reference	-----	130710-06-M P	130710-07-M P	130710-08-M P	130710-09-M P	130710-10-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date extracted	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	17/07/2010	17/07/2010	17/07/2010	17/07/2010	17/07/2010
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	93	107	101	93	92

Organochlorine Pesticides in soil						
Our Reference:	UNITS	43537-11	43537-12	43537-13	43537-14	43537-15
Your Reference	-----	130710-11-M	130710-12-M	130710-13-M	130710-14-M	130710-15-M
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date extracted	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	17/07/2010	17/07/2010	17/07/2010	17/07/2010	17/07/2010
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	92	95	101	93	90

Organochlorine Pesticides in soil						
Our Reference:	UNITS	43537-16	43537-17	43537-18	43537-19	43537-20
Your Reference	-----	130710-16-M P	130710-17-M P	130710-18-M P	130710-19-M P	140710-20-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	14/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date extracted	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	17/07/2010	17/07/2010	17/07/2010	17/07/2010	17/07/2010
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	86	90	95	99	90

Organochlorine Pesticides in soil						
Our Reference:	UNITS	43537-21	43537-22	43537-23	43537-24	43537-25
Your Reference	-----	140710-21-M	140710-22-M	140710-23-M	140710-25-M	140710-26-M
		P	P	P	P	P
Date Sampled	-----	14/07/2010	14/07/2010	14/07/2010	14/07/2010	14/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date extracted	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	17/07/2010	17/07/2010	17/07/2010	17/07/2010	17/07/2010
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	97	93	97	91	88

Organochlorine Pesticides in soil						
Our Reference:	UNITS	43537-26	43537-27	43537-28	43537-29	43537-30
Your Reference	-----	140710-27-M	140710-28-M	140710-29-M	140710-30-M	140710-31-M
Date Sampled	-----	14/07/2010	14/07/2010	14/07/2010	14/07/2010	14/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date extracted	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	17/07/2010	17/07/2010	17/07/2010	17/07/2010	17/07/2010
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	105	88	86	87	89

Organochlorine Pesticides in soil		
Our Reference:	UNITS	43537-31
Your Reference	-----	140710-32-M P
Date Sampled	-----	14/07/2010
Type of sample		Soil
Sample Matrix Code		SO
Time Sampled		00:00
Date extracted	-	16/07/2010
Date analysed	-	17/07/2010
HCB	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Surrogate TCLMX	%	88

Acid Extractable metals in soil						
Our Reference:	UNITS	43537-1	43537-2	43537-3	43537-4	43537-5
Your Reference	-----	130710-01-M P	130710-02-M P	130710-03-M P	130710-04-M P	130710-05-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date digested	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Arsenic	mg/kg	4	4	6	5	7
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	12	16	16	18	16
Copper	mg/kg	12	21	18	20	39
Lead	mg/kg	15	19	16	19	21
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	11	7	11	10
Zinc	mg/kg	14	32	20	38	53

Acid Extractable metals in soil						
Our Reference:	UNITS	43537-6	43537-7	43537-8	43537-9	43537-10
Your Reference	-----	130710-06-M P	130710-07-M P	130710-08-M P	130710-09-M P	130710-10-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date digested	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Arsenic	mg/kg	6	6	7	4	5
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	19	19	19	13	15
Copper	mg/kg	18	20	21	19	12
Lead	mg/kg	17	14	15	17	17
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	6	5	11	8
Zinc	mg/kg	31	19	19	41	27

Acid Extractable metals in soil						
Our Reference:	UNITS	43537-11	43537-12	43537-13	43537-14	43537-15
Your Reference	-----	130710-11-M P	130710-12-M P	130710-13-M P	130710-14-M P	130710-15-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date digested	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Arsenic	mg/kg	<4	7	6	8	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	44	18	19	18	13
Copper	mg/kg	14	27	17	15	39
Lead	mg/kg	12	15	11	18	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	15	10	13	11	16
Zinc	mg/kg	11	28	48	43	67

Acid Extractable metals in soil						
Our Reference:	UNITS	43537-16	43537-17	43537-18	43537-19	43537-20
Your Reference	-----	130710-16-M P	130710-17-M P	130710-18-M P	130710-19-M P	140710-20-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	14/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date digested	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Arsenic	mg/kg	8	<4	<4	<4	14
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	24	12	13	14	19
Copper	mg/kg	11	20	18	30	19
Lead	mg/kg	28	21	12	12	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	9	8	12	14
Zinc	mg/kg	16	43	23	50	28

Acid Extractable metals in soil						
Our Reference:	UNITS	43537-21	43537-22	43537-23	43537-24	43537-25
Your Reference	-----	140710-21-M P	140710-22-M P	140710-23-M P	140710-25-M P	140710-26-M P
Date Sampled	-----	14/07/2010	14/07/2010	14/07/2010	14/07/2010	14/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date digested	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Arsenic	mg/kg	5	7	6	8	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	18	21	18	21	12
Copper	mg/kg	18	15	17	11	11
Lead	mg/kg	16	16	15	18	12
Mercury	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Nickel	mg/kg	10	9	9	6	4
Zinc	mg/kg	24	26	27	19	11

Acid Extractable metals in soil						
Our Reference:	UNITS	43537-26	43537-27	43537-28	43537-29	43537-30
Your Reference	-----	140710-27-M P	140710-28-M P	140710-29-M P	140710-30-M P	140710-31-M P
Date Sampled	-----	14/07/2010	14/07/2010	14/07/2010	14/07/2010	14/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date digested	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
Arsenic	mg/kg	5	7	6	<4	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	18	21	20	22	14
Copper	mg/kg	20	10	13	21	19
Lead	mg/kg	21	20	13	16	20
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	8	9	19	6
Zinc	mg/kg	33	13	18	33	37

Acid Extractable metals in soil		
Our Reference:	UNITS	43537-31
Your Reference	-----	140710-32-M P
Date Sampled	-----	14/07/2010
Type of sample		Soil
Sample Matrix Code		SO
Time Sampled		00:00
Date digested	-	16/07/2010
Date analysed	-	16/07/2010
Arsenic	mg/kg	7
Cadmium	mg/kg	<0.5
Chromium	mg/kg	15
Copper	mg/kg	18
Lead	mg/kg	13
Mercury	mg/kg	<0.1
Nickel	mg/kg	7
Zinc	mg/kg	33

Moisture						
Our Reference:	UNITS	43537-1	43537-2	43537-3	43537-4	43537-5
Your Reference	-----	130710-01-M P	130710-02-M P	130710-03-M P	130710-04-M P	130710-05-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date prepared	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Date analysed	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Moisture	%	17	21	22	24	19

Moisture						
Our Reference:	UNITS	43537-6	43537-7	43537-8	43537-9	43537-10
Your Reference	-----	130710-06-M P	130710-07-M P	130710-08-M P	130710-09-M P	130710-10-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date prepared	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Date analysed	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Moisture	%	17	22	20	23	20

Moisture						
Our Reference:	UNITS	43537-11	43537-12	43537-13	43537-14	43537-15
Your Reference	-----	130710-11-M P	130710-12-M P	130710-13-M P	130710-14-M P	130710-15-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date prepared	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Date analysed	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Moisture	%	19	29	19	19	20

Moisture						
Our Reference:	UNITS	43537-16	43537-17	43537-18	43537-19	43537-20
Your Reference	-----	130710-16-M P	130710-17-M P	130710-18-M P	130710-19-M P	140710-20-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	14/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date prepared	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Date analysed	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Moisture	%	30	28	16	19	21

Moisture Our Reference: Your Reference	UNITS -----	43537-21 140710-21-M P	43537-22 140710-22-M P	43537-23 140710-23-M P	43537-24 140710-25-M P	43537-25 140710-26-M P
Date Sampled Type of sample Sample Matrix Code Time Sampled	-----	14/07/2010 Soil SO 00:00	14/07/2010 Soil SO 00:00	14/07/2010 Soil SO 00:00	14/07/2010 Soil SO 00:00	14/07/2010 Soil SO 00:00
Date prepared	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Date analysed	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Moisture	%	19	17	16	16	15

Moisture Our Reference: Your Reference	UNITS -----	43537-26 140710-27-M P	43537-27 140710-28-M P	43537-28 140710-29-M P	43537-29 140710-30-M P	43537-30 140710-31-M P
Date Sampled Type of sample Sample Matrix Code Time Sampled	-----	14/07/2010 Soil SO 00:00	14/07/2010 Soil SO 00:00	14/07/2010 Soil SO 00:00	14/07/2010 Soil SO 00:00	14/07/2010 Soil SO 00:00
Date prepared	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Date analysed	-	16/7/2010	16/7/2010	16/7/2010	16/7/2010	16/7/2010
Moisture	%	18	19	19	21	26

Moisture Our Reference: Your Reference	UNITS -----	43537-31 140710-32-M P	43537-32 Trip Blank-RC
Date Sampled Type of sample Sample Matrix Code Time Sampled	-----	14/07/2010 Soil SO 00:00	14/07/2010 Soil SO 00:00
Date prepared	-	16/7/2010	16/7/2010
Date analysed	-	16/7/2010	16/7/2010
Moisture	%	18	0.20

Asbestos ID - soils						
Our Reference:	UNITS	43537-5	43537-6	43537-9	43537-14	43537-15
Your Reference	-----	130710-05-M P	130710-06-M P	130710-09-M P	130710-14-M P	130710-15-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	13/07/2010	13/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date analysed	-	20/7/2010	20/7/2010	20/7/2010	20/7/2010	20/7/2010
Sample Description	-	Approx 30g Soil	Approx 30g Soil	Approx 30g Soil	Approx 30g Soil	Approx 30g Soil
Asbestos ID in soil	-	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected

Asbestos ID - soils						
Our Reference:	UNITS	43537-17	43537-18	43537-19	43537-20	43537-25
Your Reference	-----	130710-17-M P	130710-18-M P	130710-19-M P	140710-20-M P	140710-26-M P
Date Sampled	-----	13/07/2010	13/07/2010	13/07/2010	14/07/2010	14/07/2010
Type of sample		Soil	Soil	Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO	SO	SO
Time Sampled		00:00	00:00	00:00	00:00	00:00
Date analysed	-	20/7/2010	20/7/2010	20/7/2010	20/7/2010	20/7/2010
Sample Description	-	Approx 30g Soil	Approx 30g Soil	Approx 30g Soil	Approx 30g Soil	Approx 30g Soil
Asbestos ID in soil	-	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected

Asbestos ID - soils			
Our Reference:	UNITS	43537-28	43537-30
Your Reference	-----	140710-29-M P	140710-31-M P
Date Sampled	-----	14/07/2010	14/07/2010
Type of sample		Soil	Soil
Sample Matrix Code		SO	SO
Time Sampled		00:00	00:00
Date analysed	-	20/7/2010	20/7/2010
Sample Description	-	Approx 30g Soil	Approx 30g Soil
Asbestos ID in soil	-	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected

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

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
vTPH & BTEX in Soil						Base II Duplicate II %RPD		
Date extracted	-			16/7/2010	43537-17	16/7/2010 16/7/2010	LCS-3	16/7/2010
Date analysed	-			17/7/2010	43537-17	17/7/2010 17/7/2010	LCS-3	17/7/2010
vTPH C ₆ - C ₉	mg/kg	25	GC.16	<25	43537-17	<25 <25	LCS-3	86%
Benzene	mg/kg	0.5	GC.16	<0.5	43537-17	<0.5 <0.5	LCS-3	92%
Toluene	mg/kg	0.5	GC.16	<0.5	43537-17	<0.5 <0.5	LCS-3	82%
Ethylbenzene	mg/kg	1	GC.16	<1.0	43537-17	<1.0 <1.0	LCS-3	82%
m+p-xylene	mg/kg	2	GC.16	<2.0	43537-17	<2.0 <2.0	LCS-3	86%
o-Xylene	mg/kg	1	GC.16	<1.0	43537-17	<1.0 <1.0	LCS-3	85%
Surrogate aaa-Trifluorotoluene	%		GC.16	97	43537-17	85 91 RPD: 7	LCS-3	96%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
sTPH in Soil (C ₁₀ -C ₃₆)						Base II Duplicate II %RPD		
Date extracted	-			16/7/2010	43537-17	16/7/2010 16/7/2010	LCS-2	16/7/2010
Date analysed	-			16/7/2010	43537-17	16/7/2010 16/7/2010	LCS-2	16/7/2010
TPH C ₁₀ - C ₁₄	mg/kg	50	GC.3	<50	43537-17	<50 <50	LCS-2	86%
TPH C ₁₅ - C ₂₈	mg/kg	100	GC.3	<100	43537-17	<100 <100	LCS-2	93%
TPH C ₂₉ - C ₃₆	mg/kg	100	GC.3	<100	43537-17	<100 <100	LCS-2	92%
Surrogate o-Terphenyl	%		GC.3	90	43537-17	93 92 RPD: 1	LCS-2	89%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			16/07/2010	43537-17	16/07/2010 16/07/2010	LCS-2	16/07/2010
Date analysed	-			17/07/2010	43537-17	17/07/2010 17/07/2010	LCS-2	17/07/2010
Naphthalene	mg/kg	0.1	GC.12 subset	<0.1	43537-17	<0.1 <0.1	LCS-2	89%
Acenaphthylene	mg/kg	0.1	GC.12 subset	<0.1	43537-17	<0.1 <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	GC.12 subset	<0.1	43537-17	<0.1 <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	GC.12 subset	<0.1	43537-17	<0.1 <0.1	LCS-2	94%
Phenanthrene	mg/kg	0.1	GC.12 subset	<0.1	43537-17	<0.1 <0.1	LCS-2	100%
Anthracene	mg/kg	0.1	GC.12 subset	<0.1	43537-17	<0.1 <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	GC.12 subset	<0.1	43537-17	<0.1 <0.1	LCS-2	94%
Pyrene	mg/kg	0.1	GC.12 subset	<0.1	43537-17	<0.1 <0.1	LCS-2	103%

Client Reference: CES100604-JBA, Ropes Creek

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Benzo(a)anthracene	mg/kg	0.1	GC.12 subset	<0.1	43537-17	<0.1 <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	GC.12 subset	<0.1	43537-17	<0.1 <0.1	LCS-2	112%
Benzo(b+k)fluoranthene	mg/kg	0.2	GC.12 subset	<0.2	43537-17	<0.2 <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	GC.12 subset	<0.05	43537-17	<0.05 <0.05	LCS-2	122%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	GC.12 subset	<0.1	43537-17	<0.1 <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	GC.12 subset	<0.1	43537-17	<0.1 <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	GC.12 subset	<0.1	43537-17	<0.1 <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		GC.12 subset	76	43537-17	74 74 RPD: 0	LCS-2	63%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Organochlorine Pesticides in soil						Base II Duplicate II %RPD		
Date extracted	-			16/07/2010	43537-7	16/07/2010 16/07/2010	LCS-3	16/07/2010
Date analysed	-			17/07/2010	43537-7	17/07/2010 17/07/2010	LCS-3	17/07/2010
HCB	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	LCS-3	116%
gamma-BHC	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	LCS-3	126%
Heptachlor	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	LCS-3	115%
delta-BHC	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	LCS-3	109%
Heptachlor Epoxide	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	LCS-3	123%
gamma-Chlordane	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	LCS-3	131%
Dieldrin	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	LCS-3	110%
Endrin	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	LCS-3	117%
pp-DDD	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	LCS-3	121%
Endosulfan II	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	LCS-3	104%
Methoxychlor	mg/kg	0.1	GC-5	<0.1	43537-7	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%		GC-5	103	43537-7	107 90 RPD: 17	LCS-3	101%

Envirolab Reference: 43537
Revision No: R 00



QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Acid Extractable metals in soil						Base II Duplicate II %RPD		
Date digested	-			16/07/2010	43537-7	16/07/2010 16/07/2010	LCS-3	16/07/2010
Date analysed	-			16/07/2010	43537-7	16/07/2010 16/07/2010	LCS-3	16/07/2010
Arsenic	mg/kg	4	Metals.20 ICP-AES	<4	43537-7	6 7 RPD: 15	LCS-3	89%
Cadmium	mg/kg	0.5	Metals.20 ICP-AES	<0.5	43537-7	<0.5 <0.5	LCS-3	90%
Chromium	mg/kg	1	Metals.20 ICP-AES	<1	43537-7	19 19 RPD: 0	LCS-3	93%
Copper	mg/kg	1	Metals.20 ICP-AES	<1	43537-7	20 20 RPD: 0	LCS-3	98%
Lead	mg/kg	1	Metals.20 ICP-AES	<1	43537-7	14 16 RPD: 13	LCS-3	89%
Mercury	mg/kg	0.1	Metals.21 CV-AAS	<0.1	43537-7	<0.1 <0.1	LCS-3	104%
Nickel	mg/kg	1	Metals.20 ICP-AES	<1	43537-7	6 6 RPD: 0	LCS-3	92%
Zinc	mg/kg	1	Metals.20 ICP-AES	<1	43537-7	19 19 RPD: 0	LCS-3	90%

QUALITY CONTROL	UNITS	PQL	METHOD	Blank
Moisture				
Date prepared	-			16/7/2010
Date analysed	-			16/7/2010
Moisture	%	0.1	LAB.8	<0.10

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

QUALITY CONTROL	UNITS	Dup. Sm#	Duplicate	Spike Sm#	Spike % Recovery
vTPH & BTEX in Soil			Base + Duplicate + %RPD		
Date extracted	-	[NT]	[NT]	43537-18	16/7/2010
Date analysed	-	[NT]	[NT]	43537-18	17/7/2010
vTPH C ₆ - C ₉	mg/kg	[NT]	[NT]	43537-18	81%
Benzene	mg/kg	[NT]	[NT]	43537-18	78%
Toluene	mg/kg	[NT]	[NT]	43537-18	80%
Ethylbenzene	mg/kg	[NT]	[NT]	43537-18	78%
m+p-xylene	mg/kg	[NT]	[NT]	43537-18	84%
o-Xylene	mg/kg	[NT]	[NT]	43537-18	82%
Surrogate aaa-Trifluorotoluene	%	[NT]	[NT]	43537-18	102%

QUALITY CONTROL sTPH in Soil (C10-C36)	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	43537-18	16/7/2010
Date analysed	-	[NT]	[NT]	43537-18	16/7/2010
TPH C10 - C14	mg/kg	[NT]	[NT]	43537-18	87%
TPH C15 - C28	mg/kg	[NT]	[NT]	43537-18	94%
TPH C29 - C36	mg/kg	[NT]	[NT]	43537-18	93%
Surrogate o-Terphenyl	%	[NT]	[NT]	43537-18	90%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	43537-18	16/07/2010
Date analysed	-	[NT]	[NT]	43537-18	17/07/2010
Naphthalene	mg/kg	[NT]	[NT]	43537-18	90%
Acenaphthylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Acenaphthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluorene	mg/kg	[NT]	[NT]	43537-18	93%
Phenanthrene	mg/kg	[NT]	[NT]	43537-18	98%
Anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	[NT]	[NT]	43537-18	91%
Pyrene	mg/kg	[NT]	[NT]	43537-18	99%
Benzo(a)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	[NT]	[NT]	43537-18	109%
Benzo(b+k)fluoranthene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	[NT]	[NT]	43537-18	117%
Indeno(1,2,3-c,d)pyrene	mg/kg	[NT]	[NT]	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%	[NT]	[NT]	43537-18	62%

Client Reference: CES100604-JBA, Ropes Creek

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	43537-17	16/07/2010 16/07/2010	LCS-4	16/07/2010
Date analysed	-	43537-17	17/07/2010 17/07/2010	LCS-4	17/07/2010
HCB	mg/kg	43537-17	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	43537-17	<0.1 <0.1	LCS-4	101%
gamma-BHC	mg/kg	43537-17	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	43537-17	<0.1 <0.1	LCS-4	108%
Heptachlor	mg/kg	43537-17	<0.1 <0.1	LCS-4	95%
delta-BHC	mg/kg	43537-17	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	43537-17	<0.1 <0.1	LCS-4	93%
Heptachlor Epoxide	mg/kg	43537-17	<0.1 <0.1	LCS-4	104%
gamma-Chlordane	mg/kg	43537-17	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	43537-17	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	43537-17	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	43537-17	<0.1 <0.1	LCS-4	109%
Dieldrin	mg/kg	43537-17	<0.1 <0.1	LCS-4	92%
Endrin	mg/kg	43537-17	<0.1 <0.1	LCS-4	95%
pp-DDD	mg/kg	43537-17	<0.1 <0.1	LCS-4	100%
Endosulfan II	mg/kg	43537-17	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	43537-17	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	43537-17	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	43537-17	<0.1 <0.1	LCS-4	86%
Methoxychlor	mg/kg	43537-17	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%	43537-17	90 93 RPD: 3	LCS-4	95%

Client Reference: CES100604-JBA, Ropes Creek

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	43537-17	16/07/2010 16/07/2010	LCS-4	16/07/2010
Date analysed	-	43537-17	16/07/2010 16/07/2010	LCS-4	16/07/2010
Arsenic	mg/kg	43537-17	<4 5	LCS-4	91%
Cadmium	mg/kg	43537-17	<0.5 <0.5	LCS-4	90%
Chromium	mg/kg	43537-17	12 13 RPD: 8	LCS-4	93%
Copper	mg/kg	43537-17	20 22 RPD: 10	LCS-4	99%
Lead	mg/kg	43537-17	21 23 RPD: 9	LCS-4	89%
Mercury	mg/kg	43537-17	<0.1 <0.1	LCS-4	105%
Nickel	mg/kg	43537-17	9 9 RPD: 0	LCS-4	92%
Zinc	mg/kg	43537-17	43 47 RPD: 9	LCS-4	90%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	43537-27	16/07/2010 16/07/2010	43537-18	16/07/2010
Date analysed	-	43537-27	17/07/2010 17/07/2010	43537-18	17/07/2010
HCB	mg/kg	43537-27	<0.1 <0.1	[NR]	[NR]
alpha-BHC	mg/kg	43537-27	<0.1 <0.1	43537-18	109%
gamma-BHC	mg/kg	43537-27	<0.1 <0.1	[NR]	[NR]
beta-BHC	mg/kg	43537-27	<0.1 <0.1	43537-18	117%
Heptachlor	mg/kg	43537-27	<0.1 <0.1	43537-18	103%
delta-BHC	mg/kg	43537-27	<0.1 <0.1	[NR]	[NR]
Aldrin	mg/kg	43537-27	<0.1 <0.1	43537-18	101%
Heptachlor Epoxide	mg/kg	43537-27	<0.1 <0.1	43537-18	113%
gamma-Chlordane	mg/kg	43537-27	<0.1 <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	43537-27	<0.1 <0.1	[NR]	[NR]
Endosulfan I	mg/kg	43537-27	<0.1 <0.1	[NR]	[NR]
pp-DDE	mg/kg	43537-27	<0.1 <0.1	43537-18	120%
Dieldrin	mg/kg	43537-27	<0.1 <0.1	43537-18	100%
Endrin	mg/kg	43537-27	<0.1 <0.1	43537-18	100%
pp-DDD	mg/kg	43537-27	<0.1 <0.1	43537-18	107%
Endosulfan II	mg/kg	43537-27	<0.1 <0.1	[NR]	[NR]
pp-DDT	mg/kg	43537-27	<0.1 <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	43537-27	<0.1 <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	43537-27	<0.1 <0.1	43537-18	89%
Methoxychlor	mg/kg	43537-27	<0.1 <0.1	[NR]	[NR]
Surrogate TCLMX	%	43537-27	88 99 RPD: 12	43537-18	100%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	43537-27	16/07/2010 16/07/2010	43537-18	16/07/2010
Date analysed	-	43537-27	16/07/2010 16/07/2010	43537-18	16/07/2010
Arsenic	mg/kg	43537-27	7 6 RPD: 15	43537-18	87%
Cadmium	mg/kg	43537-27	<0.5 <0.5	43537-18	86%
Chromium	mg/kg	43537-27	21 20 RPD: 5	43537-18	93%
Copper	mg/kg	43537-27	10 11 RPD: 10	43537-18	99%
Lead	mg/kg	43537-27	20 20 RPD: 0	43537-18	86%
Mercury	mg/kg	43537-27	<0.1 <0.1	43537-18	93%
Nickel	mg/kg	43537-27	8 8 RPD: 0	43537-18	87%
Zinc	mg/kg	43537-27	13 14 RPD: 7	43537-18	86%

Report Comments:

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

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

Asbestos was analysed by Approved Identifier: Matt Mansfield

Asbestos was authorised by Approved Signatory: Matt Mansfield

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

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

Quality Control Definitions

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

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

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

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

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

Laboratory Acceptance Criteria:

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

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

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

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

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: ES1014114	Page	: 1 of 5
Client	: CONSULTING EARTH SCIENTISTS	Laboratory	: Environmental Division Sydney
Contact	: MS CAROLINE AYLOTT	Contact	: Charlie Pierce
Address	: Suite 55 Upper Level Jones Bay Wharf 26-32 Pirrama Rd PYRMONT NSW, AUSTRALIA 2040	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: caylott@consultingearth.com.au	E-mail	: sydney.enviro.services@alsglobal.com
Telephone	: +61 02 85692200	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 95524399	Facsimile	: +61-2-8784 8500
Project	: CES100604-JBA	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----	Date Samples Received	: 16-JUL-2010
C-O-C number	: 129410	Issue Date	: 21-JUL-2010
Sampler	: CA	No. of samples received	: 1
Site	: ROPES CREEK	No. of samples analysed	: 1
Quote number	: SY/272/10		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Alex Rossi	Organic Chemist	Inorganics
Wisam.Marassa	Metals Coordinator	Organics
		Inorganics

Environmental Division Sydney

Part of the **ALS Laboratory Group**

277-289 Woodpark Road Smithfield NSW Australia 2164

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A Campbell Brothers Limited Company





Page : 3 of 5
Work Order : ES1014114
Client : CONSULTING EARTH SCIENTISTS
Project : CES100604-JBA

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting



Analytical Results

Sub-Matrix: SOIL

Sub-Matrix: SOIL		Client sample ID				130710-24-MP					
		Client sampling date / time				13-JUL-2010 10:00					
Compound	CAS Number	LOR	Unit			ES1014114-001					
EA055: Moisture Content											
^ Moisture Content (dried @ 103°C)				1.0	%	16.7					
EG005T: Total Metals by ICP-AES											
Arsenic	7440-38-2	5	mg/kg			9					
Cadmium	7440-43-9	1	mg/kg			<1					
Chromium	7440-47-3	2	mg/kg			24					
Copper	7440-50-8	5	mg/kg			21					
Lead	7439-92-1	5	mg/kg			18					
Nickel	7440-02-0	2	mg/kg			10					
Zinc	7440-66-6	5	mg/kg			30					
EG035T: Total Recoverable Mercury by FIMS											
Mercury	7439-97-6	0.1	mg/kg			<0.1					
EP068A: Organochlorine Pesticides (OC)											
alpha-BHC	319-84-6	0.05	mg/kg			<0.05					
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg			<0.05					
beta-BHC	319-85-7	0.05	mg/kg			<0.05					
gamma-BHC	58-89-9	0.05	mg/kg			<0.05					
delta-BHC	319-86-8	0.05	mg/kg			<0.05					
Heptachlor	76-44-8	0.05	mg/kg			<0.05					
Aldrin	309-00-2	0.05	mg/kg			<0.05					
Heptachlor epoxide	1024-57-3	0.05	mg/kg			<0.05					
trans-Chlordane	5103-74-2	0.05	mg/kg			<0.05					
alpha-Endosulfan	959-98-8	0.05	mg/kg			<0.05					
cis-Chlordane	5103-71-9	0.05	mg/kg			<0.05					
Dieldrin	60-57-1	0.05	mg/kg			<0.05					
4,4'-DDE	72-55-9	0.05	mg/kg			<0.05					
Endrin	72-20-8	0.05	mg/kg			<0.05					
beta-Endosulfan	33213-65-9	0.05	mg/kg			<0.05					
4,4'-DDD	72-54-8	0.05	mg/kg			<0.05					
Endrin aldehyde	7421-93-4	0.05	mg/kg			<0.05					
Endosulfan sulfate	1031-07-8	0.05	mg/kg			<0.05					
4,4'-DDT	50-29-3	0.2	mg/kg			<0.2					
Endrin ketone	53494-70-5	0.05	mg/kg			<0.05					
Methoxychlor	72-43-5	0.2	mg/kg			<0.2					
EP068S: Organochlorine Pesticide Surrogate											
Dibromo-DDE	21655-73-2	0.1	%			95.9					
EP068T: Organophosphorus Pesticide Surrogate											
DEF	78-48-8	0.1	%			94.7					



Surrogate Control Limits

Sub-Matrix: SOIL			Recovery Limits (%)	
Compound	CAS Number		Low	High
EP068S: Organochlorine Pesticide Surrogate				
Dibromo-DDE	21655-73-2		19.5	167.0
EP068T: Organophosphorus Pesticide Surrogate				
DEF	78-48-8		22.7	163.5

**APPENDIX 7:
BOREHOLE LOGS**

**APPENDIX 7:
BOREHOLE LOGS**

Project ID: CES100604-JBA

Easting: 298196.532

Project: Ropes Creek

Northing: 6255583.263

Client: JBA Planning

Elevation: 59.786

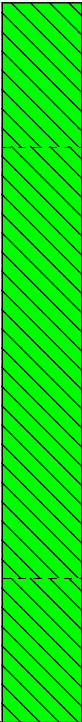


**CONSULTING
EARTH
SCIENTISTS**

Jones Bay Wharf 19-21, Lower Level Suite 121
26-32 Pirrama Road Pymont 2009
PH: (02) 8569 2200 FAX: (02) 9552 4399

Location: Wallgrove Rd, Eastern Creek

Environmental Log: **RCBH5**

DRILLING INFO.			LITHOLOGY		SAMPLING INFORMATION					WELL DETAIL
Depth	Method	Water	Symbol	Description	Sample ID	Type	FID/PID (ppm)			
							0	250	500	750
0	Hand Auger			CLAY: Medium plasticity, brown, with organic material (roots), trace of fine grained sand, organic odour						
		CLAY: Alluvial. Medium plasticity, brown with some orange, trace of fine grained sand, with some roots, organic odour								
		CLAY: Alluvial. Medium plasticity, mottled orange and brown with trace of sub rounded to rounded fine gravels consisting of ironstone nodules and shale								
				End of borehole.						

Drill Company: CES

Date Commenced: 13/07/2010

Drill Model: Hand Auger

Date Completed: 13/07/2010

Hole Diameter (mm): 60

Logged/checked by: M Pickett

Sheet: 1 of 1

Sheet: 1 of 1

Project ID: CES100604-JBA

Project: Ropes Creek

Client: JBA Planner

Location: Wallgrove Rd, Eastern Creek

Easting: 298116.596

Northing: 6255963.319

Elevation: 57.475

Environmental Log: RCBH14



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26-32 Pirrama Road Pymont 2009
PH: (02) 8569 2200 FAX: (02) 9552 4399

DRILLING INFO.			LITHOLOGY		SAMPLING INFORMATION					WELL DETAIL
Depth	Method	Water	Symbol	Description	Sample ID	Type	FID/PID (ppm)			
							0	250	500	750
0	Hand Auger		TOPSOIL: Clay. Brown Surface Description: Depression area approx 1 m2 flattened dead grass, area wet, no surface water CLAY: Orange/brown, high plasticity, some sand							
					130710-15-MP	Grab				
			End of borehole.							

Drill Company: CES

Drill Model: Hand Auger

Hole Diameter (mm): 60

Date Commenced: 13/07/2010

Date Completed: 13/07/2010

Logged/checked by: M Pickett

Sheet: 1 of 1

Sheet: 1 of 1

Project ID: CES100604-JBA

Project: Ropes Creek

Client: JBA Planning

Location: Wallgrove Rd, Eastern Creek

Easting: 298095.072

Northing: 6256292.767

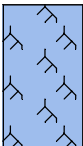
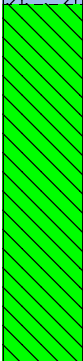
Elevation: 54.792

Environmental Log: RCBH21



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Jones Bay Wharf 19-21, Lower Level Suite 121
26-32 Pirrama Road Pymont 2009
PH: (02) 8569 2200 FAX: (02) 9552 4399

DRILLING INFO.			LITHOLOGY		SAMPLING INFORMATION					WELL DETAIL
Depth	Method	Water	Symbol	Description	Sample ID	Type	FID/PID (ppm)			
							0	250	500	750
0	↑ Hand Auger ↓			TOPSOIL: Clay. Brown						
				CLAY: High plasticity, dark brown/orange						
				140710-24-MP / 140710-23-MP / 140710-22-MP						
				End of borehole.						

Drill Company: CES

Drill Model: Hand Auger

Hole Diameter (mm): 60

Date Commenced: 14/07/2010

Date Completed: 14/07/2010

Logged/checked by: M Pickett

Sheet: 1 of 1

Project ID: CES100604-JBA

Project: Ropes Creek

Client: JBA Planning

Location: Wallgrove Rd, Eastern Creek

Easting: 298425.112

Northing: 6256200.981

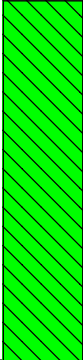
Elevation: 54.157

Environmental Log: RCBH23



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Jones Bay Wharf 19-21, Lower Level Suite 121
26-32 Pirrama Road Pymont 2009
PH: (02) 8569 2200 FAX: (02) 9552 4399

DRILLING INFO.			LITHOLOGY		SAMPLING INFORMATION							WELL DETAIL
Depth	Method	Water	Symbol	Description	Sample ID	Type	FID/PID (ppm)					
							0	250	500	750		
0	↑ Hand Auger ↓			CLAY: Pale brown with orange mottling, dry, odourless Surface Description: Sparse low grass, next to dry creek bed, some moss and dead grass								
					140710-26-MP	Grab						
				End of borehole.								

Drill Company: CES

Drill Model: Hand Auger

Hole Diameter (mm): 60

Date Commenced: 14/07/2010

Date Completed: 14/07/2010

Logged/checked by: M Pickett

Sheet: 1 of 1

Sheet: 1 of 1

Sheet: 1 of 1