Source Aerial Photography: NSW Dept. of Lands

CONSULTING EARTH SCIENTISTS
Jones Bay Wharf 19-21, Suite 55
26-32 Pirrama Road, Pyrmont, NSW, 2009
ph 8569 2200 fax 9552 4399

Title

Appendix 5.6 - Lot A Burley Road
Horsley Park Employment Precinct (1978)

CES Project ID:	Date:
CES100606-JBA	23/07/2010
Prepared By: M.Howden	Checked By: L.Jenkins

Source Aerial Photography: Google Earth

CONSULTING EARTH SCIENTISTS
Jones Bay Wharf 19-21, Suite 55
26-32 Pirrama Road, Pyrmont, NSW, 2009
ph 8569 2200 fax 9552 4399

Title

Appendix 5.7 - Lot A Burley Road
Horsley Park Employment Precinct (2005)

CES Project ID:	Date:
CES100606-JBA	23/07/2010
Prepared By: M.Howden	Checked By: L.Jenkins

Source Aerial Photography: Google Earth

CONSULTING EARTH SCIENTISTS
Jones Bay Wharf 19-21, Suite 55
26-32 Pirrama Road, Pyrmont, NSW, 2009
ph 8569 2200 fax 9552 4399

Title

Appendix 5.8 - Lot A Burley Road
Horsley Park Employment Precinct (2007)

CES Project ID:	Date:
CES100606-JBA	23/07/2010
Prepared By:	Checked By:
M.Howden	L.Jenkins

APPENDIX 5:
SITE PHOTOGRAPHS

Photograph 01: North eastern corner of the site (looking south west), area of disturbed terrain/ fill. Location of HPTP26

Photograph 02: Looking south west to large dam near centre of the site with tributary to Ropes Creek and old feed sheds visible.

Photograph 03: Looking north west to small dam and western site boundary.

Photograph 04: Looking east with dry creek bed in the gully and eastern boundary prior to the dwellings.

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 43540

Client:
Consulting Earth Scientists
Suite 53, Upper Level
26-32 Pirrama Rd
Pyrmont
NSW 2009

Attention: Luke Jenkins / Caroline Aylott

Sample log in details:

Your Reference:	**CES100606-JBA, Horsley Park**
No. of samples:	30 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:	23/07/10

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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

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vTPH & BTEX in Soil						
Our Reference:	UNITS	43540-1	43540-4	43540-9	43540-11	43540-15
Your Reference	----------	140710-33-C A	140710-36-C A	140710-41-C A	140710-43-C A	140710-48-C A
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	-	16/7/2010	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	%	91	98	97	95	98

vTPH & BTEX in Soil						
Our Reference:	UNITS	43540-16	43540-17	43540-18	43540-22	43540-24
Your Reference	----------	140710-49-C A	140710-50-C A	140710-51-C A	140710-56-C A	140710-57-C A
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	-	16/7/2010	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	%	96	96	101	92	93

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vTPH & BTEX in Soil					
Our Reference:	UNITS	43540-26	43540-28	43540-29	43540-30
Your Reference	----------	140710-59-C A	140710-61-C A	Trip Blank-HP	Trip Spike-HP
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	99%
Toluene	mg/kg	<0.5	<0.5	<0.5	101%
Ethylbenzene	mg/kg	<1.0	<1.0	<1.0	99%
m+p-xylene	mg/kg	<2.0	<2.0	<2.0	100%
o-Xylene	mg/kg	<1.0	<1.0	<1.0	100%
Surrogate aaa-Trifluorotoluene	%	90	95	102	113

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sTPH in Soil (C10-C36)						
Our Reference:	UNITS	43540-1	43540-4	43540-9	43540-11	43540-15
Your Reference	----------	140710-33-C A	140710-36-C A	140710-41-C A	140710-43-C A	140710-48-C A
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	-	16/7/2010	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 C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TPH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TPH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	113	99	97	90	93

sTPH in Soil (C10-C36)						
Our Reference:	UNITS	43540-16	43540-17	43540-18	43540-22	43540-24
Your Reference	----------	140710-49-C A	140710-50-C A	140710-51-C A	140710-56-C A	140710-57-C A
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	-	16/7/2010	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 C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TPH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TPH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	92	95	91	95	93

sTPH in Soil (C10-C36)			
Our Reference:	UNITS	43540-26	43540-28
Your Reference	----------	140710-59-C A	140710-61-C A
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 C_{10} - C_{14}	mg/kg	<50	<50
TPH C_{15} - C_{28}	mg/kg	<100	<100
TPH C_{29} - C_{36}	mg/kg	<100	<100
Surrogate o-Terphenyl	%	92	92

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PAHs in Soil						
Our Reference:	UNITS	43540-1	43540-4	43540-9	43540-11	43540-15
Your Reference	----------	140710-33-C A	140710-36-C A	140710-41-C A	140710-43-C A	140710-48-C A
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
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-d_{14}	%	72	72	67	67	69

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PAHs in Soil						
Our Reference:	UNITS	43540-16	43540-17	43540-18	43540-22	43540-24
Your Reference	----------	140710-49-C A	140710-50-C A	140710-51-C A	140710-56-C A	140710-57-C A
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
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-d_{14}	%	72	70	67	75	74

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PAHs in Soil			
Our Reference:	UNITS	43540-26	43540-28
Your Reference	----------	140710-59-C A	140710-61-C A
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-d_{14}	%	70	70

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Organochlorine Pesticides in soil						
Our Reference:	UNITS	43540-1	43540-2	43540-3	43540-4	43540-5
Your Reference	----------	140710-33-C A	140710-34-C A	140710-35-C A	140710-36-C A	140710-37-C A
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	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
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	%	100	102	96	102	106

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Organochlorine Pesticides in soil						
Our Reference:	UNITS	43540-6	43540-7	43540-8	43540-9	43540-10
Your Reference	----------	140710-38-C A	140710-39-C A	140710-40-C A	140710-41-C A	140710-42-C A
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	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
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	%	109	99	98	106	98

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Organochlorine Pesticides in soil						
Our Reference:	UNITS	43540-11	43540-12	43540-13	43540-14	43540-15
Your Reference	----------	140710-43-C A	140710-44-C A	140710-45-C A	140710-47-C A	140710-48-C A
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	-	16/07/2010	16/07/2010	16/07/2010	16/07/2010	16/07/2010
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	%	107	107	100	103	100

NATA
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Organochlorine Pesticides in soil						
Our Reference:	UNITS	43540-16	43540-17	43540-18	43540-19	43540-20
Your Reference	----------	140710-49-C A	140710-50-C A	140710-51-C A	140710-52-C A	140710-53-C A
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	-	16/07/2010	16/07/2010	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	%	104	96	99	100	105

NATA
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Organochlorine Pesticides in soil						
Our Reference:	UNITS	43540-21	43540-22	43540-23	43540-24	43540-25
Your Reference	----------	140710-54-C A	140710-56-C A	140710-55-C A	140710-57-C A	140710-58-C A
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	106	99	101	93

NATA
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Organochlorine Pesticides in soil				
Our Reference:	UNITS	43540-26	43540-27	43540-28
Your Reference	----------	140710-59-C A	140710-60-C A	140710-61-C A
Date Sampled	----------	14/07/2010	14/07/2010	14/07/2010
Type of sample		Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO
Time Sampled		00:00	00:00	00:00
Date extracted	-	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	17/07/2010	17/07/2010	17/07/2010
HCB	mg/kg	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Surrogate TCLMX	%	89	95	106

NATA
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Acid Extractable metals in soil						
Our Reference:	UNITS	43540-1	43540-2	43540-3	43540-4	43540-5
Your Reference	----------	140710-33-C A	140710-34-C A	140710-35-C A	140710-36-C A	140710-37-C A
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	6	7	<4	6	16
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	20	20	18	17	23
Copper	mg/kg	26	22	17	11	19
Lead	mg/kg	21	19	15	16	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	19	4	5	5
Zinc	mg/kg	36	40	18	20	18

Acid Extractable metals in soil						
Our Reference:	UNITS	43540-6	43540-7	43540-8	43540-9	43540-10
Your Reference	----------	140710-38-C A	140710-39-C A	140710-40-C A	140710-41-C A	140710-42-C A
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	7	8	9	9	10
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	17	16	18	17	21
Copper	mg/kg	22	27	32	32	22
Lead	mg/kg	16	15	15	13	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	7	6	11	7
Zinc	mg/kg	32	29	26	43	23

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Acid Extractable metals in soil						
Our Reference:	UNITS	43540-11	43540-12	43540-13	43540-14	43540-15
Your Reference	----------	140710-43-C A	140710-44-C A	140710-45-C A	140710-47-C A	140710-48-C A
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	9	9	13	7
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	18	20	20	15	17
Copper	mg/kg	25	22	20	24	8
Lead	mg/kg	17	22	23	13	24
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	9	10	12	5
Zinc	mg/kg	40	32	34	50	15

Acid Extractable metals in soil						
Our Reference:	UNITS	43540-16	43540-17	43540-18	43540-19	43540-20
Your Reference	----------	140710-49-C A	140710-50-C A	140710-51-C A	140710-52-C A	140710-53-C A
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	7	9	9	9	8
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	17	18	23	19	19
Copper	mg/kg	19	15	14	25	17
Lead	mg/kg	13	22	26	17	20
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	7	8	9	9
Zinc	mg/kg	17	25	25	34	25

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Acid Extractable metals in soil						
Our Reference:	UNITS	43540-21	43540-22	43540-23	43540-24	43540-25
Your Reference	----------	140710-54-C A	140710-56-C A	140710-55-C A	140710-57-C A	140710-58-C A
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	<4	6	4	<4	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	15	17	18	15	110
Copper	mg/kg	25	21	34	24	27
Lead	mg/kg	21	24	16	14	10
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	12	10	12	7	99
Zinc	mg/kg	39	36	60	28	27

Acid Extractable metals in soil				
Our Reference:	UNITS	43540-26	43540-27	43540-28
Your Reference	----------	140710-59-C A	140710-60-C A	140710-61-C A
Date Sampled	----------	14/07/2010	14/07/2010	14/07/2010
Type of sample		Soil	Soil	Soil
Sample Matrix Code		SO	SO	SO
Time Sampled		00:00	00:00	00:00
Date digested	-	16/07/2010	16/07/2010	16/07/2010
Date analysed	-	16/07/2010	16/07/2010	16/07/2010
Arsenic	mg/kg	<4	8	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5
Chromium	mg/kg	41	24	41
Copper	mg/kg	21	16	17
Lead	mg/kg	13	10	9
Mercury	mg/kg	<0.1	<0.1	<0.1
Nickel	mg/kg	30	8	31
Zinc	mg/kg	42	18	16

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Moisture						
Our Reference:	UNITS	43540-1	43540-2	43540-3	43540-4	43540-5
Your Reference	----------	140710-33-C A	140710-34-C A	140710-35-C A	140710-36-C A	140710-37-C A
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 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	14	19	14	23

Moisture						
Our Reference:	UNITS	43540-6	43540-7	43540-8	43540-9	43540-10
Your Reference	----------	140710-38-C A	140710-39-C A	140710-40-C A	140710-41-C A	140710-42-C A
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 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	21	25	22	22

Moisture						
Our Reference:	UNITS	43540-11	43540-12	43540-13	43540-14	43540-15
Your Reference	----------	140710-43-C A	140710-44-C A	140710-45-C A	140710-47-C A	140710-48-C A
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 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	%	22	23	22	20	20

Moisture						
Our Reference:	UNITS	43540-16	43540-17	43540-18	43540-19	43540-20
Your Reference	----------	140710-49-C A	140710-50-C A	140710-51-C A	140710-52-C A	140710-53-C A
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 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	25	23	18	17

NATA
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Moisture						
Our Reference:	UNITS	43540-21	43540-22	43540-23	43540-24	43540-25
Your Reference	----------	140710-54-C A	140710-56-C A	140710-55-C A	140710-57-C A	140710-58-C A
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 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	%	21	17	19	21	27

Moisture					
Our Reference:	UNITS	43540-26	43540-27	43540-28	43540-29
Your Reference	----------	140710-59-C A	140710-60-C A	140710-61-C A	Trip Blank-HP
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 prepared	-	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
Moisture	%	24	25	23	0.30

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Asbestos ID - soils						
Our Reference:	UNITS	43540-1	43540-4	43540-9	43540-11	43540-15
Your Reference	----------	140710-33-C A	140710-36-C A	140710-41-C A	140710-43-C A	140710-48-C A
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 analysed	-	20/7/2010	20/7/2010	20/7/2010	20/7/2010	20/7/2010
Sample Description	-	Approx 40g Soil	Approx 40g Soil	Approx 40g Soil	Approx 40g Soil	Approx 40g Soil
Asbestos ID in soil	-	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected

Asbestos ID - soils						
Our Reference:	UNITS	43540-16	43540-17	43540-18	43540-22	43540-24
Your Reference	----------	140710-49-C A	140710-50-C A	140710-51-C A	140710-56-C A	140710-57-C A
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 analysed	-	20/7/2010	20/7/2010	20/7/2010	20/7/2010	20/7/2010
Sample Description	-	Approx 40g Soil	Approx 40g Soil	Approx 40g Soil	Approx 40g Soil	Approx 40g Soil
Asbestos ID in soil	-	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected	Respirable fibres not detected

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Asbestos ID - soils			
Our Reference:	UNITS	43540-26	43540-28
Your Reference	----------	140710-59-C A	140710-61-C A
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 40g Soil	Approx 40g Soil
Asbestos ID in soil	-	No asbestos found at reporting limit of 0.1g/kg	No asbestos found at reporting limit of 0.1g/kg
Trace Analysis	-	Respirable fibres not detected	Respirable fibres not detected

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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.

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QUALITY CONTROL vTPH & BTEX in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			16/7/2010	43540-1	16/7/2010 || 16/7/2010	LCS-2	16/7/2010
Date analysed	-			17/7/2010	43540-1	17/7/2010 || 17/7/2010	LCS-2	17/7/2010
vTPH C_6 - C_9	mg/kg	25	GC.16	<25	43540-1	<25 || <25	LCS-2	87%
Benzene	mg/kg	0.5	GC.16	<0.5	43540-1	<0.5 || <0.5	LCS-2	83%
Toluene	mg/kg	0.5	GC.16	<0.5	43540-1	<0.5 || <0.5	LCS-2	86%
Ethylbenzene	mg/kg	1	GC.16	<1.0	43540-1	<1.0 || <1.0	LCS-2	85%
m+p-xylene	mg/kg	2	GC.16	<2.0	43540-1	<2.0 || <2.0	LCS-2	90%
o-Xylene	mg/kg	1	GC.16	<1.0	43540-1	<1.0 || <1.0	LCS-2	90%
Surrogate aaa-Trifluorotoluene	%		GC.16	99	43540-1	91 || 98 || RPD: 7	LCS-2	104%

QUALITY CONTROL sTPH in Soil (C10-C36)	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			16/7/2010	43540-1	16/7/2010 || 16/7/2010	LCS-4	16/7/2010
Date analysed	-			16/7/2010	43540-1	16/7/2010 || 16/7/2010	LCS-4	16/7/2010
TPH C_{10} - C_{14}	mg/kg	50	GC.3	<50	43540-1	<50 || <50	LCS-4	86%
TPH C_{15} - C_{28}	mg/kg	100	GC.3	<100	43540-1	<100 || <100	LCS-4	94%
TPH C_{29} - C_{36}	mg/kg	100	GC.3	<100	43540-1	<100 || <100	LCS-4	92%
Surrogate o-Terphenyl	%		GC.3	89	43540-1	113 || 102 || RPD: 10	LCS-4	94%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			16/07/2010	43540-1	16/07/2010 || 16/07/2010	LCS-4	16/07/2010
Date analysed	-			17/07/2010	43540-1	17/07/2010 || 17/07/2010	LCS-4	17/07/2010
Naphthalene	mg/kg	0.1	GC.12 subset	<0.1	43540-1	<0.1 || <0.1	LCS-4	86%
Acenaphthylene	mg/kg	0.1	GC.12 subset	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	GC.12 subset	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	GC.12 subset	<0.1	43540-1	<0.1 || <0.1	LCS-4	95%
Phenanthrene	mg/kg	0.1	GC.12 subset	<0.1	43540-1	<0.1 || <0.1	LCS-4	102%
Anthracene	mg/kg	0.1	GC.12 subset	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	GC.12 subset	<0.1	43540-1	<0.1 || <0.1	LCS-4	98%
Pyrene	mg/kg	0.1	GC.12 subset	<0.1	43540-1	<0.1 || <0.1	LCS-4	107%

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QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Benzo(a)anthracene	mg/kg	0.1	GC.12 subset	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	GC.12 subset	<0.1	43540-1	<0.1 || <0.1	LCS-4	114%
Benzo(b+k)fluoranthene	mg/kg	0.2	GC.12 subset	<0.2	43540-1	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	GC.12 subset	<0.05	43540-1	<0.05 || <0.05	LCS-4	136%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	GC.12 subset	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	GC.12 subset	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	GC.12 subset	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		GC.12 subset	72	43540-1	72 || 74 || RPD: 3	LCS-4	67%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			16/07/2010	43540-1	16/07/2010 || 16/07/2010	LCS-2	16/07/2010
Date analysed	-			16/07/2010	43540-1	16/07/2010 || 16/07/2010	LCS-2	16/07/2010
HCB	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	LCS-2	119%
gamma-BHC	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	LCS-2	131%
Heptachlor	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	LCS-2	119%
delta-BHC	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	LCS-2	112%
Heptachlor Epoxide	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	LCS-2	128%
gamma-Chlordane	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	LCS-2	137%
Dieldrin	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	LCS-2	115%
Endrin	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	LCS-2	122%
pp-DDD	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	LCS-2	127%
Endosulfan II	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	LCS-2	110%
Methoxychlor	mg/kg	0.1	GC-5	<0.1	43540-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%		GC-5	101	43540-1	100 || 99 || RPD: 1	LCS-2	99%

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QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date digested	-			16/07/2010	43540-1	16/07/2010 || 16/07/2010	LCS-1	16/07/2010
Date analysed	-			16/07/2010	43540-1	16/07/2010 || 16/07/2010	LCS-1	16/07/2010
Arsenic	mg/kg	4	Metals.20 ICP-AES	<4	43540-1	6 || 6 || RPD: 0	LCS-1	91%
Cadmium	mg/kg	0.5	Metals.20 ICP-AES	<0.5	43540-1	<0.5 || <0.5	LCS-1	90%
Chromium	mg/kg	1	Metals.20 ICP-AES	<1	43540-1	20 || 17 || RPD: 16	LCS-1	95%
Copper	mg/kg	1	Metals.20 ICP-AES	<1	43540-1	26 || 25 || RPD: 4	LCS-1	99%
Lead	mg/kg	1	Metals.20 ICP-AES	<1	43540-1	21 || 18 || RPD: 15	LCS-1	91%
Mercury	mg/kg	0.1	Metals.21 CV-AAS	<0.1	43540-1	<0.1 || <0.1	LCS-1	112%
Nickel	mg/kg	1	Metals.20 ICP-AES	<1	43540-1	11 || 11 || RPD: 0	LCS-1	94%
Zinc	mg/kg	1	Metals.20 ICP-AES	<1	43540-1	36 || 35 || RPD: 3	LCS-1	92%

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

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

QUALITY CONTROL vTPH & BTEX in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	43540-24	16/7/2010 || 16/7/2010	43540-4	16/7/2010
Date analysed	-	43540-24	17/7/2010 || 17/7/2010	43540-4	17/7/2010
vTPH C_6 - C_9	mg/kg	43540-24	<25 || <25	43540-4	81%
Benzene	mg/kg	43540-24	<0.5 || <0.5	43540-4	80%
Toluene	mg/kg	43540-24	<0.5 || <0.5	43540-4	81%
Ethylbenzene	mg/kg	43540-24	<1.0 || <1.0	43540-4	78%
m+p-xylene	mg/kg	43540-24	<2.0 || <2.0	43540-4	83%
o-Xylene	mg/kg	43540-24	<1.0 || <1.0	43540-4	82%
Surrogate aaa-Trifluorotoluene	%	43540-24	93 || 95 || RPD: 2	43540-4	102%

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QUALITY CONTROL sTPH in Soil (C10-C36)	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	43540-24	16/7/2010 || 16/7/2010	43540-4	16/7/2010
Date analysed	-	43540-24	16/7/2010 || 16/7/2010	43540-4	16/7/2010
TPH C_{10} - C_{14}	mg/kg	43540-24	<50 || <50	43540-4	88%
TPH C_{15} - C_{28}	mg/kg	43540-24	<100 || <100	43540-4	95%
TPH C_{29} - C_{36}	mg/kg	43540-24	<100 || <100	43540-4	89%
Surrogate o-Terphenyl	%	43540-24	93 || 93 || RPD: 0	43540-4	98%

QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	43540-24	16/07/2010 || 16/07/2010	43540-4	16/07/2010
Date analysed	-	43540-24	17/07/2010 || 17/07/2010	43540-4	17/07/2010
Naphthalene	mg/kg	43540-24	<0.1 || <0.1	43540-4	86%
Acenaphthylene	mg/kg	43540-24	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	43540-24	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	43540-24	<0.1 || <0.1	43540-4	95%
Phenanthrene	mg/kg	43540-24	<0.1 || <0.1	43540-4	102%
Anthracene	mg/kg	43540-24	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	43540-24	<0.1 || <0.1	43540-4	98%
Pyrene	mg/kg	43540-24	<0.1 || <0.1	43540-4	107%
Benzo(a)anthracene	mg/kg	43540-24	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	43540-24	<0.1 || <0.1	43540-4	114%
Benzo(b+k)fluoranthene	mg/kg	43540-24	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	43540-24	<0.05 || <0.05	43540-4	136%
Indeno(1,2,3-c,d)pyrene	mg/kg	43540-24	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	43540-24	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	43540-24	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%	43540-24	74 || 68 || RPD: 8	43540-4	67%

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QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	43540-12	16/07/2010 || 16/07/2010	LCS-3	16/07/2010
Date analysed	-	43540-12	16/07/2010 || 16/07/2010	LCS-3	17/07/2010
HCB	mg/kg	43540-12	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	43540-12	<0.1 || <0.1	LCS-3	116%
gamma-BHC	mg/kg	43540-12	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	43540-12	<0.1 || <0.1	LCS-3	126%
Heptachlor	mg/kg	43540-12	<0.1 || <0.1	LCS-3	115%
delta-BHC	mg/kg	43540-12	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	43540-12	<0.1 || <0.1	LCS-3	109%
Heptachlor Epoxide	mg/kg	43540-12	<0.1 || <0.1	LCS-3	123%
gamma-Chlordane	mg/kg	43540-12	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	43540-12	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	43540-12	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	43540-12	<0.1 || <0.1	LCS-3	131%
Dieldrin	mg/kg	43540-12	<0.1 || <0.1	LCS-3	110%
Endrin	mg/kg	43540-12	<0.1 || <0.1	LCS-3	117%
pp-DDD	mg/kg	43540-12	<0.1 || <0.1	LCS-3	121%
Endosulfan II	mg/kg	43540-12	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	43540-12	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	43540-12	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	43540-12	<0.1 || <0.1	LCS-3	104%
Methoxychlor	mg/kg	43540-12	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	43540-12	107 || 104 || RPD: 3	LCS-3	101%

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QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	43540-12	16/07/2010 || 16/07/2010	LCS-2	16/07/2010
Date analysed	-	43540-12	16/07/2010 || 16/07/2010	LCS-2	16/07/2010
Arsenic	mg/kg	43540-12	9 || 7 || RPD: 25	LCS-2	89%
Cadmium	mg/kg	43540-12	<0.5 || <0.5	LCS-2	89%
Chromium	mg/kg	43540-12	20 || 17 || RPD: 16	LCS-2	92%
Copper	mg/kg	43540-12	22 || 21 || RPD: 5	LCS-2	96%
Lead	mg/kg	43540-12	22 || 18 || RPD: 20	LCS-2	89%
Mercury	mg/kg	43540-12	<0.1 || <0.1	LCS-2	107%
Nickel	mg/kg	43540-12	9 || 10 || RPD: 11	LCS-2	92%
Zinc	mg/kg	43540-12	32 || 30 || RPD: 6	LCS-2	90%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	43540-23	16/07/2010 || 16/07/2010	43540-4	16/07/2010
Date analysed	-	43540-23	17/07/2010 || 17/07/2010	43540-4	16/07/2010
HCB	mg/kg	43540-23	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	43540-23	<0.1 || <0.1	43540-4	114%
gamma-BHC	mg/kg	43540-23	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	43540-23	<0.1 || <0.1	43540-4	122%
Heptachlor	mg/kg	43540-23	<0.1 || <0.1	43540-4	112%
delta-BHC	mg/kg	43540-23	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	43540-23	<0.1 || <0.1	43540-4	104%
Heptachlor Epoxide	mg/kg	43540-23	<0.1 || <0.1	43540-4	118%
gamma-Chlordane	mg/kg	43540-23	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	43540-23	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	43540-23	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	43540-23	<0.1 || <0.1	43540-4	124%
Dieldrin	mg/kg	43540-23	<0.1 || <0.1	43540-4	104%
Endrin	mg/kg	43540-23	<0.1 || <0.1	43540-4	110%
pp-DDD	mg/kg	43540-23	<0.1 || <0.1	43540-4	112%
Endosulfan II	mg/kg	43540-23	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	43540-23	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	43540-23	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	43540-23	<0.1 || <0.1	43540-4	97%
Methoxychlor	mg/kg	43540-23	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	43540-23	99 || 99 || RPD: 0	43540-4	99%

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QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	43540-21	16/07/2010 || 16/07/2010	43540-4	16/07/2010
Date analysed	-	43540-21	16/07/2010 || 16/07/2010	43540-4	16/07/2010
Arsenic	mg/kg	43540-21	<4 || 4	43540-4	90%
Cadmium	mg/kg	43540-21	<0.5 || <0.5	43540-4	84%
Chromium	mg/kg	43540-21	15 || 15 || RPD: 0	43540-4	93%
Copper	mg/kg	43540-21	25 || 25 || RPD: 0	43540-4	98%
Lead	mg/kg	43540-21	21 || 20 || RPD: 5	43540-4	85%
Mercury	mg/kg	43540-21	<0.1 || <0.1	43540-4	108%
Nickel	mg/kg	43540-21	12 || 12 || RPD: 0	43540-4	89%
Zinc	mg/kg	43540-21	39 || 42 || RPD: 7	43540-4	86%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	[NT]	[NT]	43540-22	16/07/2010
Date analysed	-	[NT]	[NT]	43540-22	17/07/2010
HCB	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-BHC	mg/kg	[NT]	[NT]	43540-22	120%
gamma-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
beta-BHC	mg/kg	[NT]	[NT]	43540-22	130%
Heptachlor	mg/kg	[NT]	[NT]	43540-22	112%
delta-BHC	mg/kg	[NT]	[NT]	[NR]	[NR]
Aldrin	mg/kg	[NT]	[NT]	43540-22	111%
Heptachlor Epoxide	mg/kg	[NT]	[NT]	43540-22	126%
gamma-Chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDE	mg/kg	[NT]	[NT]	43540-22	134%
Dieldrin	mg/kg	[NT]	[NT]	43540-22	112%
Endrin	mg/kg	[NT]	[NT]	43540-22	115%
pp-DDD	mg/kg	[NT]	[NT]	43540-22	121%
Endosulfan II	mg/kg	[NT]	[NT]	[NR]	[NR]
pp-DDT	mg/kg	[NT]	[NT]	[NR]	[NR]
Endrin Aldehyde	mg/kg	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	[NT]	[NT]	43540-22	102%
Methoxychlor	mg/kg	[NT]	[NT]	[NR]	[NR]
Surrogate TCLMX	%	[NT]	[NT]	43540-22	106%

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QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	[NT]	[NT]	43540-22	16/07/2010
Date analysed	-	[NT]	[NT]	43540-22	16/07/2010
Arsenic	mg/kg	[NT]	[NT]	43540-22	81%
Cadmium	mg/kg	[NT]	[NT]	43540-22	77%
Chromium	mg/kg	[NT]	[NT]	43540-22	86%
Copper	mg/kg	[NT]	[NT]	43540-22	94%
Lead	mg/kg	[NT]	[NT]	43540-22	81%
Mercury	mg/kg	[NT]	[NT]	43540-22	110%
Nickel	mg/kg	[NT]	[NT]	43540-22	81%
Zinc	mg/kg	[NT]	[NT]	43540-22	82%

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 it's 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

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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 43540-A

Client:
Consulting Earth Scientists
Suite 53, Upper Level
26-32 Pirrama Rd
Pyrmont
NSW 2009

Attention: Luke Jenkins / Caroline Aylott

Sample log in details:

Your Reference:	**CES100606-JBA, Horsley Park**
No. of samples:	30 Soils
Date samples received:	15/07/10
Date completed instructions received:	23/07/10

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:	23/07/10
Date of Preliminary Report:	Not Issued
Issue Date:	23/07/10

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

Results Approved By:

Nancy Zhang
Chemist

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PCBs in Soil						
Our Reference:	UNITS	43540-A-1	43540-A-4	43540-A-9	43540-A-11	43540-A-15
Your Reference	----------	140710-33-C A	140710-36-C A	140710-41-C A	140710-43-C A	140710-48-C A
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
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221*	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	105	102	109	111	103

PCBs in Soil						
Our Reference:	UNITS	43540-A-16	43540-A-17	43540-A-18	43540-A-22	43540-A-24
Your Reference	----------	140710-49-C A	140710-50-C A	140710-51-C A	140710-56-C A	140710-57-C A
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
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221*	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	107	96	99	106	101

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PCBs in Soil			
Our Reference:	UNITS	43540-A-26	43540-A-28
Your Reference	----------	140710-59-C A	140710-61-C A
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
Arochlor 1016	mg/kg	<0.1	<0.1
Arochlor 1221*	mg/kg	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1
Surrogate TCLMX	%	89	109

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Method ID	Methodology Summary
GC-6	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.

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QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			16/07/2010	43540-A-1	16/07/2010 || 16/07/2010	LCS-1	16/07/2010
Date analysed	-			17/07/2010	43540-A-1	17/07/2010 || 17/07/2010	LCS-1	17/07/2010
Arochlor 1016	mg/kg	0.1	GC-6	<0.1	43540-A-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221*	mg/kg	0.1	GC-6	<0.1	43540-A-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	GC-6	<0.1	43540-A-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	GC-6	<0.1	43540-A-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	GC-6	<0.1	43540-A-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	GC-6	<0.1	43540-A-1	<0.1 || <0.1	LCS-1	121%
Arochlor 1260	mg/kg	0.1	GC-6	<0.1	43540-A-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%		GC-6	108	43540-A-1	105 || 105 || RPD: 0	LCS-1	132%

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Report Comments:

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

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ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **ES1014112**	Page	: 1 of 5
Client	: **CONSULTING EARTH SCIENTISTS**	Laboratory	: Environmental Division Sydney
Contact	: MR LUKE JENKINS	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	: ljenkins@consultingearth.com.au	E-mail	: sydney.enviro.services@alsglobal.com
Telephone	: +61 02 8569 2200	Telephone	: +61-2-8784 8555
Facsimile	: +61 02 95524399	Facsimile	: +61-2-8784 8500
Project	: CES100606-JBA	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: 129411	Date Samples Received	: 16-JUL-2010
Sampler	: CA	Issue Date	: 21-JUL-2010
Site	: HORSLEY PARK		
		No. of samples received	: 1
Quote number	: SY/272/10	No. of samples analysed	: 1

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

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WORLD RECOGNISED ACCREDITATION

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*
		Inorganics
Celine Conceicao	Spectroscopist	Inorganics
Edwandy Fadjar	Senior Organic Chemist	Organics

Environmental Division Sydney
Part of the **ALS Laboratory Group**
277-289 Woodpark Road Smithfield NSW Australia 2164
Tel. +61-2-8784 8555 Fax. +61-2-8784 8500 **www.alsglobal.com**
A Campbell Brothers Limited Company

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 insuffient 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			Client sample ID	140710-46-CA	----	----	----	----
			Client sampling date / time	14-JUL-2010 15:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES1014112-001	----	----	----	----
EA055: Moisture Content								
^ Moisture Content (dried @ 103°C)	----	1.0	%	24.9	----	----	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	10	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	18	----	----	----	----
Copper	7440-50-8	5	mg/kg	24	----	----	----	----
Lead	7439-92-1	5	mg/kg	20	----	----	----	----
Nickel	7440-02-0	2	mg/kg	10	----	----	----	----
Zinc	7440-66-6	5	mg/kg	34	----	----	----	----
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	%	116	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	90.8	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) 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

Project ID:	CES100606-JBA	**Easting:**	298390.624
Project:	Horsley Park	**Northing:**	6253316.213
Client:	JBA Planning	**Elevation:**	85.667
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH1**

CONSULTING EARTH SCIENTISTS
Jones Bay Wharf 19-21, Lower Level Suite 121
26-32 Pirrama Road Pyrmont 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. Dark brown, loose, some burnt wood fragments Surface Description: Grass cover healthy. Near top of ridge				
				CLAY: Dark brown/ orange with burnt wood fragments, odourless, dry	140710-33-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	298243.197
Project:	Horsley Park	**Northing:**	6253319.816
Client:	JBA Planning	**Elevation:**	87.675
Location:	Wallgrove Rd, Eastern Creek		

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

Environmental Log: **HPBH2**

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			FILL: Fine to coarse gravel of blue metal Surface description: Area of low grass approx 0.5m sq				
				CLAY: Orange/ brown, medium plasticity with some sand	140710-34-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	298061.258
Project:	Horsley Park	**Northing:**	6253358.590
Client:	JBA Planning	**Elevation:**	86.901
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH3**

CONSULTING EARTH SCIENTISTS
Jones Bay Wharf 19-21, Lower Level Suite 121
26-32 Pirrama Road Pyrmont 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. Dark brown, loose, dry Surface Description: Heavy grass cover. On top of ridge				
				CLAY: Brown with orange mottling, medium plasticity, with some angular to subangular fine shale gravel	140710-35-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	297695.639
Project:	Horsley Park	**Northing:**	6253325.995
Client:	JBA Planning	**Elevation:**	73.555
Location:	Wallgrove Rd, Eastern Creek		

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

Environmental Log: **HPBH4**

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, low plasticity with some sand. loose, odourless and dry Surface Description: Dense low grass, Sample taken outside feed shed	140710-36-CA	Grab						
				End of borehole.								
1												

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	297898.056
Project:	Horsley Park	**Northing:**	6253361.129
Client:	JBA Planning	**Elevation:**	82.653
Location:	Wallgrove Rd, Eastern Creek		

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

Environmental Log: **HPBH5**

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. Dark brown, loose Surface Description: well grassed paddock				
				CLAY: Red/ orange, medium plasticity, dry, odourless	140710-37-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	297749.415
Project:	Horsley Park	**Northing:**	6253389.647
Client:	JBA Planning	**Elevation:**	74.484
Location:	Wallgrove Rd, Eastern Creek		

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Environmental Log: **HPBH6**

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. Dark brown, loose Surface Description: Dense, low grass				
				CLAY: Dark brown with mottled orange, medium plasticity, dry, odourless	140710-38-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	297805.516
Project:	Horsley Park	**Northing:**	6253627.350
Client:	JBA Planning	**Elevation:**	78.300
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH7**

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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, loose medium plasticity clay Surface description: Dense grass with some dead grass/ hay				
				CLAY: Orange/ brown, high plasticity, odourless, dry	140710-40CA / 140710-39CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	297934.399
Project:	Horsley Park	**Northing:**	6253598.054
Client:	JBA Planning	**Elevation:**	81.677
Location:	Wallgrove Rd, Eastern Creek		

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Environmental Log: **HPBH8**

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. Orange/ brown, medium plasticity clay, dry, odourless Surface Description: Area of depression approx 30cm below surrounding ground level for an area of approx 0.5m square. Grass in depression was dead	140710-41-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	298088.495
Project:	Horsley Park	**Northing:**	6253585.867
Client:	JBA Planning	**Elevation:**	75.685
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH9**

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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. Dark brown, loose Surface Description: heavy grass cover with clover				
				CLAY: Dark brown with orange mottling, medium plasticity, dry, odourless	140710-42-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	298277.909
Project:	Horsley Park	**Northing:**	6253576.994
Client:	JBA Planning	**Elevation:**	77.521
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH10**

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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. Dark brown, loose, dry Surface Description: Heavy grass cover, some dry/ dead grass								
				CLAY: Orange/ brown, high plasticity with some ironstone, subangular to angular small to medium gravel, odourless, dry	140710-43-CA	Grab						
				End of borehole.								
1												

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	298421.752
Project:	Horsley Park	**Northing:**	6253577.584
Client:	JBA Planning	**Elevation:**	77.337
Location:	Wallgrove Rd, Eastern Creek		

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Environmental Log: **HPBH11**

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			PEAT: Dark brown, organic clay Surface Description: Dry creek bed, low grass CLAY: Dark brown, high plasticity, wet, odourless	140710-44-CA / 140710-45-CA / 140710-46-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	298460.812
Project:	Horsley Park	**Northing:**	6253788.865
Client:	JBA Planning	**Elevation:**	78.784
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH12**

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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, loose, dry Surface Description: Dense healthy low grass				
				CLAY: Orange/ brown, medium plasticity with some sand, dry, odourless	140710-47-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	298322.566
Project:	Horsley Park	**Northing:**	6253806.023
Client:	JBA Planning	**Elevation:**	72.834
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH13**

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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			ALLUVIUM: Dark brown, some subangular to angular small to medium ironstone gravel Surface Description: In creek bed, no vegetation				
				CLAY: Yellow/ brown, high plasticity, moist, odourless	140710-49-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	298115.521
Project:	Horsley Park	**Northing:**	6253777.908
Client:	JBA Planning	**Elevation:**	69.618
Location:	Wallgrove Rd, Eastern Creek		

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Environmental Log: **HPBH14**

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			ALLUVIUM: Sandy Clay. Brown, loose, low plasticity with some sand Surface Description: dead grass. Surface moist, taken adjacent to dam behind rushes	140710-48-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	298003.223
Project:	Horsley Park	**Northing:**	6253846.626
Client:	JBA Planning	**Elevation:**	62.860
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH15**

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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			FILL: Alluvial. Light brown, low plasticity with some sand Surface Description: No vegetation, dry crust. Fill west of dam				
				Clay: Dark brown/ black, lots of plant roots, plant roots are black, strong organic/ anoxic/manure odour	140710-50-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	297818.443
Project:	Horsley Park	**Northing:**	6253916.750
Client:	JBA Planning	**Elevation:**	68.051
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH16**

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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: Clay mud. Grey/ green, greater than liquid limit with some gravel Surface Description: Surface water on mud patch with dark green/ black algae on surface. Outside of sheds, sparse vegetation on mud	140710-51-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	297932.280
Project:	Horsley Park	**Northing:**	6254080.108
Client:	JBA Planning	**Elevation:**	67.755
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH17**

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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. Light brown, loose Surface Description: Heavy grass cover				
				CLAY: Orange/ light brown, medium plasticity with some sand, odourless, dry	140710-52-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	298109.903
Project:	Horsley Park	**Northing:**	6254071.206
Client:	JBA Planning	**Elevation:**	74.073
Location:	Wallgrove Rd, Eastern Creek		

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Environmental Log: **HPBH18**

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: Sandy Clay. Brown, loose, dry with clay increasing at 0.25m Surface Description: Grass and hay	140710-53-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	298078.703
Project:	Horsley Park	**Northing:**	6254301.016
Client:	JBA Planning	**Elevation:**	72.200
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH19**

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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, loose, lots of plant roots Surface Description: Grass cover				
				CLAY: Brown, medium plasticity, dry, odourless	140710-54-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	297902.240
Project:	Horsley Park	**Northing:**	6254312.427
Client:	JBA Planning	**Elevation:**	67.032
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH20**

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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. Dark brown, loose, dry Surface Description: Healthy, medium length grass	140710-56-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	297997.553
Project:	Horsley Park	**Northing:**	6254470.247
Client:	JBA Planning	**Elevation:**	73.079
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH21**

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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. Dark brown, loose, dry Surface Description: grass and hay				
				CLAY: Orange/ brown, medium plasticity with some sand, odourless, dry	140710-55-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	298218.303
Project:	Horsley Park	**Northing:**	6254446.906
Client:	JBA Planning	**Elevation:**	80.179
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH22**

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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: Grass and hay CLAY: Orange/ brown, medium plasticity with some ironstone gravel, dry, odourless	140710-57-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	298136.285
Project:	Horsley Park	**Northing:**	6254638.608
Client:	JBA Planning	**Elevation:**	74.049
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH23**

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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. Dark brown, loose, dry Surface Description: short to medium height grass cover				
				CLAY: Dark brown/ grey, high plasticity with some sand, dry, odourless	140710-58-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	297945.213
Project:	Horsley Park	**Northing:**	6254702.820
Client:	JBA Planning	**Elevation:**	82.830
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH24**

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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. Dark brown with orange				
				CLAY: Orange/ brown, high plasticity, dry, odourless	140710-59-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	298058.864
Project:	Horsley Park	**Northing:**	6254817.664
Client:	JBA Planning	**Elevation:**	77.046
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH25**

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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. Dark brown, loose, dry				
				CLAY: Dark brown with orange, medium plasticity with some sand, dry, odourless	140710-60-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott

Project ID:	CES100606-JBA	**Easting:**	298263.120
Project:	Horsley Park	**Northing:**	6254830.511
Client:	JBA Planning	**Elevation:**	66.782
Location:	Wallgrove Rd, Eastern Creek	**Environmental Log:**	**HPBH26**

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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			FILL: Clay. Light brown/ green with some sand Surface Description: Very sparse low vegetation. Fill area approx 20m square, dry, odourless	140710-61-CA	Grab		
				End of borehole.				
1								

Drill Company:	CES	**Date Commenced:**	14/07/2010
Drill Model:	Hand Auger	**Date Completed:**	14/07/2010
Hole Diameter (mm):	60	**Logged/checked by:**	C. Aylott