



AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET31856/ 35036 / 1 - 3

Your ref : 361794

NATA Accreditation No: 14484

11 December 2012

MGT- Labmark Environmental Pty Ltd
Unit F3, Building F, 16 Mars Road
Lane Cove NSW 2066

Attn: Dr Robert Symons
Laboratory & Technical Manager

Dear Robert

Asbestos Identification

This report presents the results of three samples, forwarded by MGT- Labmark Environmental Pty Ltd on 7 December 2012, for analysis for asbestos.

1.Introduction: Three samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Safer Environment Method 1.**)

3. Results : **Sample No. 1. ASET31856 / 35036 / 1. 361794 - BH109 - 0.0 - 0.2m - De02077.**
Approx dimensions 7.0 cm x 7.0 cm x 2.2 cm
The sample consisted of a mixture of sandy soil, stones, plant matter and fragments of brick like material.
No asbestos detected.

Sample No. 2. ASET31856 / 35036 / 2. 361794 - BH109 - 0.4 - 0.5m - De02078.
Approx dimensions 7.0 cm x 7.0 cm x 2.0 cm
The sample consisted of a mixture of sandy soil, stones and plant matter, fragments of plaster and cement.
No asbestos detected.

Sample No. 3. ASET31856 / 35036 / 3. 361794 - BH110 - 0.15 - 0.25m - De02089.
Approx dimensions 7.0 cm x 7.0 cm x 1.85 cm
The sample consisted of a mixture of sandy clayish soil, stones and plant matter.
No asbestos detected.

Analysed and reported by,

Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier
Approved Signatory



This document is issued in accordance with
NATA's Accreditation requirements. Accredited
for compliance with ISO/IEC 17025.

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ASBESTOS DETECTION & IDENTIFICATION • REPAIR & CALIBRATION OF SCIENTIFIC EQUIPMENT • AIRBORNE FIBRE & SILICA MONITORING



environmental
SOCIAL AND SAFETY PERFORMANCE

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Consigning Office: Chatswood

Report Results to: Matthew Locke

Invoices to: Matthew Locke

Project No: GEOTLCOV24303AF Task No:

Project Name: SICEEP

Sampler's Name: Priya Dass

Special Instructions: AS PER PAGE 1

Laboratory: MGT LabMark

Project Manager: Matthew Locke

Email: Matthew Locke @coffey.com

Email: Matthew Locke @coffey.com

Mobile:

Phone:

Analysis Request Section

Hold - Metals (Low Level)

Hold - Metals (Low Level)

Hold - Metals (Low Level)

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Hold - Metals (Low Level)

Lab No.

Sample ID

QC11

QC11A

BH116 (0.5-0.6m)

BH116 (0.5-0.6m) A

BH116 (0.7-0.8m)

BH116 (1.0-1.1m)

BH116 (1.5-1.6m)

BH116 (1.5-1.6m) A

BH116 (2.0-2.1m)

BH116 (2.5-2.6m)

BH116 (2.6-2.7m)

BH116 (3.4-3.5m)

BH116 (3.4-3.5m) A

Sample Date

Time

Matrix (Soil, etc)

Container Type & Preservative*

T-A-T (specify)

Standards

1 x 250ml GT

1 x 250ml GT

1 x Ziplock bag

1 x Ziplock bag

1 x Ziplock bag

1 x Ziplock bag

1 x Ziplock bag

1 x Ziplock bag

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RELINQUISHED BY

Name: Priya Dass

Date: 6/12/12

Time: 10:44 a.m.

Date:

Time:

RECEIVED BY

Name: SOE

Date: 6/12/12

Time: 10-44

Date:

Time:

Sample Receipt Advice: (Lab Use Only)

All Samples Received in Good Condition

All Documentation is in Proper Order

Samples Received Properly Chilled

Lab. Ref/ Batch No.

362175

*Container Type & Preservation Codes: P - Plastic, G - Glass Bottle, J - Glass Jar, V - Vial, Z - Ziplock Bag, N - Nitric Acid Preserved, C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice, ST - Sodium Thiosulfate, NP - No Preservative, OP - Other Preservative

Coffey Environments

Version: 4

Issue Date: 24/08/2012



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

environments

SPECIALISTS IN ENVIRONMENTAL
SOCIAL AND SAFETY PERFORMANCE

Consigning Office: Chatswood

Report Results to: Matthew Locke

Invoices to: Matthew Locke

Project No: GEOTLCON24303AF

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Project Name: SICEEP

Task No:

Laboratory: MGT LabMark

Mobile:

Sampler's Name: Priya Dass

Project Manager: Matthew Locke

Email: matthew_locke@coffey.com

Phone:

Email: matthew_locke@coffey.com

Special Instructions:

TPH/BTEX/PAH TESTED AS SUITE B43/METALS TESTED AS M8

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil, etc)	Container Type & Preservative*	T-A-T (specify)
	BH113 (0.5-0.6m)	5/12/12		Soil	1x 250ml GJT	Standard
	BH113 (0.5-0.6m) A				1x ziplock bag	
	BH113 (0.7-0.8m)				Ice	
	BH113 (1.42-1.50m)					
	BH117 (0.25-0.35m)					
x	BH117 (0.25-0.35m) A					
	BH117 (0.5-0.6m)					
	BH117 (0.9-1.0m)					
	QC10				1x 250ml GJT	
	BH117 (1.0-1.1m)				1x 250ml GJT +	
x	BH117 (1.0-1.1m) A				1x ziplock bag	
	BH117 (1.5-1.6m)					
	BH117 (2.0-2.1m)					
	BH117 (2.5-2.6m)					
	BH117 (2.5-2.6m) A					
	BH117 (2.9-3.0m)					
	BH117 (3.0-3.1m)					
	BH116 (0.04-0.1m)	6/12/12				

RELINQUISHED BY

RECEIVED BY

Name: Priya Dass Date: 6/12/12

Name: SVE

Company: MGT LabMark

Date: 6/12/12

Sample Receipt Advice: (Lab Use Only)

Coffey Environments Time: 10:44am

Company: MGT LabMark

Time: 10:44

Time: 10:44

All Samples Received in Good Condition

Name: Date: Time:

Name: Date: Time:

Name: Date: Time:

Name: Date: Time:

All Documentation is in Proper Order

Company: Date: Time:

Company: Date: Time:

Company: Date: Time:

Company: Date: Time:

Samples Received Properly Chilled

*Container Type & Preservation Codes: P - Plastic, G - Glass Bottle, J - Glass Jar, V - Vial, Z - Ziplock Bag, N - Nitric Acid Preserved, C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice, ST - Sodium Thiosulfate, NP - No Preservative, OP - Other Preservative

Lab. Ref/Batch No.

362175

Coffey Environments

Version: 4

Issue Date: 24/08/2012

Sample Receipt Advice

Company name: **Coffey Geotechnics Pty Ltd Chatswood**
Contact name: **Matthew Locke**
Client job number: **SICEEP GEOTLCOV24303AF**
COC number: **103780-81**
Turn around time: **5 Day**
Date/Time received: **Dec 7, 2012 12:48 PM**
mgt-LabMark reference: **362175**

Sample information

- ☒ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☒ Sample Temperature of a random sample selected from the batch as recorded by mgt-LabMark
Sample Receipt : 6 degrees Celsius.
- ☒ All samples have been received as described on the above COC.
- ☒ COC has been completed correctly.
- ☒ Attempt to chill was evident.
- ☒ Appropriately preserved sample containers have been used.
- ☒ All samples were received in good condition.
- ☒ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☒ Organic samples had Teflon liners.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Sample BH117 (0.25-0.35m)_A was not received; 2 samples received as BH117 (0.25-0.35m) one labelled as parent (De04814) and other as A (De04815) | Sample QC11A sent to Envirolab as requested | Asbestos analysis conducted by ASET

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: jean.heng@mgtlabmark.com.au

Results will be delivered electronically via e.mail to Matthew Locke - Matthew_Locke@coffey.com.

Certificate of Analysis

Coffey Geotechnics Pty Ltd Chatswood
Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Attention: Matthew Locke

Report 362175-S
Client Reference SICEEP GEOTLCOV24303AF
Received Date Dec 06, 2012

Client Sample ID			BH113_(0.5-0.6m)	BH113_(0.5-0.6m)_A	BH113_(0.7-0.8m)	BH113_(1.42-1.50m)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De04810	S12-De04811	S12-De04812	S12-De04813
Date Sampled			Dec 05, 2012	Dec 05, 2012	Dec 05, 2012	Dec 05, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	< 10	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	< 100	< 100	< 100	< 100
TRH C29-C36	100	mg/kg	< 100	< 100	< 100	< 100
TRH C10-36 (Total)	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total m+p-Xylenes	1	mg/kg	< 1	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	92	91	91	92
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	< 1	< 1	< 1
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH113_(0.5-0.6m)	BH113_(0.5-0.6m)_A	BH113_(0.7-0.8m)	BH113_(1.42-1.50m)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De04810	S12-De04811	S12-De04812	S12-De04813
Date Sampled			Dec 05, 2012	Dec 05, 2012	Dec 05, 2012	Dec 05, 2012
Test/Reference	LOR	Unit				
Polyaromatic Hydrocarbons (PAH)						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	1	mg/kg	< 1	< 1	< 1	< 1
2-Fluorobiphenyl (surr.)	1	%	86	98	91	96
p-Terphenyl-d14 (surr.)	1	%	93	102	90	93
Heavy Metals						
Arsenic	2	mg/kg	3.6	3.8	-	4.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	14	13	-	13
Copper	5	mg/kg	30	20	-	15
Lead	5	mg/kg	37	15	-	78
Mercury	0.05	mg/kg	0.07	< 0.05	-	0.10
Nickel	5	mg/kg	13	6.0	-	< 5
Zinc	5	mg/kg	29	15	-	10
% Moisture	0.1	%	12	14	7.1	16
Asbestos			See attached	-	-	-

Client Sample ID			BH117_(0.25-0.35m)	BH117_(0.25-0.35m)_A	BH117_(0.9-1.0m)	QC10
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De04814	S12-De04815	S12-De04817	S12-De04818
Date Sampled			Dec 05, 2012	Dec 05, 2012	Dec 05, 2012	Dec 05, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	< 10	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	1000	630	260	220
TRH C29-C36	100	mg/kg	1300	1100	860	660
TRH C10-36 (Total)	100	mg/kg	2300	1700	1100	880
BTEX						
Benzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total m+p-Xylenes	1	mg/kg	< 1	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	95	93	88	93
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			BH117_(0.25-0.35m)	BH117_(0.25-0.35m)_A	BH117_(0.9-1.0m)	QC10
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De04814	S12-De04815	S12-De04817	S12-De04818
Date Sampled			Dec 05, 2012	Dec 05, 2012	Dec 05, 2012	Dec 05, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
TRH >C16-C34	100	mg/kg	1900	1400	840	700
TRH >C34-C40	100	mg/kg	470	430	490	330
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 5	< 5	< 5	< 0.5
Acenaphthylene	0.5	mg/kg	< 5	< 5	< 5	< 0.5
Anthracene	0.5	mg/kg	< 5	< 5	< 5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 5	< 5	< 5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 5	< 5	< 5	< 0.5
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 10	< 10	< 10	< 1
Benzo(g,h,i)perylene	0.5	mg/kg	< 5	< 5	< 5	< 0.5
Chrysene	0.5	mg/kg	< 5	< 5	< 5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 5	< 5	< 5	< 0.5
Fluoranthene	0.5	mg/kg	< 5	< 5	< 5	< 0.5
Fluorene	0.5	mg/kg	< 5	< 5	< 5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 5	< 5	< 5	< 0.5
Naphthalene	0.5	mg/kg	< 5	< 5	< 5	< 0.5
Phenanthrene	0.5	mg/kg	< 5	< 5	< 5	< 0.5
Pyrene	0.5	mg/kg	< 5	< 5	< 5	< 0.5
Total PAH	1	mg/kg	< 10	< 10	< 10	< 1
2-Fluorobiphenyl (surr.)	1	%	99	89	90	84
p-Terphenyl-d14 (surr.)	1	%	102	97	89	80
Heavy Metals						
Arsenic	2	mg/kg	5.5	5.9	3.7	-
Cadmium	0.4	mg/kg	< 0.4	0.5	< 0.4	-
Chromium	5	mg/kg	5.9	< 5	< 5	-
Copper	5	mg/kg	200	140	83	-
Lead	5	mg/kg	95	91	15	-
Mercury	0.05	mg/kg	0.14	0.14	< 0.05	-
Nickel	5	mg/kg	13	19	5.9	-
Zinc	5	mg/kg	160	180	41	-
% Moisture	0.1	%	9.8	7.9	10.0	10
Asbestos			See attached	-	-	-

Client Sample ID			BH117_(2.0-2.1m)	BH117_(3.0-3.1m)	BH116_(0.04-0.1m)	QC11
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De04822	S12-De04826	S12-De04827	S12-De04828
Date Sampled			Dec 05, 2012	Dec 05, 2012	Dec 06, 2012	Dec 06, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	< 10	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	< 100	< 100	360	420
TRH C29-C36	100	mg/kg	< 100	< 100	160	240

Client Sample ID			BH117_(2.0-2.1m)	BH117_(3.0-3.1m)	BH116_(0.04-0.1m)	QC11
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De04822	S12-De04826	S12-De04827	S12-De04828
Date Sampled			Dec 05, 2012	Dec 05, 2012	Dec 06, 2012	Dec 06, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C10-36 (Total)	100	mg/kg	< 100	< 100	520	660
BTEX						
Benzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total m+p-Xylenes	1	mg/kg	< 1	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	88	91	93	91
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	440	560
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	< 1	< 1	< 1
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	1	mg/kg	< 1	< 1	< 1	< 1
2-Fluorobiphenyl (surr.)	1	%	88	95	90	91
p-Terphenyl-d14 (surr.)	1	%	90	93	89	91
Heavy Metals						
Arsenic	2	mg/kg	3.4	-	12	13
Cadmium	0.4	mg/kg	< 0.4	-	0.5	0.6
Chromium	5	mg/kg	< 5	-	27	23
Copper	5	mg/kg	55	-	46	56
Lead	5	mg/kg	6.2	-	240	260
Mercury	0.05	mg/kg	< 0.05	-	0.41	0.44
Nickel	5	mg/kg	5.3	-	55	58
Zinc	5	mg/kg	8.9	-	140	170
% Moisture	0.1	%	14	17	8.7	11

Client Sample ID			BH117_(2.0-2.1m)	BH117_(3.0-3.1m)	BH116_(0.04-0.1m)	QC11
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De04822	S12-De04826	S12-De04827	S12-De04828
Date Sampled			Dec 05, 2012	Dec 05, 2012	Dec 06, 2012	Dec 06, 2012
Test/Reference	LOR	Unit				
Asbestos			-	-	See attached	-

Client Sample ID			BH116_(0.7-0.8m)	BH116_(1.5-1.6m)	BH116_(1.5-1.6m)_A	BH116_(2.5-2.6m)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De04831	S12-De04833	S12-De04834	S12-De04836
Date Sampled			Dec 06, 2012	Dec 06, 2012	Dec 06, 2012	Dec 06, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	< 10	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	170	< 100	< 100	< 100
TRH C29-C36	100	mg/kg	< 100	< 100	< 100	< 100
TRH C10-36 (Total)	100	mg/kg	170	< 100	< 100	< 100
BTEX						
Benzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total m+p-Xylenes	1	mg/kg	< 1	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	100	104	107	96
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	210	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	< 1	< 1	< 1
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	0.7	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	0.8	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH116_(0.7-0.8m)	BH116_(1.5-1.6m)	BH116_(1.5-1.6m)_A	BH116_(2.5-2.6m)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De04831	S12-De04833	S12-De04834	S12-De04836
Date Sampled			Dec 06, 2012	Dec 06, 2012	Dec 06, 2012	Dec 06, 2012
Test/Reference	LOR	Unit				
Polyaromatic Hydrocarbons (PAH)						
Phenanthrene	0.5	mg/kg	1.1	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	0.8	< 0.5	< 0.5	< 0.5
Total PAH	1	mg/kg	3.9	< 1	< 1	< 1
2-Fluorobiphenyl (surr.)	1	%	87	87	86	89
p-Terphenyl-d14 (surr.)	1	%	93	95	92	95
Heavy Metals						
Arsenic	2	mg/kg	9.9	2.8	3.9	-
Cadmium	0.4	mg/kg	1.0	< 0.4	< 0.4	-
Chromium	5	mg/kg	14	5.3	6.3	-
Copper	5	mg/kg	110	31	32	-
Lead	5	mg/kg	260	47	55	-
Mercury	0.05	mg/kg	0.11	< 0.05	< 0.05	-
Nickel	5	mg/kg	43	5.3	7.7	-
Zinc	5	mg/kg	210	26	42	-
% Moisture	0.1	%	16	11	10	16
Asbestos			See attached	-	-	-

Client Sample ID			BH116_(3.4-3.5m)	BH116_(3.4-3.5m)_A
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			S12-De04838	S12-De04839
Date Sampled			Dec 06, 2012	Dec 06, 2012
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	10	mg/kg	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	< 50
TRH C15-C28	100	mg/kg	< 100	< 100
TRH C29-C36	100	mg/kg	< 100	< 100
TRH C10-36 (Total)	100	mg/kg	< 100	< 100
BTEX				
Benzene	0.5	mg/kg	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5
Total m+p-Xylenes	1	mg/kg	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	104	75
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50

Client Sample ID			BH116_(3.4-3.5m)	BH116_(3.4-3.5m)_A
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			S12-De04838	S12-De04839
Date Sampled			Dec 06, 2012	Dec 06, 2012
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				
TRH >C16-C34	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
Polyaromatic Hydrocarbons (PAH)				
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	< 1
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Total PAH	1	mg/kg	< 1	< 1
2-Fluorobiphenyl (surr.)	1	%	87	94
p-Terphenyl-d14 (surr.)	1	%	93	99
% Moisture	0.1	%	17	17

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Testing Site	Extracted	Holding Time
mgt-LabMark Suite 4			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Dec 10, 2012	14 Day
- Method: E004 Petroleum Hydrocarbons (TPH)			
BTEX	Sydney	Dec 07, 2012	14 Day
- Method: E029/E016 BTEX			
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *	Sydney	Dec 10, 2012	14 Day
- Method: LM-LTM-ORG2010			
Polyaromatic Hydrocarbons (PAH)	Sydney	Dec 10, 2012	14 Day
- Method: E007 Polyaromatic Hydrocarbons (PAH)			
Metals M8	Sydney	Dec 07, 2012	28 Day
- Method: E022 Acid Extractable metals in Soils & E026 Mercury			
% Moisture	Sydney	Dec 07, 2012	28 Day
- Method: E005 Moisture Content			

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Client Job No.: SICEEP GEOTLCOV24303AF

Order No.:
Report #: 362175
Phone: +61 2 9406 1000
Fax: +61 2 9406 1002

Received: Dec 7, 2012 12:48 PM
Due: Dec 14, 2012
Priority: 5 Day
Contact Name: Matthew Locke

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	mgt-LabMark Suite 4
Laboratory where analysis is conducted									
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217					X		X	X	X
Brisbane Laboratory - NATA Site # 20794									
External Laboratory						X			
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
BH113_(0.5-0.6m)	Dec 05, 2012		Soil	S12-De04810	X	X		X	X
BH113_(0.5-0.6m)_A	Dec 05, 2012		Soil	S12-De04811	X			X	X
BH113_(0.7-0.8m)	Dec 05, 2012		Soil	S12-De04812	X				X
BH113_(1.42-1.50m)	Dec 05, 2012		Soil	S12-De04813	X			X	X
BH117_(0.25-0.35m)	Dec 05, 2012		Soil	S12-De04814	X	X		X	X
BH117_(0.25-0.35m)_A	Dec 05, 2012		Soil	S12-De04815	X			X	X

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Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	mgt-LabMark Suite 4
Laboratory where analysis is conducted									
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217					X		X	X	X
Brisbane Laboratory - NATA Site # 20794									
External Laboratory						X			
BH117_(0.5-0.6m)	Dec 05, 2012		Soil	S12-De04816			X		
BH117_(0.9-1.0m)	Dec 05, 2012		Soil	S12-De04817	X			X	X
QC10	Dec 05, 2012		Soil	S12-De04818	X				X
BH117_(1.0-1.1m)	Dec 05, 2012		Soil	S12-De04819			X		
BH117_(1.0-1.1m) A	Dec 05, 2012		Soil	S12-De04820			X		
BH117_(1.5-1.6m)	Dec 05, 2012		Soil	S12-De04821			X		
BH117_(2.0-2.1m)	Dec 05, 2012		Soil	S12-De04822	X			X	X

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Laboratory where analysis is conducted									
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217					X		X	X	X
Brisbane Laboratory - NATA Site # 20794									
External Laboratory						X			
BH117_(2.5-2.6m)	Dec 05, 2012		Soil	S12-De04823			X		
BH117_(2.5-2.6m)_A	Dec 05, 2012		Soil	S12-De04824			X		
BH117_(2.9-3.0m)	Dec 05, 2012		Soil	S12-De04825			X		
BH117_(3.0-3.1m)	Dec 05, 2012		Soil	S12-De04826	X				X
BH116_(0.04-0.1m)	Dec 06, 2012		Soil	S12-De04827	X	X		X	X
QC11	Dec 06, 2012		Soil	S12-De04828	X			X	X
BH116_(0.5-0.6m)	Dec 06, 2012		Soil	S12-De04829			X		

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Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	mgt-LabMark Suite 4
Laboratory where analysis is conducted									
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217					X		X	X	X
Brisbane Laboratory - NATA Site # 20794									
External Laboratory						X			
BH116_(0.5-0.6m)_A	Dec 06, 2012		Soil	S12-De04830			X		
BH116_(0.7-0.8m)	Dec 06, 2012		Soil	S12-De04831	X	X		X	X
BH116_(1.0-1.1m)	Dec 06, 2012		Soil	S12-De04832			X		
BH116_(1.5-1.6m)	Dec 06, 2012		Soil	S12-De04833	X			X	X
BH116_(1.5-1.6m)_A	Dec 06, 2012		Soil	S12-De04834	X			X	X
BH116_(2.0-2.1m)	Dec 06, 2012		Soil	S12-De04835			X		
BH116_(2.5-2.6m)	Dec 06, 2012		Soil	S12-De04836	X				X

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Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	mgt-LabMark Suite 4
Laboratory where analysis is conducted									
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217					X		X	X	X
Brisbane Laboratory - NATA Site # 20794									
External Laboratory						X			
BH116_(2.6-2.7m)	Dec 06, 2012		Soil	S12-De04837			X		
BH116_(3.4-3.5m)	Dec 06, 2012		Soil	S12-De04838	X				X
BH116_(3.4-3.5m) A	Dec 06, 2012		Soil	S12-De04839	X				X

mgt-LabMark Internal Quality Control Review

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environment Protection Authority
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC was performed on samples not pertaining to this report, however QC is representative of the sequence or batch that client samples were analysed within

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
3. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	mg/kg	< 10			10	Pass	
TRH C10-C14	mg/kg	< 50			50	Pass	
TRH C15-C28	mg/kg	< 100			100	Pass	
TRH C29-C36	mg/kg	< 100			100	Pass	
Method Blank							
BTEX E029/E016 BTEX							
Benzene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.5			0.5	Pass	
Total m+p-Xylenes	mg/kg	< 1			1	Pass	
o-Xylene	mg/kg	< 0.5			0.5	Pass	
Xylenes(ortho.meta and para)	mg/kg	< 1.5			1.5	Pass	
Total BTEX	mg/kg	< 1.5			1.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	mg/kg	< 1			1	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Metals M8 E022 Acid Extractable metals in Soils & E026 Mercury							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							

Test			Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
TRH C6-C9			%	81		70-130	Pass	
TRH C10-C14			%	112		70-130	Pass	
LCS - % Recovery								
BTEX E029/E016 BTEX								
Benzene			%	90		70-130	Pass	
Toluene			%	89		70-130	Pass	
Ethylbenzene			%	88		70-130	Pass	
Total m+p-Xylenes			%	91		70-130	Pass	
o-Xylene			%	89		70-130	Pass	
Xylenes(ortho.meta and para)			%	90		70-130	Pass	
LCS - % Recovery								
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010								
Naphthalene			%	80		70-130	Pass	
TRH C6-C10			%	89		70-130	Pass	
TRH >C10-C16			%	99		70-130	Pass	
LCS - % Recovery								
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)								
Acenaphthene			%	111		70-130	Pass	
Acenaphthylene			%	105		70-130	Pass	
Anthracene			%	109		70-130	Pass	
Benz(a)anthracene			%	100		70-130	Pass	
Benzo(a)pyrene			%	103		70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene			%	106		70-130	Pass	
Benzo(g,h,i)perylene			%	99		70-130	Pass	
Chrysene			%	112		70-130	Pass	
Dibenz(a,h)anthracene			%	95		70-130	Pass	
Fluoranthene			%	102		70-130	Pass	
Fluorene			%	106		70-130	Pass	
Indeno(1,2,3-cd)pyrene			%	98		70-130	Pass	
Naphthalene			%	111		70-130	Pass	
Phenanthrene			%	99		70-130	Pass	
Pyrene			%	106		70-130	Pass	
LCS - % Recovery								
Metals M8 E022 Acid Extractable metals in Soils & E026 Mercury								
Arsenic			%	127		70-130	Pass	
Cadmium			%	125		70-130	Pass	
Chromium			%	130		70-130	Pass	
Copper			%	119		70-130	Pass	
Lead			%	124		70-130	Pass	
Mercury			%	102		70-130	Pass	
Nickel			%	130		70-130	Pass	
Zinc			%	124		70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1				
TRH C6-C9	S12-De04810	CP	%	71		70-130	Pass	
TRH C10-C14	S12-De04810	CP	%	115		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	S12-De04810	CP	%	82		70-130	Pass	
Toluene	S12-De04810	CP	%	81		70-130	Pass	
Ethylbenzene	S12-De04810	CP	%	80		70-130	Pass	
Total m+p-Xylenes	S12-De04810	CP	%	84		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
o-Xylene	S12-De04810	CP	%	82		70-130	Pass	
Xylenes(ortho.meta and para)	S12-De04810	CP	%	83		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1				
Naphthalene	S12-De04810	CP	%	70		70-130	Pass	
TRH C6-C10	S12-De04810	CP	%	78		70-130	Pass	
TRH >C10-C16	S12-De04810	CP	%	101		70-130	Pass	
Spike - % Recovery								
Polyaromatic Hydrocarbons (PAH)				Result 1				
Acenaphthene	S12-De04810	CP	%	103		70-130	Pass	
Acenaphthylene	S12-De04810	CP	%	99		70-130	Pass	
Anthracene	S12-De04810	CP	%	100		70-130	Pass	
Benz(a)anthracene	S12-De04810	CP	%	101		70-130	Pass	
Benzo(a)pyrene	S12-De04810	CP	%	86		70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S12-De04810	CP	%	101		70-130	Pass	
Benzo(g,h,i)perylene	S12-De04810	CP	%	101		70-130	Pass	
Chrysene	S12-De04810	CP	%	113		70-130	Pass	
Dibenz(a,h)anthracene	S12-De04810	CP	%	90		70-130	Pass	
Fluoranthene	S12-De04810	CP	%	116		70-130	Pass	
Fluorene	S12-De04810	CP	%	95		70-130	Pass	
Indeno(1,2,3-cd)pyrene	S12-De04810	CP	%	98		70-130	Pass	
Naphthalene	S12-De04810	CP	%	108		70-130	Pass	
Phenanthrene	S12-De04810	CP	%	98		70-130	Pass	
Pyrene	S12-De04810	CP	%	120		70-130	Pass	
Spike - % Recovery								
Metals M8				Result 1				
Copper	S12-De05525	NCP	%	100		70-130	Pass	
Nickel	S12-De05525	NCP	%	130		70-130	Pass	
Spike - % Recovery								
Metals M8				Result 1				
Arsenic	S12-De04817	CP	%	128		70-130	Pass	
Cadmium	S12-De04817	CP	%	118		70-130	Pass	
Chromium	S12-De04817	CP	%	124		70-130	Pass	
Lead	S12-De04817	CP	%	119		70-130	Pass	
Mercury	S12-De04817	CP	%	106		70-130	Pass	
Nickel	S12-De04817	CP	%	96		70-130	Pass	
Zinc	S12-De04817	CP	%	129		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1				
TRH C6-C9	S12-De04827	CP	%	74		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	S12-De04827	CP	%	85		70-130	Pass	
Toluene	S12-De04827	CP	%	84		70-130	Pass	
Ethylbenzene	S12-De04827	CP	%	84		70-130	Pass	
Total m+p-Xylenes	S12-De04827	CP	%	86		70-130	Pass	
o-Xylene	S12-De04827	CP	%	84		70-130	Pass	
Xylenes(ortho.meta and para)	S12-De04827	CP	%	86		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1				
Naphthalene	S12-De04827	CP	%	83		70-130	Pass	
TRH C6-C10	S12-De04827	CP	%	76		70-130	Pass	
Spike - % Recovery								
Polyaromatic Hydrocarbons (PAH)				Result 1				
Acenaphthene	S12-De04827	CP	%	97		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Acenaphthylene	S12-De04827	CP	%	87			70-130	Pass	
Anthracene	S12-De04827	CP	%	90			70-130	Pass	
Benz(a)anthracene	S12-De04827	CP	%	86			70-130	Pass	
Benzo(a)pyrene	S12-De04827	CP	%	103			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S12-De04827	CP	%	113			70-130	Pass	
Benzo(g,h,i)perylene	S12-De04827	CP	%	128			70-130	Pass	
Chrysene	S12-De04827	CP	%	103			70-130	Pass	
Dibenz(a,h)anthracene	S12-De04827	CP	%	116			70-130	Pass	
Fluoranthene	S12-De04827	CP	%	103			70-130	Pass	
Fluorene	S12-De04827	CP	%	89			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S12-De04827	CP	%	122			70-130	Pass	
Naphthalene	S12-De04827	CP	%	101			70-130	Pass	
Phenanthrene	S12-De04827	CP	%	103			70-130	Pass	
Pyrene	S12-De04827	CP	%	104			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S12-De04810	CP	mg/kg	< 10	< 10	<1	30%	Pass	
TRH C10-C14	S12-De04810	CP	mg/kg	< 50	< 50	4.0	30%	Pass	
TRH C15-C28	S12-De04810	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH C29-C36	S12-De04810	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total m+p-Xylenes	S12-De04810	CP	mg/kg	< 1	< 1	<1	30%	Pass	
o-Xylene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes(ortho.meta and para)	S12-De04810	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Total BTEX	S12-De04810	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD			
Naphthalene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S12-De04810	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10 less BTEX (F1)	S12-De04810	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S12-De04810	CP	mg/kg	< 50	< 50	2.0	30%	Pass	
TRH >C16-C34	S12-De04810	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S12-De04810	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD			
Acenaphthene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S12-De04810	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzo(g,h,i)perylene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD		
Phenanthrene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S12-De04810	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Metals M8				Result 1	Result 2	RPD		
Copper	S12-De05524	NCP	mg/kg	67	80	18	30%	Pass
Duplicate								
Metals M8				Result 1	Result 2	RPD		
Arsenic	S12-De04815	CP	mg/kg	5.9	5.1	15	30%	Pass
Cadmium	S12-De04815	CP	mg/kg	0.5	0.4	6.0	30%	Pass
Chromium	S12-De04815	CP	mg/kg	< 5	6.7	41	30%	Fail
Copper	S12-De04815	CP	mg/kg	140	160	12	30%	Pass
Lead	S12-De04815	CP	mg/kg	91	87	5.0	30%	Pass
Mercury	S12-De04815	CP	mg/kg	0.14	0.12	14	30%	Pass
Nickel	S12-De04815	CP	mg/kg	19	16	17	30%	Pass
Zinc	S12-De04815	CP	mg/kg	180	190	7.0	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C9	S12-De04827	CP	mg/kg	< 10	< 10	<1	30%	Pass
TRH C10-C14	S12-De04827	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C15-C28	S12-De04827	CP	mg/kg	360	290	20	30%	Pass
TRH C29-C36	S12-De04827	CP	mg/kg	160	140	9.0	30%	Pass
Duplicate								
BTEX				Result 1	Result 2	RPD		
Benzene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Toluene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ethylbenzene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Total m+p-Xylenes	S12-De04827	CP	mg/kg	< 1	< 1	<1	30%	Pass
o-Xylene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Xylenes(ortho.meta and para)	S12-De04827	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass
Total BTEX	S12-De04827	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD		
Naphthalene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	S12-De04827	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C6-C10 less BTEX (F1)	S12-De04827	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH >C10-C16	S12-De04827	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	S12-De04827	CP	mg/kg	440	370	17	30%	Pass
TRH >C34-C40	S12-De04827	CP	mg/kg	< 100	< 100	8.0	30%	Pass
Duplicate								
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD		
Acenaphthene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S12-De04827	CP	mg/kg	< 1	< 1	<1	30%	Pass
Benzo(g,h,i)perylene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD		
Pyrene	S12-De04827	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Comments

Please note: Asbestos analysed by ASET (Job :ASET31879/35059/1-4) NATA Accreditation : 14484

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q15	The RPD reported passes mgt-LabMark's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Laura Schofield	Senior Analyst-Volatile (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)



Dr. Bob Symons

Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref: ASET31879/ 35059 / 1 - 4

Your ref: 362175

NATA Accreditation No: 14484

12 December 2012

MGT- Labmark Environmental Pty Ltd

Unit F3, 16 Mars Road

Lane Cove West NSW 2066

Attn: Dr Robert Symons

Laboratory & Technical Manager

Dear Robert

Asbestos Identification

This report presents the results of four samples, forwarded by MGT- Labmark Environmental Pty Ltd on 12 December 2012, for analysis for asbestos.

1.Introduction:Four samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1.)**

3. Results : **Sample No. 1. ASET31879 / 35059 / 1. BH113 - 0.5-0.6m - De04810.**
Approx dimensions 6.0 cm x 6.0 cm x 2.0 cm
The sample consisted of a mixture of soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 2. ASET31879 / 35059 / 2. BH117 - 0.25-0.35m - De04814.
Approx dimensions 6.0 cm x 6.0 cm x 2.1 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and bitumen.
No asbestos detected.

Sample No. 3. ASET31879 / 35059 / 3. BH116 - 0.04-0.1m - De04827.
Approx dimensions 6.0 cm x 6.0 cm x 2.0 cm
The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster, cement, brick, bitumen and pieces of glass.
No asbestos detected.

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635

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Sample No. 4. ASET31879 / 35059 / 4. BH116 - 0.7-0.8 - De04831.

Approx dimensions 6.0 cm x 6.0 cm x 2.0 cm

The sample consisted of a mixture of soil, stones, fragments of plaster, corroded metal and glass.

No asbestos detected.

Analysed and reported by,

A handwritten signature in black ink, appearing to read "N. Maddage", written over a light blue horizontal line.

Nisansala Maddage. BSc(Hons)
Environmental Scientist/Approved Identifier

A handwritten signature in black ink, appearing to read "Mahen De Silva", written over a light blue horizontal line.

Mahen De Silva . BSc. MSc. Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Signatory



This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 2 of 2 103783

		Consigning Office: Chatswood Report Results to: Matthew Locke Invoices to: Matthew Locke		Mobile: @coffey.com Email: matthew_locke@coffey.com			
Project No: GEOTLCON24303AF Task No: Project Name: SICEEP Laboratory: MGT LabMark Sampler's Name: Priya Dass Project Manager: Matthew Locke		Analysis Request Section					
Special Instructions: AS PER PAGE 1		Analysis Request Section					
Lab No.	Sample ID	Sample Date	Time	Matrix (Sol., etc)	Container Type & Preservative*	T-A-T (specify)	Notes
	BH107 (4.0-4.1m) A						
	BH107 (4.5-4.6m) B						
	BH107 (5.0-5.1m)						
	BH107 (5.5-5.6m)						
	BH107 (5.5-5.6m) A						
	BH107 (5.9-6.0m)						
	QC14						
	BH115 (0.33-0.43m)	7/12/12					
	BH115 (0.33-0.43m) A						
	BH115 (0.5-0.6m)						
	BH115 (1.0-1.1m)						
	BH115 (1.0-1.1m) A						
	BH115 (1.2-1.3m)						
RELINQUISHED BY Name: Priya Dass Date: 7/12/12 Coffey Environments Time: 10:15 a.m.		RECEIVED BY Name: SUE Date: 7/12/12 Company: MGT Labmark Time: 10:15					
Name: Priya Dass Date: 7/12/12 Coffey Environments Time: 10:15 a.m.		Sample Receipt Advice: (Lab Use Only) ☐ All Samples Received in Good Condition ☐ All Documentation is in Proper Order ☐ Samples Received Properly Chilled Lab. Ref/Batch No.					
Name: Priya Dass Date: 7/12/12 Coffey Environments Time: 10:15 a.m.		*Container Type & Preservation Codes: P - Plastic, G - Glass Bottle, J - Glass Jar, V - Vial, Z - Ziplock Bag, N - Nitric Acid Preserved, C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice, ST - Sodium Thiosulfate, NP - No Preservative, OP - Other Preservative Coffey Environments					

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Issue Date: 24/08/2012

Sample Receipt Advice

Company name: **Coffey Geotechnics Pty Ltd Chatswood**

Contact name: **Matthew Locke**
Client job number: **SICEEP GEOTLCOV24303AF**
COC number: **103782-103783**
Turn around time: **5 Day**
Date/Time received: **Dec 7, 2012 12:20 PM**
mgt-LabMark reference: **362306**

Sample information

- ☒ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☒ Sample Temperature of a random sample selected from the batch as recorded by mgt-LabMark
Sample Receipt : 19 degrees Celsius.
- ☒ All samples have been received as described on the above COC.
- ☒ COC has been completed correctly.
- ☒ Attempt to chill was evident.
- ☒ Appropriately preserved sample containers have been used.
- ☒ All samples were received in good condition.
- ☒ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☒ Organic samples had Teflon liners.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

QC13A forwarded to Envirolab as requested | Asbestos conducted by ASET

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: jean.heng@mgtlabmark.com.au

Results will be delivered electronically via e.mail to Matthew Locke - Matthew_Locke@coffey.com.

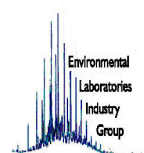
mgt-LabMark Sample Receipt



Environmental Laboratory
Air Analysis
Water Analysis
Soil Contamination Analysis

NATA Accreditation
Stack Emission Sampling & Analysis
Trade Waste Sampling & Analysis
Groundwater Sampling & Analysis

35Years of Environmental Analysis & Experience – fully Australian Owned



Certificate of Analysis

Coffey Geotechnics Pty Ltd Chatswood
Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Attention: Matthew Locke

Report 362306-S
Client Reference SICEEP GEOTLCOV24303AF
Received Date Dec 07, 2012

Client Sample ID			BH107_(0.17-0.27m)	BH107_(0.17-0.27m)_A	BH107_(0.4-0.5m)	BH107_(0.9-1.0m)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De05524	S12-De05525	S12-De05526	S12-De05527
Date Sampled			Dec 06, 2012	Dec 06, 2012	Dec 06, 2012	Dec 06, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	< 10	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	< 100	< 100	< 100	< 100
TRH C29-C36	100	mg/kg	< 100	< 100	< 100	< 100
TRH C10-36 (Total)	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total m+p-Xylenes	1	mg/kg	< 1	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	97	96	108	91
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.9
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	< 1	< 1	1.2
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.8
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH107_(0.17-0.27m)	BH107_(0.17-0.27m)_A	BH107_(0.4-0.5m)	BH107_(0.9-1.0m)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De05524	S12-De05525	S12-De05526	S12-De05527
Date Sampled			Dec 06, 2012	Dec 06, 2012	Dec 06, 2012	Dec 06, 2012
Test/Reference	LOR	Unit				
Polyaromatic Hydrocarbons (PAH)						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	1	mg/kg	< 1	< 1	< 1	3.4
2-Fluorobiphenyl (surr.)	1	%	108	92	97	97
p-Terphenyl-d14 (surr.)	1	%	93	81	82	82
Heavy Metals						
Arsenic	2	mg/kg	< 2	3.0	9.6	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	< 5	< 5	21	-
Copper	5	mg/kg	67	67	30	-
Lead	5	mg/kg	23	18	27	-
Mercury	0.05	mg/kg	0.10	0.07	< 0.05	-
Nickel	5	mg/kg	81	66	32	-
Zinc	5	mg/kg	92	78	200	-
% Moisture	0.1	%	8.6	11	6.9	8.8
Asbestos			-	-	See attached	See attached

Client Sample ID			BH107_(1.5-1.6m)	BH107_(2.5-2.6m)	BH115_(0.33-0.43m)	BH115_(1.0-1.1m)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De05530	S12-De05533	S12-De05545	S12-De05548
Date Sampled			Dec 06, 2012	Dec 06, 2012	Dec 07, 2012	Dec 07, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	< 10	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	< 100	< 100	< 100	300
TRH C29-C36	100	mg/kg	< 100	< 100	< 100	490
TRH C10-36 (Total)	100	mg/kg	< 100	< 100	< 100	790
BTEX						
Benzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total m+p-Xylenes	1	mg/kg	< 1	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	92	92	95	93
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			BH107_(1.5-1.6m)	BH107_(2.5-2.6m)	BH115_(0.33-0.43m)	BH115_(1.0-1.1m)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De05530	S12-De05533	S12-De05545	S12-De05548
Date Sampled			Dec 06, 2012	Dec 06, 2012	Dec 07, 2012	Dec 07, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	660
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	310
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	0.7	< 0.5
Benz(a)anthracene	0.5	mg/kg	0.7	< 0.5	1.8	0.5
Benzo(a)pyrene	0.5	mg/kg	0.7	< 0.5	2.6	0.7
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	1.1	< 1	4.3	1.3
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	1.4	< 0.5
Chrysene	0.5	mg/kg	0.7	< 0.5	1.8	0.6
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	1.1	< 0.5	3.1	0.8
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	1.2	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	0.8	< 0.5	2.2	0.7
Pyrene	0.5	mg/kg	1.1	< 0.5	2.9	0.8
Total PAH	1	mg/kg	6.2	< 1	22	5.4
2-Fluorobiphenyl (surr.)	1	%	86	89	93	92
p-Terphenyl-d14 (surr.)	1	%	77	75	81	81
Heavy Metals						
Arsenic	2	mg/kg	2.3	-	11	13
Cadmium	0.4	mg/kg	0.7	-	0.6	1.1
Chromium	5	mg/kg	17	-	11	< 5
Copper	5	mg/kg	37	-	120	71
Lead	5	mg/kg	26	-	210	220
Mercury	0.05	mg/kg	0.83	-	0.21	0.17
Nickel	5	mg/kg	110	-	19	14
Zinc	5	mg/kg	110	-	280	480
% Moisture	0.1	%	10	4.9	7.6	9.7
Asbestos			-	-	See attached	-

Client Sample ID			BH115_(1.0-1.1m)_A
Sample Matrix			Soil
mgt-LabMark Sample No.			S12-De05549
Date Sampled			Dec 07, 2012
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	10	mg/kg	< 10
TRH C10-C14	50	mg/kg	< 50
TRH C15-C28	100	mg/kg	190
TRH C29-C36	100	mg/kg	370

Client Sample ID			BH115_(1.0-1.1m)_A
Sample Matrix			Soil
mgt-LabMark Sample No.			S12-De05549
Date Sampled			Dec 07, 2012
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C10-36 (Total)	100	mg/kg	560
BTEX			
Benzene	0.5	mg/kg	< 0.5
Toluene	0.5	mg/kg	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5
Total m+p-Xylenes	1	mg/kg	< 1
o-Xylene	0.5	mg/kg	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5
Total BTEX	1.5	mg/kg	< 1.5
4-Bromofluorobenzene (surr.)	1	%	98
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *			
Naphthalene ^{N02}	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	460
TRH >C34-C40	100	mg/kg	240
Polyaromatic Hydrocarbons (PAH)			
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	0.7
Fluorene	0.5	mg/kg	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	0.5
Pyrene	0.5	mg/kg	0.6
Total PAH	1	mg/kg	1.8
2-Fluorobiphenyl (surr.)	1	%	90
p-Terphenyl-d14 (surr.)	1	%	78
Heavy Metals			
Arsenic	2	mg/kg	10
Cadmium	0.4	mg/kg	0.9
Chromium	5	mg/kg	6.7
Copper	5	mg/kg	57
Lead	5	mg/kg	200
Mercury	0.05	mg/kg	0.14
Nickel	5	mg/kg	9.6
Zinc	5	mg/kg	390
% Moisture	0.1	%	6.5

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Testing Site	Extracted	Holding Time
mgt-LabMark Suite 4			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Dec 10, 2012	14 Day
- Method: E004 Petroleum Hydrocarbons (TPH)			
BTEX	Sydney	Dec 07, 2012	14 Day
- Method: E029/E016 BTEX			
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *	Sydney	Dec 10, 2012	14 Day
- Method: LM-LTM-ORG2010			
Polyaromatic Hydrocarbons (PAH)	Sydney	Dec 10, 2012	14 Day
- Method: E007 Polyaromatic Hydrocarbons (PAH)			
Metals M8	Sydney	Dec 07, 2012	28 Day
- Method: E022 Acid Extractable metals in Soils & E026 Mercury			
% Moisture	Sydney	Dec 07, 2012	28 Day
- Method: E005 Moisture Content			

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Client Job No.: SICEEP GEOTLCOV24303AF

Order No.:
Report #: 362306
Phone: +61 2 9406 1000
Fax: +61 2 9406 1002

Received: Dec 7, 2012 12:20 PM
Due: Dec 14, 2012
Priority: 5 Day
Contact Name: Matthew Locke

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	mgt-LabMark Suite 4
Laboratory where analysis is conducted									
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217					X		X	X	X
Brisbane Laboratory - NATA Site # 20794									
External Laboratory						X			
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
BH116_(3.6-3.8m)	Dec 06, 2012		Soil	S12-De05521			X		
BH116_(4.4-4.5m)	Dec 06, 2012		Soil	S12-De05522			X		
QC12	Dec 06, 2012		Soil	S12-De05523			X		
BH107_(0.17-0.27m)	Dec 06, 2012		Soil	S12-De05524	X			X	X
BH107_(0.17-0.27m)_A	Dec 06, 2012		Soil	S12-De05525	X			X	X
BH107_(0.4-0.5m)	Dec 06, 2012		Soil	S12-De05526	X	X		X	X

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Client Job No.: SICEEP GEOTLCOV24303AF

Order No.:
Report #: 362306
Phone: +61 2 9406 1000
Fax: +61 2 9406 1002

Received: Dec 7, 2012 12:20 PM
Due: Dec 14, 2012
Priority: 5 Day
Contact Name: Matthew Locke

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	mgt-LabMark Suite 4
Laboratory where analysis is conducted									
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217					X		X	X	X
Brisbane Laboratory - NATA Site # 20794									
External Laboratory						X			
BH107_(0.9-1.0m)	Dec 06, 2012		Soil	S12-De05527	X	X			X
BH107_(1.0-1.1m)	Dec 06, 2012		Soil	S12-De05528			X		
BH107_(1.0-1.1m) A	Dec 06, 2012		Soil	S12-De05529			X		
BH107_(1.5-1.6m)	Dec 06, 2012		Soil	S12-De05530	X			X	X
BH107_(2.0-2.1m)	Dec 06, 2012		Soil	S12-De05531			X		
QC13	Dec 06, 2012		Soil	S12-De05532			X		
BH107_(2.5-2.6m)	Dec 06, 2012		Soil	S12-De05533	X				X

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Client Job No.: SICEEP GEOTLCOV24303AF

Order No.:
Report #: 362306
Phone: +61 2 9406 1000
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Received: Dec 7, 2012 12:20 PM
Due: Dec 14, 2012
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Contact Name: Matthew Locke

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	mgt-LabMark Suite 4
Laboratory where analysis is conducted									
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217					X		X	X	X
Brisbane Laboratory - NATA Site # 20794									
External Laboratory						X			
BH107_(2.5-2.6m)_A	Dec 06, 2012		Soil	S12-De05534			X		
BH107_(3.0-3.1m)	Dec 06, 2012		Soil	S12-De05535			X		
BH107_(3.5-3.6m)	Dec 06, 2012		Soil	S12-De05536			X		
BH107_(4.0-4.1m)	Dec 06, 2012		Soil	S12-De05537			X		
BH107_(4.0-4.1m)_A	Dec 06, 2012		Soil	S12-De05538			X		
BH107_(4.5-4.6m)	Dec 06, 2012		Soil	S12-De05539			X		
BH107_(5.0-5.1m)	Dec 06, 2012		Soil	S12-De05540			X		

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Client Job No.: SICEEP GEOTLCOV24303AF

Order No.:
Report #: 362306
Phone: +61 2 9406 1000
Fax: +61 2 9406 1002

Received: Dec 7, 2012 12:20 PM
Due: Dec 14, 2012
Priority: 5 Day
Contact Name: Matthew Locke

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	mgt-LabMark Suite 4
Laboratory where analysis is conducted									
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217					X		X	X	X
Brisbane Laboratory - NATA Site # 20794									
External Laboratory						X			
BH107_(5.5-5.6m)	Dec 06, 2012		Soil	S12-De05541			X		
BH107_(5.5-5.6m)_A	Dec 06, 2012		Soil	S12-De05542			X		
BH107_(5.9-6.0m)	Dec 06, 2012		Soil	S12-De05543			X		
QC14	Dec 06, 2012		Soil	S12-De05544			X		
BH115_(0.33-0.43m)	Dec 07, 2012		Soil	S12-De05545	X	X		X	X
BH115_(0.33-0.43m)_A	Dec 07, 2012		Soil	S12-De05546			X		
BH115_(0.5-0.6m)	Dec 07, 2012		Soil	S12-De05547			X		

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Client Job No.: SICEEP GEOTLCOV24303AF

Order No.:
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Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	mgt-LabMark Suite 4
Laboratory where analysis is conducted									
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217					X		X	X	X
Brisbane Laboratory - NATA Site # 20794									
External Laboratory						X			
BH115_(1.0-1.1m)	Dec 07, 2012		Soil	S12-De05548	X			X	X
BH115_(1.0-1.1m)_A	Dec 07, 2012		Soil	S12-De05549	X			X	X
BH115_(1.2-1.3m)	Dec 07, 2012		Soil	S12-De05550			X		

mgt-LabMark Internal Quality Control Review

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environment Protection Authority
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC was performed on samples not pertaining to this report, however QC is representative of the sequence or batch that client samples were analysed within

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
3. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	mg/kg	< 10			10	Pass	
TRH C10-C14	mg/kg	< 50			50	Pass	
TRH C15-C28	mg/kg	< 100			100	Pass	
TRH C29-C36	mg/kg	< 100			100	Pass	
Method Blank							
BTEX E029/E016 BTEX							
Benzene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.5			0.5	Pass	
Total m+p-Xylenes	mg/kg	< 1			1	Pass	
o-Xylene	mg/kg	< 0.5			0.5	Pass	
Xylenes(ortho.meta and para)	mg/kg	< 1.5			1.5	Pass	
Total BTEX	mg/kg	< 1.5			1.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	mg/kg	< 1			1	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Metals M8 E022 Acid Extractable metals in Soils & E026 Mercury							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 2 103784

coffey environments
SPECIALISTS IN ENVIRONMENTAL,
SOCIAL AND SAFETY PERFORMANCE

Consigning Office: Chatswood
Report Results to: Matthew Locke
Invoices to: Matthew Locke
Email: matthew_locke@coffey.com
Mobile: @coffey.com
Phone: @coffey.com

Project No: GEOTLCOV24303AF Task No:
Project Name: SICEEP Laboratory: MGT LabMark
Sampler's Name: Priya Dass Project Manager: Matthew Locke

Special Instructions: TPH/BTEX/PAH TO BE TESTED AS SUITE B4 / METALS TESTED AS M8

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil, etc)	Container Type & Preservative*	T-A-T (specify)	Standard
	BH114 (0.3 - 0.4m)	7/12/12		Soil			
	BH114 (0.5 - 0.6m)						
	BH114 (0.5 - 0.6m) A						
	BH114 (1.0 - 1.1m)						
	BH114 (1.0 - 1.1m) A						
	BH114 (1.1 - 1.15m)						
	QC15						
	QC15A						
	RB2	10/12/12		Water			
	TB2			Soil			
	TS2						
	BH129 (0.24 - 0.28m)						
	BH129 (0.24 - 0.28m) A						
	BH129 (0.28 - 0.38m)						
	BH129 (0.5 - 0.55m)						
	BH127 (0.155 - 0.24m)						
	QC16						
	BH127 (0.3 - 0.5m)						

Analysis Request Section

TPH/BTEX/PAH (M8) ☒
 Metals (M8) ☒
 VOC ☒
 SVOC ☒
 TCLP - Metals ☒
 TCLP - VOC ☒
 TCLP - PAHs (Low Level) ☒
 TCLP - PAHs (High Level) ☒
 ASLP - Metals ☒
 ASLP - VOC ☒
 ASLP - PAHs (Low Level) ☒
 ASLP - PAHs (High Level) ☒
 Hold ☒

NOTES

Send to EnviroLab

RECEIVED BY

Name: SUE
Company: MGT LABMARK
Date: 10/12/12
Time: 1:15 PM

RELINQUISHED BY

Name: Priya Dass
Company: Coffey Environments
Date: 10/12/12
Time: 1:15 PM

Sample Receipt Advice: (Lab Use Only)

☐ All Samples Received in Good Condition
☐ All Documentation is in Proper Order
☐ Samples Received Properly Chilled
 Lab. Ref/Batch No.

*Container Type & Preservation Codes: P - Plastic, G - Glass Jar, V - Vial, Z - Ziplock Bag, N - Nitric Acid Preserved, C - Hydrochloric Acid Preserved, S - Sulphuric Acid Preserved, I - Ice, ST - Sodium Thiosulfate, NP - No Preservative, OP - Other Preservative

Version: 4
Issue Date: 24/06/2012

Sample Receipt Advice

Company name: **Coffey Geotechnics Pty Ltd Chatswood**

Contact name: **Matthew Locke**
Client job number: **SICEEP GEOTLCOV24303AF**
COC number: **103784-103785**
Turn around time: **5 Day**
Date/Time received: **Dec 10, 2012 10:25 AM**
mgt-LabMark reference: **362572**

Sample information

- ☒ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☒ Sample Temperature of a random sample selected from the batch as recorded by mgt-LabMark
Sample Receipt : 6.5 degrees Celsius.
- ☒ All samples have been received as described on the above COC.
- ☒ COC has been completed correctly.
- ☒ Attempt to chill was evident.
- ☒ Appropriately preserved sample containers have been used.
- ☒ All samples were received in good condition.
- ☒ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☒ Organic samples had Teflon liners.
- ☒ Sample containers for volatile analysis received with zero headspace.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Samples received on 10/12/12 1:55PM with analysis received on 11/12/12 10:25AM turn around times adjusted accordingly | Asbestos analysis conducted by ASET

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: jean.heng@mgtlabmark.com.au

Results will be delivered electronically via e.mail to Matthew Locke - Matthew_Locke@coffey.com.

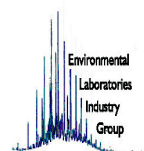
mgt-LabMark Sample Receipt



Environmental Laboratory
Air Analysis
Water Analysis
Soil Contamination Analysis

NATA Accreditation
Stack Emission Sampling & Analysis
Trade Waste Sampling & Analysis
Groundwater Sampling & Analysis

35Years of Environmental Analysis & Experience – fully Australian Owned



Coffey Geotechnics Pty Ltd Chatswood
Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Attention: Matthew Locke

Report 362572-S
Client Reference SICEEP GEOTLCOV24303AF
Received Date Dec 10, 2012

Certificate of Analysis



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Client Sample ID			BH114_(0.3-0.4M)	BH114_(1.0-1.1M)	BH114_(1.0-1.1M)_A	QC15
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De07438	S12-De07442	S12-De07443	S12-De07445
Date Sampled			Dec 07, 2012	Dec 07, 2012	Dec 07, 2012	Dec 07, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	< 10	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	< 100	< 100	< 100	< 100
TRH C29-C36	100	mg/kg	< 100	< 100	< 100	< 100
TRH C10-36 (Total)	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total m+p-Xylenes	1	mg/kg	< 1	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	98	87	86	89
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	< 1	< 1	< 1
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH114_(0.3-0.4M)	BH114_(1.0-1.1M)	BH114_(1.0-1.1M)_A	QC15
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De07438	S12-De07442	S12-De07443	S12-De07445
Date Sampled			Dec 07, 2012	Dec 07, 2012	Dec 07, 2012	Dec 07, 2012
Test/Reference	LOR	Unit				
Polyaromatic Hydrocarbons (PAH)						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH	1	mg/kg	< 1	< 1	< 1	< 1
2-Fluorobiphenyl (surr.)	1	%	89	94	97	92
p-Terphenyl-d14 (surr.)	1	%	88	100	104	93
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	12	7.4	11	11
Copper	5	mg/kg	48	28	19	36
Lead	5	mg/kg	55	33	29	51
Mercury	0.05	mg/kg	0.13	0.24	0.16	0.08
Nickel	5	mg/kg	8.4	< 5	< 5	8.4
Zinc	5	mg/kg	58	< 5	6.2	61
% Moisture	0.1	%	9.4	6.2	11	9.1
Asbestos			See attached	See attached	-	-

Client Sample ID			TB2	TS2	BH129_(0.24-0.28M)_A	BH129_(0.28-0.38M)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De07447	S12-De07448	S12-De07450	S12-De07451
Date Sampled			Dec 10, 2012	Dec 10, 2012	Dec 10, 2012	Dec 10, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	97%	< 10	< 10
TRH C10-C14	50	mg/kg	-	-	< 50	< 50
TRH C15-C28	100	mg/kg	-	-	< 100	< 100
TRH C29-C36	100	mg/kg	-	-	< 100	< 100
TRH C10-36 (Total)	100	mg/kg	-	-	< 100	< 100
BTEX						
Benzene	0.5	mg/kg	< 0.5	95%	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	98%	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	98%	< 0.5	< 0.5
Total m+p-Xylenes	1	mg/kg	< 1	98%	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	98%	< 0.5	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	98%	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	98%	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	91	120	77	89
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	-	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	< 20	< 20
TRH >C10-C16	50	mg/kg	-	-	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	< 50	< 50

Client Sample ID			TB2	TS2	BH129_(0.24-0.28M)_A	BH129_(0.28-0.38M)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De07447	S12-De07448	S12-De07450	S12-De07451
Date Sampled			Dec 10, 2012	Dec 10, 2012	Dec 10, 2012	Dec 10, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
TRH >C16-C34	100	mg/kg	-	-	< 100	< 100
TRH >C34-C40	100	mg/kg	-	-	< 100	< 100
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	0.6
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	0.6
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	-	-	< 1	1.1
Benzo(g,h,i)perylene	0.5	mg/kg	-	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	-	< 0.5	0.6
Dibenz(a,h)anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	-	< 0.5	1.0
Fluorene	0.5	mg/kg	-	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	-	-	< 0.5	1.0
Total PAH	1	mg/kg	-	-	< 1	4.9
2-Fluorobiphenyl (surr.)	1	%	-	-	94	91
p-Terphenyl-d14 (surr.)	1	%	-	-	102	102
Heavy Metals						
Arsenic	2	mg/kg	-	-	4.1	4.9
Cadmium	0.4	mg/kg	-	-	< 0.4	0.5
Chromium	5	mg/kg	-	-	< 5	16
Copper	5	mg/kg	-	-	29	49
Lead	5	mg/kg	-	-	52	150
Mercury	0.05	mg/kg	-	-	0.43	0.68
Nickel	5	mg/kg	-	-	6.6	14
Zinc	5	mg/kg	-	-	140	430
% Moisture	0.1	%	-	-	35	10
Asbestos			-	-	See attached	-

Client Sample ID			BH127_(0.3-0.5M)	BH127_(0.3-0.5M)_A
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			S12-De07455	S12-De07456
Date Sampled			Dec 10, 2012	Dec 10, 2012
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	10	mg/kg	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	< 50
TRH C15-C28	100	mg/kg	< 100	< 100
TRH C29-C36	100	mg/kg	< 100	< 100

Client Sample ID			BH127_(0.3-0.5M)	BH127_(0.3-0.5M)_A
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			S12-De07455	S12-De07456
Date Sampled			Dec 10, 2012	Dec 10, 2012
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C10-36 (Total)	100	mg/kg	< 100	< 100
BTEX				
Benzene	0.5	mg/kg	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5
Total m+p-Xylenes	1	mg/kg	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	91	89
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
Polyaromatic Hydrocarbons (PAH)				
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	< 1
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Total PAH	1	mg/kg	< 1	< 1
2-Fluorobiphenyl (surr.)	1	%	96	95
p-Terphenyl-d14 (surr.)	1	%	103	100
Heavy Metals				
Arsenic	2	mg/kg	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	6.3	< 5
Copper	5	mg/kg	55	64
Lead	5	mg/kg	6.8	11
Mercury	0.05	mg/kg	< 0.05	< 0.05
Nickel	5	mg/kg	120	130
Zinc	5	mg/kg	67	71
% Moisture	0.1	%	7.0	5.9

Client Sample ID			BH127_(0.3-0.5M)	BH127_(0.3-0.5M)_A
Sample Matrix			Soil	Soil
mgt-LabMark Sample No.			S12-De07455	S12-De07456
Date Sampled			Dec 10, 2012	Dec 10, 2012
Test/Reference	LOR	Unit		
Asbestos			See attached	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Testing Site	Extracted	Holding Time
mgt-LabMark Suite 4			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Dec 11, 2012	14 Day
- Method: E004 Petroleum Hydrocarbons (TPH)			
BTEX	Sydney	Dec 11, 2012	14 Day
- Method: E029/E016 BTEX			
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *	Sydney	Dec 11, 2012	14 Day
- Method: LM-LTM-ORG2010			
Polyaromatic Hydrocarbons (PAH)	Sydney	Dec 11, 2012	14 Day
- Method: E007 Polyaromatic Hydrocarbons (PAH)			
Metals M8	Sydney	Dec 11, 2012	28 Day
- Method: E022 Acid Extractable metals in Soils & E026 Mercury			
% Moisture	Sydney	Dec 11, 2012	28 Day
- Method: E005 Moisture Content			

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Client Job No.: SICEEP GEOTLCOV24303AF

Order No.:
Report #: 362572
Phone: +61 2 9406 1000
Fax: +61 2 9406 1002

Received: Dec 10, 2012 10:25 AM
Due: Dec 17, 2012
Priority: 5 Day
Contact Name: Matthew Locke

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	Metals M8	Metals M8 filtered	BTEX	mgt-LabMark Suite 4
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217					X		X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
External Laboratory						X						
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID								
BH114_(0.3-0.4M)	Dec 07, 2012		Soil	S12-De07438	X	X			X			X
BH114_(0.5-0.6M)	Dec 07, 2012		Soil	S12-De07439			X					
BH114_(0.5-0.6M) A	Dec 07, 2012		Soil	S12-De07441			X					
BH114_(1.0-1.1M)	Dec 07, 2012		Soil	S12-De07442	X	X			X			X
BH114_(1.0-1.1M) A	Dec 07, 2012		Soil	S12-De07443	X				X			X
BH114_(1.1-1.15M)	Dec 07, 2012		Soil	S12-De07444			X					

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

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mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	Metals M8	Metals M8 filtered	BTEX	mgt-LabMark Suite 4
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217					X		X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
External Laboratory						X						
QC15	Dec 07, 2012		Soil	S12-De07445	X				X			X
RB2	Dec 10, 2012		Water	S12-De07446						X		X
TB2	Dec 10, 2012		Soil	S12-De07447				X			X	
TS2	Dec 10, 2012		Soil	S12-De07448				X			X	
BH129_(0.24-0.28M)	Dec 10, 2012		Soil	S12-De07449			X					
BH129_(0.24-0.28M)_A	Dec 10, 2012		Soil	S12-De07450	X	X			X			X
BH129_(0.28-0.38M)	Dec 10, 2012		Soil	S12-De07451	X				X			X
BH129_(0.5-0.55M)	Dec 10, 2012		Soil	S12-De07452			X					

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
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Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	Metals M8	Metals M8 filtered	BTEX	mgt-LabMark Suite 4
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217					X		X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
External Laboratory						X						
BH129_(0.155-0.24M)	Dec 10, 2012		Soil	S12-De07453			X					
QC16	Dec 10, 2012		Soil	S12-De07454			X					
BH127_(0.3-0.5M)	Dec 10, 2012		Soil	S12-De07455	X	X			X			X
BH127_(0.3-0.5M) A	Dec 10, 2012		Soil	S12-De07456	X				X			X
BH127_(0.6-0.8M)	Dec 10, 2012		Soil	S12-De07457			X					
TSLAB2	Dec 10, 2012		Soil	S12-De07526				X			X	

mgt-LabMark Internal Quality Control Review

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environment Protection Authority
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC was performed on samples not pertaining to this report, however QC is representative of the sequence or batch that client samples were analysed within

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
3. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	mg/kg	< 10			10	Pass	
TRH C10-C14	mg/kg	< 50			50	Pass	
TRH C15-C28	mg/kg	< 100			100	Pass	
TRH C29-C36	mg/kg	< 100			100	Pass	
Method Blank							
BTEX E029/E016 BTEX							
Benzene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.5			0.5	Pass	
Total m+p-Xylenes	mg/kg	< 1			1	Pass	
o-Xylene	mg/kg	< 0.5			0.5	Pass	
Xylenes(ortho.meta and para)	mg/kg	< 1.5			1.5	Pass	
Total BTEX	mg/kg	< 1.5			1.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	mg/kg	< 1			1	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Metals M8 E022 Acid Extractable metals in Soils & E026 Mercury							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							

Test			Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
TRH C6-C9			%	71		70-130	Pass	
TRH C10-C14			%	95		70-130	Pass	
LCS - % Recovery								
BTEX E029/E016 BTEX								
Benzene			%	100		70-130	Pass	
Toluene			%	100		70-130	Pass	
Ethylbenzene			%	105		70-130	Pass	
Total m+p-Xylenes			%	104		70-130	Pass	
o-Xylene			%	104		70-130	Pass	
Xylenes(ortho.meta and para)			%	104		70-130	Pass	
LCS - % Recovery								
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010								
Naphthalene			%	118		70-130	Pass	
TRH C6-C10			%	83		70-130	Pass	
TRH >C10-C16			%	93		70-130	Pass	
LCS - % Recovery								
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)								
Acenaphthene			%	112		70-130	Pass	
Acenaphthylene			%	100		70-130	Pass	
Anthracene			%	120		70-130	Pass	
Benz(a)anthracene			%	96		70-130	Pass	
Benzo(a)pyrene			%	103		70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene			%	106		70-130	Pass	
Benzo(g,h,i)perylene			%	96		70-130	Pass	
Chrysene			%	106		70-130	Pass	
Dibenz(a,h)anthracene			%	88		70-130	Pass	
Fluoranthene			%	104		70-130	Pass	
Fluorene			%	103		70-130	Pass	
Indeno(1,2,3-cd)pyrene			%	100		70-130	Pass	
Naphthalene			%	105		70-130	Pass	
Phenanthrene			%	94		70-130	Pass	
Pyrene			%	107		70-130	Pass	
LCS - % Recovery								
Metals M8 E022 Acid Extractable metals in Soils & E026 Mercury								
Arsenic			%	105		70-130	Pass	
Cadmium			%	111		70-130	Pass	
Chromium			%	108		70-130	Pass	
Copper			%	111		70-130	Pass	
Lead			%	105		70-130	Pass	
Mercury			%	94		70-130	Pass	
Nickel			%	103		70-130	Pass	
Zinc			%	114		70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1				
TRH C6-C9	S12-De07438	CP	%	85		70-130	Pass	
TRH C10-C14	S12-De07438	CP	%	124		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	S12-De07438	CP	%	88		70-130	Pass	
Toluene	S12-De07438	CP	%	92		70-130	Pass	
Ethylbenzene	S12-De07438	CP	%	96		70-130	Pass	
Total m+p-Xylenes	S12-De07438	CP	%	96		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
o-Xylene	S12-De07438	CP	%	97			70-130	Pass	
Xylenes(ortho.meta and para)	S12-De07438	CP	%	97			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1					
Naphthalene	S12-De07438	CP	%	113			70-130	Pass	
TRH C6-C10	S12-De07438	CP	%	88			70-130	Pass	
TRH >C10-C16	S12-De07438	CP	%	114			70-130	Pass	
Spike - % Recovery									
Polyaromatic Hydrocarbons (PAH)				Result 1					
Acenaphthene	S12-De07438	CP	%	115			70-130	Pass	
Acenaphthylene	S12-De07438	CP	%	101			70-130	Pass	
Anthracene	S12-De07438	CP	%	117			70-130	Pass	
Benz(a)anthracene	S12-De07438	CP	%	110			70-130	Pass	
Benzo(a)pyrene	S12-De07438	CP	%	114			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S12-De07438	CP	%	106			70-130	Pass	
Benzo(g,h,i)perylene	S12-De07438	CP	%	127			70-130	Pass	
Chrysene	S12-De07438	CP	%	122			70-130	Pass	
Dibenz(a,h)anthracene	S12-De07438	CP	%	112			70-130	Pass	
Fluoranthene	S12-De07438	CP	%	111			70-130	Pass	
Fluorene	S12-De07438	CP	%	109			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S12-De07438	CP	%	123			70-130	Pass	
Naphthalene	S12-De07438	CP	%	113			70-130	Pass	
Phenanthrene	S12-De07438	CP	%	113			70-130	Pass	
Pyrene	S12-De07438	CP	%	116			70-130	Pass	
Spike - % Recovery									
Metals M8				Result 1					
Arsenic	S12-De07438	CP	%	105			70-130	Pass	
Cadmium	S12-De07438	CP	%	114			70-130	Pass	
Chromium	S12-De07438	CP	%	109			70-130	Pass	
Copper	S12-De07438	CP	%	107			70-130	Pass	
Lead	S12-De07438	CP	%	85			70-130	Pass	
Mercury	S12-De07438	CP	%	86			70-130	Pass	
Nickel	S12-De07438	CP	%	102			70-130	Pass	
Zinc	S12-De07438	CP	%	118			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S12-De07438	CP	mg/kg	< 10	< 10	<1	30%	Pass	
TRH C10-C14	S12-De07438	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C15-C28	S12-De07438	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH C29-C36	S12-De07438	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total m+p-Xylenes	S12-De07438	CP	mg/kg	< 1	< 1	<1	30%	Pass	
o-Xylene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes(ortho.meta and para)	S12-De07438	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Total BTEX	S12-De07438	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD			
Naphthalene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S12-De07438	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate								
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD		
TRH C6-C10 less BTEX (F1)	S12-De07438	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH >C10-C16	S12-De07438	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	S12-De07438	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	S12-De07438	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD		
Acenaphthene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S12-De07438	CP	mg/kg	< 1	< 1	<1	30%	Pass
Benzo(g,h,i)perylene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S12-De07438	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Metals M8				Result 1	Result 2	RPD		
Arsenic	S12-De08094	NCP	mg/kg	< 2	2.3	15	30%	Pass
Cadmium	S12-De08094	NCP	mg/kg	< 0.4	< 0.4	23	30%	Pass
Chromium	S12-De08094	NCP	mg/kg	6.5	7.1	9.0	30%	Pass
Copper	S12-De08094	NCP	mg/kg	34	25	30	30%	Pass
Lead	S12-De07805	NCP	mg/kg	12	9.6	22	30%	Pass
Nickel	S12-De08094	NCP	mg/kg	7.7	7.0	10	30%	Pass
Zinc	S12-De08094	NCP	mg/kg	99	85	15	30%	Pass

Comments

Please note: Asbestos analysed by ASET (Job : ASET31904/35084/1-4) NATA Accreditation : 14484

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.

Authorised By

Jean Heng	Client Services
Laura Schofield	Senior Analyst-Volatile (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
James Norford	Senior Analyst-Metal (NSW)



Dr. Bob Symons

Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

mgt-LabMark shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall mgt-LabMark be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Coffey Geotechnics Pty Ltd Chatswood
Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Attention: Matthew Locke

Report 362572-W
Client Reference SICEEP GEOTLCOV24303AF
Received Date Dec 10, 2012

Certificate of Analysis



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Client Sample ID			RB2
Sample Matrix			Water
mgt-LabMark Sample No.			S12-De07446
Date Sampled			Dec 10, 2012
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	0.02	mg/L	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-36 (Total)	0.1	mg/L	< 0.1
BTEX			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
Total m+p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes(ortho.meta and para)	0.003	mg/L	< 0.003
Total BTEX	0.01	mg/L	< 0.01
4-Bromofluorobenzene (surr.)	1	%	103
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *			
Naphthalene ^{N02}	0.005	mg/L	< 0.005
TRH C6-C10	0.02	mg/L	< 0.02
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1
Polyaromatic Hydrocarbons (PAH)			
Acenaphthene	0.001	mg/L	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001
Anthracene	0.001	mg/L	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001
Benzo(b)fluoranthene & Benzo(k)fluoranthene	0.002	mg/L	< 0.002
Benzo(g,h,i)perylene	0.001	mg/L	< 0.001
Chrysene	0.001	mg/L	< 0.001
Dibenz(a,h)anthracene	0.001	mg/L	< 0.001
Fluoranthene	0.001	mg/L	< 0.001
Fluorene	0.001	mg/L	< 0.001
Indeno(1,2,3-cd)pyrene	0.001	mg/L	< 0.001
Naphthalene	0.001	mg/L	< 0.001
Phenanthrene	0.001	mg/L	< 0.001

Client Sample ID			RB2
Sample Matrix			Water
mgt-LabMark Sample No.			S12-De07446
Date Sampled			Dec 10, 2012
Test/Reference	LOR	Unit	
Polyaromatic Hydrocarbons (PAH)			
Pyrene	0.001	mg/L	< 0.001
Total PAH	0.002	mg/L	< 0.002
2-Fluorobiphenyl (surr.)	1	%	82
p-Terphenyl-d14 (surr.)	1	%	88
Heavy Metals			
Lead (filtered)	0.001	mg/L	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001
Arsenic (filtered)	0.001	mg/L	< 0.001
Cadmium (filtered)	0.0001	mg/L	< 0.0001
Chromium (filtered)	0.001	mg/L	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001
Zinc (filtered)	0.005	mg/L	< 0.005

Description	Testing Site	Extracted	Holding Time
mgt-LabMark Suite 4			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Dec 11, 2012	7 Day
- Method: E004 Petroleum Hydrocarbons (TPH)			
BTEX	Sydney	Dec 11, 2012	14 Day
- Method: E029/E016 BTEX			
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *	Sydney	Dec 11, 2012	7 Day
- Method: LM-LTM-ORG2010			
Polyaromatic Hydrocarbons (PAH)	Sydney	Dec 11, 2012	7 Day
- Method: E007 Polyaromatic Hydrocarbons (PAH)			
Metals M8 filtered	Sydney	Dec 11, 2012	28 Day
- Method: E020/E030 Filtered Metals in Water & E026 Mercury			

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Client Job No.: SICEEP GEOTLCOV24303AF

Order No.:
Report #: 362572
Phone: +61 2 9406 1000
Fax: +61 2 9406 1002

Received: Dec 10, 2012 10:25 AM
Due: Dec 17, 2012
Priority: 5 Day
Contact Name: Matthew Locke

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	Metals M8	Metals M8 filtered	BTEX	mgt-LabMark Suite 4
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217					X		X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
External Laboratory						X						
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID								
BH114_(0.3-0.4M)	Dec 07, 2012		Soil	S12-De07438	X	X			X			X
BH114_(0.5-0.6M)	Dec 07, 2012		Soil	S12-De07439			X					
BH114_(0.5-0.6M) A	Dec 07, 2012		Soil	S12-De07441			X					
BH114_(1.0-1.1M)	Dec 07, 2012		Soil	S12-De07442	X	X			X			X
BH114_(1.0-1.1M) A	Dec 07, 2012		Soil	S12-De07443	X				X			X
BH114_(1.1-1.15M)	Dec 07, 2012		Soil	S12-De07444			X					

Company Name: Coffey Geotechnics Pty Ltd Chatswood
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Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	Metals M8	Metals M8 filtered	BTEX	mgt-LabMark Suite 4
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217					X		X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
External Laboratory						X						
QC15	Dec 07, 2012		Soil	S12-De07445	X				X			X
RB2	Dec 10, 2012		Water	S12-De07446						X		X
TB2	Dec 10, 2012		Soil	S12-De07447				X			X	
TS2	Dec 10, 2012		Soil	S12-De07448				X			X	
BH129_(0.24-0.28M)	Dec 10, 2012		Soil	S12-De07449			X					
BH129_(0.24-0.28M)_A	Dec 10, 2012		Soil	S12-De07450	X	X			X			X
BH129_(0.28-0.38M)	Dec 10, 2012		Soil	S12-De07451	X				X			X
BH129_(0.5-0.55M)	Dec 10, 2012		Soil	S12-De07452			X					

Company Name: Coffey Geotechnics Pty Ltd Chatswood
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Sample Detail					% Moisture	Asbestos	HOLD	TRH C6-C9	Metals M8	Metals M8 filtered	BTEX	mgt-LabMark Suite 4
Laboratory where analysis is conducted												
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217					X		X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
External Laboratory						X						
BH129_(0.155-0.24M)	Dec 10, 2012		Soil	S12-De07453			X					
QC16	Dec 10, 2012		Soil	S12-De07454			X					
BH127_(0.3-0.5M)	Dec 10, 2012		Soil	S12-De07455	X	X			X			X
BH127_(0.3-0.5M) A	Dec 10, 2012		Soil	S12-De07456	X				X			X
BH127_(0.6-0.8M)	Dec 10, 2012		Soil	S12-De07457			X					
TSLAB2	Dec 10, 2012		Soil	S12-De07526				X			X	

mgt-LabMark Internal Quality Control Review

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environment Protection Authority
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC was performed on samples not pertaining to this report, however QC is representative of the sequence or batch that client samples were analysed within

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
3. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX E029/E016 BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
Total m+p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes(ortho.meta and para)	mg/L	< 0.003			0.003	Pass	
Total BTEX	mg/L	< 0.01			0.01	Pass	
Method Blank							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
Naphthalene	mg/L	< 0.005			0.005	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH C6-C10 less BTEX (F1)	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	mg/L	< 0.002			0.002	Pass	
Benzo(g,h,i)perylene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a,h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1,2,3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Metals M8 filtered E020/E030 Filtered Metals in Water & E026 Mercury							
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0001			0.0001	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C6-C9			%	85			70-130	Pass	
TRH C10-C14			%	85			70-130	Pass	
LCS - % Recovery									
BTEX E029/E016 BTEX									
Benzene			%	88			70-130	Pass	
Toluene			%	88			70-130	Pass	
Ethylbenzene			%	90			70-130	Pass	
Total m+p-Xylenes			%	90			70-130	Pass	
o-Xylene			%	90			70-130	Pass	
Xylenes(ortho.meta and para)			%	90			70-130	Pass	
LCS - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010									
Naphthalene			%	100			70-130	Pass	
TRH C6-C10			%	93			70-130	Pass	
TRH >C10-C16			%	79			70-130	Pass	
LCS - % Recovery									
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)									
Acenaphthene			%	93			70-130	Pass	
Acenaphthylene			%	92			70-130	Pass	
Anthracene			%	99			70-130	Pass	
Benz(a)anthracene			%	79			70-130	Pass	
Benzo(a)pyrene			%	84			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene			%	85			70-130	Pass	
Benzo(g,h,i)perylene			%	90			70-130	Pass	
Chrysene			%	94			70-130	Pass	
Dibenz(a,h)anthracene			%	85			70-130	Pass	
Fluoranthene			%	95			70-130	Pass	
Fluorene			%	88			70-130	Pass	
Indeno(1,2,3-cd)pyrene			%	85			70-130	Pass	
Naphthalene			%	91			70-130	Pass	
Phenanthrene			%	98			70-130	Pass	
Pyrene			%	99			70-130	Pass	
LCS - % Recovery									
Metals M8 filtered E020/E030 Filtered Metals in Water & E026 Mercury									
Lead (filtered)			%	98			70-130	Pass	
Mercury (filtered)			%	78			70-130	Pass	
Nickel (filtered)			%	100			70-130	Pass	
Arsenic (filtered)			%	99			70-130	Pass	
Cadmium (filtered)			%	102			70-130	Pass	
Chromium (filtered)			%	101			70-130	Pass	
Copper (filtered)			%	102			70-130	Pass	
Zinc (filtered)			%	99			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions									
				Result 1					
TRH C6-C9	S12-De07540	NCP	%	98			70-130	Pass	
TRH C10-C14	S12-De07692	NCP	%	99			70-130	Pass	
Spike - % Recovery									
BTEX									
				Result 1					
Benzene	S12-De07540	NCP	%	106			70-130	Pass	
Toluene	S12-De07540	NCP	%	107			70-130	Pass	
Ethylbenzene	S12-De07540	NCP	%	107			70-130	Pass	
Total m+p-Xylenes	S12-De07540	NCP	%	106			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
o-Xylene	S12-De07540	NCP	%	108			70-130	Pass	
Xylenes(ortho.meta and para)	S12-De07540	NCP	%	107			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1					
TRH C6-C10	S12-De07540	NCP	%	108			70-130	Pass	
TRH >C10-C16	S12-De07692	NCP	%	92			70-130	Pass	
Spike - % Recovery									
Polyaromatic Hydrocarbons (PAH)				Result 1					
Acenaphthene	S12-De04801	NCP	%	78			70-130	Pass	
Acenaphthylene	S12-De04801	NCP	%	70			70-130	Pass	
Anthracene	S12-De04801	NCP	%	78			70-130	Pass	
Benz(a)anthracene	S12-De04801	NCP	%	72			70-130	Pass	
Benzo(a)pyrene	S12-De04801	NCP	%	70			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S12-De04801	NCP	%	70			70-130	Pass	
Benzo(g,h,i)perylene	S12-De04801	NCP	%	76			70-130	Pass	
Chrysene	S12-De04801	NCP	%	73			70-130	Pass	
Dibenz(a,h)anthracene	S12-De04801	NCP	%	70			70-130	Pass	
Fluoranthene	S12-De04801	NCP	%	78			70-130	Pass	
Fluorene	S12-De04801	NCP	%	74			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S12-De04801	NCP	%	70			70-130	Pass	
Naphthalene	S12-De04801	NCP	%	73			70-130	Pass	
Phenanthrene	S12-De04801	NCP	%	79			70-130	Pass	
Pyrene	S12-De04801	NCP	%	84			70-130	Pass	
Spike - % Recovery									
Metals M8 filtered				Result 1					
Lead (filtered)	S12-De07544	NCP	%	88			70-130	Pass	
Mercury (filtered)	S12-De07802	NCP	%	102			70-130	Pass	
Nickel (filtered)	S12-De07544	NCP	%	91			70-130	Pass	
Arsenic (filtered)	S12-De07544	NCP	%	113			70-130	Pass	
Cadmium (filtered)	S12-De07544	NCP	%	94			70-130	Pass	
Chromium (filtered)	S12-De07544	NCP	%	106			70-130	Pass	
Copper (filtered)	S12-De07544	NCP	%	90			70-130	Pass	
Zinc (filtered)	S12-De07544	NCP	%	89			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S12-De07537	NCP	mg/L	< 0.02	< 0.02	17	30%	Pass	
TRH C10-C14	S12-De09433	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S12-De09433	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S12-De09433	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S12-De07537	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S12-De07537	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S12-De07537	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Total m+p-Xylenes	S12-De07537	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S12-De07537	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes(ortho.meta and para)	S12-De07537	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Total BTEX	S12-De07537	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD			
Naphthalene	S12-De07537	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
TRH C6-C10	S12-De07537	NCP	mg/L	< 0.02	< 0.02	16	30%	Pass	
TRH C6-C10 less BTEX (F1)	S12-De07537	NCP	mg/L	< 0.02	< 0.02	16	30%	Pass	

Duplicate								
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD		
TRH >C10-C16	S12-De09433	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass
TRH >C16-C34	S12-De09433	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass
TRH >C34-C40	S12-De09433	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD		
Acenaphthene	S12-De07690	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Acenaphthylene	S12-De07690	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Anthracene	S12-De07690	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benz(a)anthracene	S12-De07690	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(a)pyrene	S12-De07690	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S12-De07690	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Benzo(g,h,i)perylene	S12-De07690	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chrysene	S12-De07690	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibenz(a,h)anthracene	S12-De07690	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluoranthene	S12-De07690	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Fluorene	S12-De07690	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S12-De07690	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Naphthalene	S12-De07690	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Phenanthrene	S12-De07690	NCP	mg/L	< 0.001	< 0.001	25	30%	Pass
Pyrene	S12-De07690	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Metals M8 filtered				Result 1	Result 2	RPD		
Lead (filtered)	S12-De07543	NCP	mg/L	0.0054	0.0054	<1	30%	Pass
Mercury (filtered)	S12-De07801	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass
Nickel (filtered)	S12-De07543	NCP	mg/L	0.060	0.059	2.0	30%	Pass
Arsenic (filtered)	S12-De07543	NCP	mg/L	0.0017	0.0016	4.0	30%	Pass
Cadmium (filtered)	S12-De07543	NCP	mg/L	0.00012	0.00011	9.0	30%	Pass
Chromium (filtered)	S12-De07543	NCP	mg/L	< 0.001	< 0.001	5.0	30%	Pass
Copper (filtered)	S12-De07543	NCP	mg/L	0.0036	0.0035	4.0	30%	Pass
Zinc (filtered)	S12-De07543	NCP	mg/L	0.21	0.21	1.0	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.

Authorised By

Jean Heng	Client Services
Laura Schofield	Senior Analyst-Volatile (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
James Norford	Senior Analyst-Metal (NSW)



Dr. Bob Symons

Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

mgt-LabMark shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall mgt-LabMark be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.



AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET31904/ 35084 / 1 - 4

Your ref : 362572

NATA Accreditation No: 14484

29 January 2013

MGT- Labmark Environmental Pty Ltd
Unit F3, Building F, 16 Mars Road
Lane Cove NSW 2066

Attn: Dr Robert Symons
Laboratory & Technical Manager

Dear Robert

Asbestos Identification

This report presents the results of four samples, forwarded by MGT- Labmark Environmental Pty Ltd on 12 December 2012, for analysis for asbestos. This report supersedes the report issued on 13 December 2012.

1.Introduction: Four samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method.
(Safer Environment Method 1.)

3. Results : **Sample No. 1. ASET31904 / 35084 / 1. BH114 – 0.3 – 0.4m - De07438.**

Approx dimensions 4.7 cm x 4.6 cm x 3.1 cm

The sample consisted of a mixture of sandy soil, stones and plant matter.

No asbestos detected.

Sample No. 2. ASET31904 / 35084 / 2. BH114 – 1.0 – 1.1m - De07442.

Approx dimensions 4.5 cm x 3.6 cm x 2.4 cm

The sample consisted of a mixture of sandy soil, stones, plant matter and fragments of bitumin.

No asbestos detected.

Sample No. 3. ASET31904 / 35084 / 3. BH129 – 0.24 – 0.28m_A - De07450.

Approx dimensions 4.2 cm x 3.7 cm x 3.2 cm

The sample consisted of a mixture of soil, stones, fragments of plaster, glass and debris.

No asbestos detected.

Sample No. 4. ASET31904 / 35084 / 4. BH127 – 0.3 – 0.5m - De07455.

Approx dimensions 4.5 cm x 3.4 cm x 3.2 cm

The sample consisted of a mixture of soil, stones, plant matter, fragments of plaster, bitumin and glass.

No asbestos detected.

Analysed and reported by

Laxman Dias. BSc
Analyst / Approved Identifier
Approved Signatory



**This document is issued in accordance with
NATA's Accreditation requirements. Accredited
for compliance with ISO/IEC 17025.**

SUITE 710 / 90 GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635

PHONE: (02) 99872183 FAX: (02) 99872151 EMAIL: aset@bigpond.net.au WEBSITE: www.Ausset.com.au

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1 103786



environments

SPECIALISTS IN ENVIRONMENTAL,
SOCIAL AND SAFETY PERFORMANCE

Consigning Office: Chatswood

Report Results to: Matthew Locke

Invoices to: Matthew Locke

Email: matthew_locke@coffey.com

Email: matthew_locke@coffey.com

Project No: GEOTLCOV24303AF Task No:

Project Name: SICEEP Laboratory: MGT Lab Mark

Sampler's Name: Priya Dass Project Manager: Matthew Locke

Special Instructions:

TPH/BTEX/PAH TESTED AS SUITE B4 / METALS TESTED AS M8

Analysis Request Section

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil, etc)	Container Type & Preservative*	T-A-T (specify)	TPH/BTEX/PAH (M8)	Metals (M8)	VOC	SVOC	TCRP	TCRP - Metals (Lab Level)	ASLP - Metals (Lab Level)	ASLP - PHHS (Lab Level)	Notes
	BH127 (1.0-1.1m)	10/12/12		Soil		Standard	X	X	X	X	X	X	X	X	
	BH127 (1.5-1.6m)						X	X	X	X	X	X	X	X	
	BH127 (1.5-1.6m) A						X	X	X	X	X	X	X	X	
	BH127 (1.9-2.0m)						X	X	X	X	X	X	X	X	
	BH127 (2.4-2.5m)						X	X	X	X	X	X	X	X	
	BH127 (2.5-2.6m)						X	X	X	X	X	X	X	X	
	BH127 (2.6-2.7m)						X	X	X	X	X	X	X	X	
	BH127 (3.4-3.5m)						X	X	X	X	X	X	X	X	
	QC17						X	X	X	X	X	X	X	X	
	QC17A						X	X	X	X	X	X	X	X	
	BH127 (3.9-4.0m)						X	X	X	X	X	X	X	X	
	BH125 (0.23-0.33m)	11/12/12					X	X	X	X	X	X	X	X	
	BH125 (0.23-0.33m) A						X	X	X	X	X	X	X	X	
	BH125 (0.5-0.6m)						X	X	X	X	X	X	X	X	
	BH125 (1.0-1.1m)						X	X	X	X	X	X	X	X	

Send to EnviroLab

RELINQUISHED BY

Name: Priya Dass Date: 11/12/12
 Coffey Environments Time: 11:37 a.m.
 Name: Date:
 Company: Time:

RECEIVED BY

Name: SOE Date: 11/12/12
 Company: MGT Labmark Time: 11-37
 Name: Date:
 Company: Time:

Sample Receipt Advice: (Lab Use Only)

☐ All Samples Received in Good Condition
☐ All Documentation is in Proper Order
☐ Samples Received Properly Chilled
 Lab. Ref/Batch No.

* Container Type & Preservation Codes: P - Plastic, G - Glass Bottle, J - Glass Jar, V - Vial, Z - Ziplock Bag, N - Nitric Acid Preserved, C - Hydrochloric Acid Preserved,
 S - Sulphuric Acid Preserved, I - Ice, ST - Sodium Thiosulfate, NP - No Preservative, OP - Other Preservative

Coffey Environments

Version: 4

Issue Date: 24/08/2012

Sample Receipt Advice

Company name: **Coffey Geotechnics Pty Ltd Chatswood**

Contact name: **Matthew Locke**
Client job number: **SICEEP GEOTLCOV24303AF**
COC number: **103786**
Turn around time: **5 Day**
Date/Time received: **Dec 11, 2012 4:30 PM**
mgt-LabMark reference: **362729**

Sample information

- ☒ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☒ Sample Temperature of a random sample selected from the batch as recorded by mgt-LabMark Sample Receipt : 5.5 degrees Celsius.
- ☒ All samples have been received as described on the above COC.
- ☒ COC has been completed correctly.
- ☒ Attempt to chill was evident.
- ☒ Appropriately preserved sample containers have been used.
- ☒ All samples were received in good condition.
- ☒ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☒ Organic samples had Teflon liners.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Sample QC17A sent to Envirolabs as requested | Asbestos analysis conducted by ASET
Samples received by the laboratory after 4pm are deemed to have been received the following working day.

Contact notes

If you have any questions with respect to these samples please contact:

Jean Heng on Phone : (+61) (2) 9900 8400 or by e.mail: jean.heng@mgtlabmark.com.au

Results will be delivered electronically via e.mail to Matthew Locke - Matthew_Locke@coffey.com.

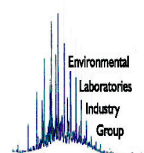
mgt-LabMark Sample Receipt



Environmental Laboratory
Air Analysis
Water Analysis
Soil Contamination Analysis

NATA Accreditation
Stack Emission Sampling & Analysis
Trade Waste Sampling & Analysis
Groundwater Sampling & Analysis

35Years of Environmental Analysis & Experience – fully Australian Owned



Certificate of Analysis

Coffey Geotechnics Pty Ltd Chatswood
Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Attention: Matthew Locke

Report 362729-S
Client Reference SICEEP GEOTLCOV24303AF
Received Date Dec 11, 2012

Client Sample ID			BH127_(1.0-1.1m)	BH127_(1.5-1.6m)	BH127_(1.5-1.6m)_A	BH127_(2.6-2.7m)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De08647	S12-De08648	S12-De08649	S12-De08653
Date Sampled			Dec 10, 2012	Dec 10, 2012	Dec 10, 2012	Dec 10, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	< 10	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	250	190	350	< 100
TRH C29-C36	100	mg/kg	550	730	860	260
TRH C10-36 (Total)	100	mg/kg	800	920	1200	260
BTEX						
Benzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total m+p-Xylenes	1	mg/kg	< 1	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	76	77	77	81
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	550	550	780	110
TRH >C34-C40	100	mg/kg	760	390	400	170
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	2.3	3.7	< 0.5
Anthracene	0.5	mg/kg	0.5	3.6	6.7	< 0.5
Benz(a)anthracene	0.5	mg/kg	0.8	7.4	15	< 0.5
Benzo(a)pyrene	0.5	mg/kg	0.8	5.9	12	< 0.5
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	1.3	9.7	20	< 1
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	2.6	4.9	< 0.5
Chrysene	0.5	mg/kg	0.7	5.1	11	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	1.9	16	31	< 0.5
Fluorene	0.5	mg/kg	< 0.5	1.8	3.1	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	2.2	4.4	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	0.6	1.0	< 0.5

Client Sample ID			BH127_(1.0-1.1m)	BH127_(1.5-1.6m)	BH127_(1.5-1.6m)_A	BH127_(2.6-2.7m)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De08647	S12-De08648	S12-De08649	S12-De08653
Date Sampled			Dec 10, 2012	Dec 10, 2012	Dec 10, 2012	Dec 10, 2012
Test/Reference	LOR	Unit				
Polyaromatic Hydrocarbons (PAH)						
Phenanthrene	0.5	mg/kg	1.2	13	21	< 0.5
Pyrene	0.5	mg/kg	1.9	14	28	< 0.5
Total PAH	1	mg/kg	9.1	84	160	< 1
2-Fluorobiphenyl (surr.)	1	%	113	104	100	96
p-Terphenyl-d14 (surr.)	1	%	112	100	97	107
Semivolatile Organic Compounds (SVOC)						
2-Chloronaphthalene	0.5	mg/kg	-	-	-	< 0.5
2-Chlorophenol	0.5	mg/kg	-	-	-	< 0.5
2-Methylnaphthalene	0.5	mg/kg	-	-	-	< 0.5
2-Methylphenol (o-Cresol)	0.5	mg/kg	-	-	-	< 0.5
2-Naphthylamine	0.5	mg/kg	-	-	-	< 0.5
2-Nitroaniline	1	mg/kg	-	-	-	< 1
2-Nitrophenol	0.5	mg/kg	-	-	-	< 0.5
3&4-Methylphenol (m&p-Cresol)	1	mg/kg	-	-	-	< 1
3-Methylcholanthrene	0.5	mg/kg	-	-	-	< 0.5
4-Aminobiphenyl	0.5	mg/kg	-	-	-	< 0.5
4-Bromophenyl phenyl ether	0.5	mg/kg	-	-	-	< 0.5
4-Chloro-3-methylphenol	0.5	mg/kg	-	-	-	< 0.5
4-Chlorophenyl phenyl ether	0.5	mg/kg	-	-	-	< 0.5
4-Nitrophenol	0.5	mg/kg	-	-	-	< 4
4,4'-DDD	0.5	mg/kg	-	-	-	< 0.5
4,4'-DDE	0.5	mg/kg	-	-	-	< 0.5
4,4'-DDT	1	mg/kg	-	-	-	< 1
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Acetophenone	0.5	mg/kg	-	-	-	< 0.5
Aldrin	0.5	mg/kg	-	-	-	< 0.5
Aniline	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	-	-	-	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	-	-	-	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	-	-	-	< 5
Butyl benzyl phthalate	0.5	mg/kg	-	-	-	< 0.5
Chlorpyrifos	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
Coumaphos	0.5	mg/kg	-	-	-	< 0.5
d-BHC	0.5	mg/kg	-	-	-	< 0.5
Demeton-O	0.5	mg/kg	-	-	-	< 0.5
Demeton-S	0.5	mg/kg	-	-	-	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	-	-	-	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	-	-	-	< 0.5
Diazinon	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Dibenzofuran	0.5	mg/kg	-	-	-	< 0.5
Dichlorvos	0.5	mg/kg	-	-	-	< 0.5
Dieldrin	0.5	mg/kg	-	-	-	< 0.5
Diethyl phthalate	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID			BH127_(1.0-1.1m)	BH127_(1.5-1.6m)	BH127_(1.5-1.6m)_A	BH127_(2.6-2.7m)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De08647	S12-De08648	S12-De08649	S12-De08653
Date Sampled			Dec 10, 2012	Dec 10, 2012	Dec 10, 2012	Dec 10, 2012
Test/Reference	LOR	Unit				
Semivolatile Organic Compounds (SVOC)						
Dimethoate	0.5	mg/kg	-	-	-	< 0.5
Dimethyl phthalate	0.5	mg/kg	-	-	-	< 0.5
Diphenylamine	0.5	mg/kg	-	-	-	< 0.5
Disulfoton	0.5	mg/kg	-	-	-	< 0.5
Endosulfan sulphate	0.5	mg/kg	-	-	-	< 0.5
Endrin	0.5	mg/kg	-	-	-	< 0.5
Endrin aldehyde	0.5	mg/kg	-	-	-	< 0.5
Endrin ketone	0.5	mg/kg	-	-	-	< 0.5
Ethoprop	0.5	mg/kg	-	-	-	< 0.5
Fenitrothion	0.5	mg/kg	-	-	-	< 0.5
Fensulfothion	0.5	mg/kg	-	-	-	< 0.5
Fenthion	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	-	< 0.5
g-BHC (Lindane)	0.5	mg/kg	-	-	-	< 0.5
Heptachlor	0.5	mg/kg	-	-	-	< 0.5
Heptachlor epoxide	0.5	mg/kg	-	-	-	< 0.5
Hexachlorobenzene	0.5	mg/kg	-	-	-	< 0.5
Hexachlorobutadiene	0.5	mg/kg	-	-	-	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	-	-	-	< 1
Hexachloroethane	0.5	mg/kg	-	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Malathion	0.5	mg/kg	-	-	-	< 0.5
Methoxychlor	0.5	mg/kg	-	-	-	< 0.5
Methyl azinphos	0.5	mg/kg	-	-	-	< 0.5
Methyl parathion	0.5	mg/kg	-	-	-	< 0.5
Mevinphos	0.5	mg/kg	-	-	-	< 0.5
Monocrotophos	10	mg/kg	-	-	-	< 10
N-Nitrosodibutylamine	0.5	mg/kg	-	-	-	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	-	-	-	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	< 0.5
Nitrobenzene	0.5	mg/kg	-	-	-	< 0.5
Parathion	0.5	mg/kg	-	-	-	< 0.5
Pentachlorobenzene	0.5	mg/kg	-	-	-	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	-	-	-	< 0.5
Pentachlorophenol	1	mg/kg	-	-	-	< 4
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5
Phenol	0.5	mg/kg	-	-	-	< 0.5
Phorate	0.5	mg/kg	-	-	-	< 0.5
Profenofos	0.5	mg/kg	-	-	-	< 0.5
Prothiofos	0.5	mg/kg	-	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	-	< 0.5
Ronnel	0.5	mg/kg	-	-	-	< 0.5
Stirophos	0.5	mg/kg	-	-	-	< 0.5
Trichloronate	0.5	mg/kg	-	-	-	< 0.5
Phenol-d6 (surr.)	1	%	-	-	-	77
Nitrobenzene-d5 (surr.)	1	%	-	-	-	84
p-Terphenyl-d14 (surr.)	1	%	-	-	-	107

Client Sample ID			BH127_(1.0-1.1m)	BH127_(1.5-1.6m)	BH127_(1.5-1.6m)_A	BH127_(2.6-2.7m)
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De08647	S12-De08648	S12-De08649	S12-De08653
Date Sampled			Dec 10, 2012	Dec 10, 2012	Dec 10, 2012	Dec 10, 2012
Test/Reference	LOR	Unit				
Semivolatile Organic Compounds (SVOC)						
2-Fluorobiphenyl (surr.)	1	%	-	-	-	96
Heavy Metals						
Arsenic	2	mg/kg	3.6	4.4	5.2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	9.3	5.5	7.6	< 5
Copper	5	mg/kg	28	42	43	< 5
Lead	5	mg/kg	85	160	190	< 5
Mercury	0.05	mg/kg	0.17	0.55	0.55	< 0.05
Nickel	5	mg/kg	15	15	14	< 5
Zinc	5	mg/kg	93	140	140	< 5
% Moisture	0.1	%	11	14	22	17
Asbestos			See attached	-	-	-

Client Sample ID			BH127_(3.4-3.5m)	QC17	BH125_(0.23-0.33m)	BH125_(0.23-0.33m)_A
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De08654	S12-De08655	S12-De08657	S12-De08658
Date Sampled			Dec 10, 2012	Dec 10, 2012	Dec 11, 2012	Dec 11, 2012
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	10	mg/kg	< 10	< 10	< 10	< 10
TRH C10-C14	50	mg/kg	< 50	< 50	< 50	< 50
TRH C15-C28	100	mg/kg	< 100	< 100	740	940
TRH C29-C36	100	mg/kg	< 100	< 100	470	530
TRH C10-36 (Total)	100	mg/kg	< 100	< 100	1200	1500
BTEX						
Benzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total m+p-Xylenes	1	mg/kg	< 1	< 1	< 1	< 1
o-Xylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
Total BTEX	1.5	mg/kg	< 1.5	< 1.5	< 1.5	< 1.5
4-Bromofluorobenzene (surr.)	1	%	76	77	78	79
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	100
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	100
TRH >C16-C34	100	mg/kg	< 100	< 100	1000	1200
TRH >C34-C40	100	mg/kg	< 100	< 100	100	130
Polyaromatic Hydrocarbons (PAH)						
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	0.6	2.1

Client Sample ID			BH127_(3.4-3.5m)	QC17	BH125_(0.23-0.33m)	BH125_(0.23-0.33m)_A
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De08654	S12-De08655	S12-De08657	S12-De08658
Date Sampled			Dec 10, 2012	Dec 10, 2012	Dec 11, 2012	Dec 11, 2012
Test/Reference	LOR	Unit				
Polyaromatic Hydrocarbons (PAH)						
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	13	18
Anthracene	0.5	mg/kg	< 0.5	< 0.5	13	18
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	31	27
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	25	20
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	< 1	< 1	39	33
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	12	7.8
Chrysene	0.5	mg/kg	< 0.5	< 0.5	24	18
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	3.1	1.8
Fluoranthene	0.5	mg/kg	0.5	0.9	65	66
Fluorene	0.5	mg/kg	< 0.5	< 0.5	4.5	15
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	9.8	7.4
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	3.7	18
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	65	87
Pyrene	0.5	mg/kg	< 0.5	0.9	64	54
Total PAH	1	mg/kg	< 1	1.8	370	390
2-Fluorobiphenyl (surr.)	1	%	104	107	105	106
p-Terphenyl-d14 (surr.)	1	%	109	105	104	106
Semivolatile Organic Compounds (SVOC)						
2-Chloronaphthalene	0.5	mg/kg	< 0.5	-	-	-
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	-
2-Methylnaphthalene	0.5	mg/kg	< 0.5	-	-	-
2-Methylphenol (o-Cresol)	0.5	mg/kg	< 0.5	-	-	-
2-Naphthylamine	0.5	mg/kg	< 0.5	-	-	-
2-Nitroaniline	1	mg/kg	< 1	-	-	-
2-Nitrophenol	0.5	mg/kg	< 0.5	-	-	-
3&4-Methylphenol (m&p-Cresol)	1	mg/kg	< 1	-	-	-
3-Methylcholanthrene	0.5	mg/kg	< 0.5	-	-	-
4-Aminobiphenyl	0.5	mg/kg	< 0.5	-	-	-
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	-	-	-
4-Chloro-3-methylphenol	0.5	mg/kg	< 0.5	-	-	-
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	-	-	-
4-Nitrophenol	0.5	mg/kg	< 0.5	-	-	-
4,4'-DDD	0.5	mg/kg	< 0.5	-	-	-
4,4'-DDE	0.5	mg/kg	< 0.5	-	-	-
4,4'-DDT	1	mg/kg	< 1	-	-	-
Acenaphthene	0.5	mg/kg	< 0.5	-	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	-	-
Acetophenone	0.5	mg/kg	< 0.5	-	-	-
Aldrin	0.5	mg/kg	< 0.5	-	-	-
Aniline	0.5	mg/kg	< 0.5	-	-	-
Anthracene	0.5	mg/kg	< 0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	-	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	-	-	-
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	-	-	-
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	-	-	-
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	-	-	-
Chlorpyrifos	0.5	mg/kg	< 0.5	-	-	-
Chrysene	0.5	mg/kg	< 0.5	-	-	-

Client Sample ID			BH127_(3.4-3.5m)	QC17	BH125_(0.23-0.33m)	BH125_(0.23-0.33m)_A
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De08654	S12-De08655	S12-De08657	S12-De08658
Date Sampled			Dec 10, 2012	Dec 10, 2012	Dec 11, 2012	Dec 11, 2012
Test/Reference	LOR	Unit				
Semivolatile Organic Compounds (SVOC)						
Coumaphos	0.5	mg/kg	< 0.5	-	-	-
d-BHC	0.5	mg/kg	< 0.5	-	-	-
Demeton-O	0.5	mg/kg	< 0.5	-	-	-
Demeton-S	0.5	mg/kg	< 0.5	-	-	-
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	-	-	-
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	-	-	-
Diazinon	0.5	mg/kg	< 0.5	-	-	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	-	-	-
Dibenzofuran	0.5	mg/kg	< 0.5	-	-	-
Dichlorvos	0.5	mg/kg	< 0.5	-	-	-
Dieldrin	0.5	mg/kg	< 0.5	-	-	-
Diethyl phthalate	0.5	mg/kg	< 0.5	-	-	-
Dimethoate	0.5	mg/kg	< 0.5	-	-	-
Dimethyl phthalate	0.5	mg/kg	< 0.5	-	-	-
Diphenylamine	0.5	mg/kg	< 0.5	-	-	-
Disulfoton	0.5	mg/kg	< 0.5	-	-	-
Endosulfan sulphate	0.5	mg/kg	< 0.5	-	-	-
Endrin	0.5	mg/kg	< 0.5	-	-	-
Endrin aldehyde	0.5	mg/kg	< 0.5	-	-	-
Endrin ketone	0.5	mg/kg	< 0.5	-	-	-
Ethoprop	0.5	mg/kg	< 0.5	-	-	-
Fenitrothion	0.5	mg/kg	< 0.5	-	-	-
Fensulfathion	0.5	mg/kg	< 0.5	-	-	-
Fenthion	0.5	mg/kg	< 0.5	-	-	-
Fluoranthene	0.5	mg/kg	0.5	-	-	-
Fluorene	0.5	mg/kg	< 0.5	-	-	-
g-BHC (Lindane)	0.5	mg/kg	< 0.5	-	-	-
Heptachlor	0.5	mg/kg	< 0.5	-	-	-
Heptachlor epoxide	0.5	mg/kg	< 0.5	-	-	-
Hexachlorobenzene	0.5	mg/kg	< 0.5	-	-	-
Hexachlorobutadiene	0.5	mg/kg	< 0.5	-	-	-
Hexachlorocyclopentadiene	1	mg/kg	< 1	-	-	-
Hexachloroethane	0.5	mg/kg	< 0.5	-	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	-	-
Malathion	0.5	mg/kg	< 0.5	-	-	-
Methoxychlor	0.5	mg/kg	< 0.5	-	-	-
Methyl azinphos	0.5	mg/kg	< 0.5	-	-	-
Methyl parathion	0.5	mg/kg	< 0.5	-	-	-
Mevinphos	0.5	mg/kg	< 0.5	-	-	-
Monocrotophos	10	mg/kg	< 10	-	-	-
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	-	-	-
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	-	-	-
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	-	-	-
Naphthalene	0.5	mg/kg	< 0.5	-	-	-
Nitrobenzene	0.5	mg/kg	< 0.5	-	-	-
Parathion	0.5	mg/kg	< 0.5	-	-	-
Pentachlorobenzene	0.5	mg/kg	< 0.5	-	-	-
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-

Client Sample ID			BH127_(3.4-3.5m)	QC17	BH125_(0.23-0.33m)	BH125_(0.23-0.33m)_A
Sample Matrix			Soil	Soil	Soil	Soil
mgt-LabMark Sample No.			S12-De08654	S12-De08655	S12-De08657	S12-De08658
Date Sampled			Dec 10, 2012	Dec 10, 2012	Dec 11, 2012	Dec 11, 2012
Test/Reference	LOR	Unit				
Semivolatile Organic Compounds (SVOC)						
Phenanthrene	0.5	mg/kg	< 0.5	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Phorate	0.5	mg/kg	< 0.5	-	-	-
Profenofos	0.5	mg/kg	< 0.5	-	-	-
Prothiofos	0.5	mg/kg	< 0.5	-	-	-
Pyrene	0.5	mg/kg	< 0.5	-	-	-
Ronnel	0.5	mg/kg	< 0.5	-	-	-
Stirophos	0.5	mg/kg	< 0.5	-	-	-
Trichloronate	0.5	mg/kg	< 0.5	-	-	-
Phenol-d6 (surr.)	1	%	90	-	-	-
Nitrobenzene-d5 (surr.)	1	%	90	-	-	-
p-Terphenyl-d14 (surr.)	1	%	109	-	-	-
2-Fluorobiphenyl (surr.)	1	%	104	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	-	-	3.6	2.9
Cadmium	0.4	mg/kg	-	-	< 0.4	< 0.4
Chromium	5	mg/kg	-	-	< 5	< 5
Copper	5	mg/kg	-	-	39	26
Lead	5	mg/kg	-	-	84	99
Mercury	0.05	mg/kg	-	-	0.24	0.21
Nickel	5	mg/kg	-	-	< 5	< 5
Zinc	5	mg/kg	-	-	74	93
% Moisture	0.1	%	23	21	16	13
Asbestos			-	-	See attached	-

Client Sample ID			BH125_(1.0-1.1m)_A
Sample Matrix			Soil
mgt-LabMark Sample No.			S12-De08660
Date Sampled			Dec 11, 2012
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	10	mg/kg	< 10
TRH C10-C14	50	mg/kg	< 50
TRH C15-C28	100	mg/kg	< 100
TRH C29-C36	100	mg/kg	< 100
TRH C10-36 (Total)	100	mg/kg	< 100
BTEX			
Benzene	0.5	mg/kg	< 0.5
Toluene	0.5	mg/kg	< 0.5
Ethylbenzene	0.5	mg/kg	< 0.5
Total m+p-Xylenes	1	mg/kg	< 1
o-Xylene	0.5	mg/kg	< 0.5
Xylenes(ortho.meta and para)	1.5	mg/kg	< 1.5

Client Sample ID			BH125_(1.0-1.1m)_A
Sample Matrix			Soil
mgt-LabMark Sample No.			S12-De08660
Date Sampled			Dec 11, 2012
Test/Reference	LOR	Unit	
BTEX			
Total BTEX	1.5	mg/kg	< 1.5
4-Bromofluorobenzene (surr.)	1	%	77
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *			
Naphthalene ^{N02}	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
Polyaromatic Hydrocarbons (PAH)			
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	0.5
Benz(a)anthracene	0.5	mg/kg	1.0
Benzo(a)pyrene	0.5	mg/kg	0.7
Benzo(b)fluoranthene & Benzo(k)fluoranthene	1	mg/kg	1.4
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	0.9
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	1.9
Fluorene	0.5	mg/kg	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	1.4
Pyrene	0.5	mg/kg	1.9
Total PAH	1	mg/kg	9.7
2-Fluorobiphenyl (surr.)	1	%	110
p-Terphenyl-d14 (surr.)	1	%	110
Heavy Metals			
Arsenic	2	mg/kg	5.1
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	18
Copper	5	mg/kg	43
Lead	5	mg/kg	110
Mercury	0.05	mg/kg	0.34
Nickel	5	mg/kg	5.3
Zinc	5	mg/kg	77
% Moisture	0.1	%	20

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Testing Site	Extracted	Holding Time
mgt-LabMark Suite 4			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Dec 12, 2012	14 Day
- Method: E004 Petroleum Hydrocarbons (TPH)			
BTEX	Sydney	Dec 12, 2012	14 Day
- Method: E029/E016 BTEX			
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *	Sydney	Dec 12, 2012	14 Day
- Method: LM-LTM-ORG2010			
Polyaromatic Hydrocarbons (PAH)	Sydney	Dec 12, 2012	14 Day
- Method: E007 Polyaromatic Hydrocarbons (PAH)			
Semivolatile Organic Compounds (SVOC)	Sydney	Dec 12, 2012	14 Day
- Method: E017 Semivolatile Organic Compounds (SVOC)			
Metals M8	Sydney	Dec 12, 2012	28 Day
- Method: E022 Acid Extractable metals in Soils & E026 Mercury			
% Moisture	Sydney	Dec 12, 2012	28 Day
- Method: E005 Moisture Content			

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Client Job No.: SICEEP GEOTLCOV24303AF

Order No.:
Report #: 362729
Phone: +61 2 9406 1000
Fax: +61 2 9406 1002

Received: Dec 11, 2012 4:30 PM
Due: Dec 19, 2012
Priority: 5 Day
Contact Name: Matthew Locke

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	mgt-LabMark Suite 4	Semivolatile Organic Compounds (SVOC)
Laboratory where analysis is conducted										
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217					X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
External Laboratory						X				
Sample ID	Sample Date	Sampling Time	Matrix	LAB ID						
BH127_(1.0-1.1m)	Dec 10, 2012		Soil	S12-De08647	X	X		X	X	
BH127_(1.5-1.6m)	Dec 10, 2012		Soil	S12-De08648	X			X	X	
BH127_(1.5-1.6m)_A	Dec 10, 2012		Soil	S12-De08649	X			X	X	
BH127_(1.9-2.0m)	Dec 10, 2012		Soil	S12-De08650			X			
BH127_(2.4-2.5m)	Dec 10, 2012		Soil	S12-De08651			X			
BH127_(2.5-2.6m)	Dec 10, 2012		Soil	S12-De08652			X			

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

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Contact Name: Matthew Locke

mgt-LabMark Client Manager: Jean Heng

Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	mgt-LabMark Suite 4	Semivolatile Organic Compounds (SVOC)
Laboratory where analysis is conducted										
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217					X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
External Laboratory						X				
BH127_(2.6-2.7m)	Dec 10, 2012		Soil	S12-De08653	X			X	X	X
BH127_(3.4-3.5m)	Dec 10, 2012		Soil	S12-De08654	X				X	X
QC17	Dec 10, 2012		Soil	S12-De08655	X				X	
BH127_(3.9-4.0m)	Dec 10, 2012		Soil	S12-De08656			X			
BH125_(0.23-0.33m)	Dec 11, 2012		Soil	S12-De08657	X	X		X	X	
BH125_(0.23-0.33m)_A	Dec 11, 2012		Soil	S12-De08658	X			X	X	
BH125_(0.5-0.6m)	Dec 11, 2012		Soil	S12-De08659			X			

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

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Received: Dec 11, 2012 4:30 PM
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Contact Name: Matthew Locke

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Sample Detail					% Moisture	Asbestos	HOLD	Metals M8	mgt-LabMark Suite 4	Semivolatile Organic Compounds (SVOC)
Laboratory where analysis is conducted										
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217					X		X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
External Laboratory						X				
BH125_(1.0-1.1m)_A	Dec 11, 2012		Soil	S12-De08660	X			X	X	

mgt-LabMark Internal Quality Control Review

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environment Protection Authority
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC was performed on samples not pertaining to this report, however QC is representative of the sequence or batch that client samples were analysed within

QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.

QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxophene & Chlordane are not added to the LCS.
3. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Arochlor 1260 in Matrix Spikes and LCS's.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	mg/kg	< 10			10	Pass	
TRH C10-C14	mg/kg	< 50			50	Pass	
TRH C15-C28	mg/kg	< 100			100	Pass	
TRH C29-C36	mg/kg	< 100			100	Pass	
Method Blank							
BTEX E029/E016 BTEX							
Benzene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.5			0.5	Pass	
Ethylbenzene	mg/kg	< 0.5			0.5	Pass	
Total m+p-Xylenes	mg/kg	< 1			1	Pass	
o-Xylene	mg/kg	< 0.5			0.5	Pass	
Xylenes(ortho.meta and para)	mg/kg	< 1.5			1.5	Pass	
Total BTEX	mg/kg	< 1.5			1.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH C6-C10 less BTEX (F1)	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	mg/kg	< 1			1	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Semivolatile Organic Compounds (SVOC) E017 Semivolatile Organic Compounds (SVOC)							
2-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2-Methylnaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.5			0.5	Pass	
2-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
2-Nitroaniline	mg/kg	< 1			1	Pass	
2-Nitrophenol	mg/kg	< 0.5			0.5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 1			1	Pass	
3-Methylcholanthrene	mg/kg	< 0.5			0.5	Pass	
4-Aminobiphenyl	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4-Bromophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 0.5			0.5	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Nitrophenol	mg/kg	< 0.5			0.5	Pass	
4,4'-DDD	mg/kg	< 0.5			0.5	Pass	
4,4'-DDE	mg/kg	< 0.5			0.5	Pass	
4,4'-DDT	mg/kg	< 1			1	Pass	
Acetophenone	mg/kg	< 0.5			0.5	Pass	
Aldrin	mg/kg	< 0.5			0.5	Pass	
Aniline	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5			0.5	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 5			5	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5			0.5	Pass	
Chlorpyrifos	mg/kg	< 0.5			0.5	Pass	
Coumaphos	mg/kg	< 0.5			0.5	Pass	
d-BHC	mg/kg	< 0.5			0.5	Pass	
Demeton-O	mg/kg	< 0.5			0.5	Pass	
Demeton-S	mg/kg	< 0.5			0.5	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5			0.5	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5			0.5	Pass	
Diazinon	mg/kg	< 0.5			0.5	Pass	
Dibenzofuran	mg/kg	< 0.5			0.5	Pass	
Dichlorvos	mg/kg	< 0.5			0.5	Pass	
Dieldrin	mg/kg	< 0.5			0.5	Pass	
Diethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethoate	mg/kg	< 0.5			0.5	Pass	
Dimethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Diphenylamine	mg/kg	< 0.5			0.5	Pass	
Disulfoton	mg/kg	< 0.5			0.5	Pass	
Endosulfan sulphate	mg/kg	< 0.5			0.5	Pass	
Endrin	mg/kg	< 0.5			0.5	Pass	
Endrin aldehyde	mg/kg	< 0.5			0.5	Pass	
Endrin ketone	mg/kg	< 0.5			0.5	Pass	
Ethoprop	mg/kg	< 0.5			0.5	Pass	
Fenitrothion	mg/kg	< 0.5			0.5	Pass	
Fensulfathion	mg/kg	< 0.5			0.5	Pass	
Fenthion	mg/kg	< 0.5			0.5	Pass	
g-BHC (Lindane)	mg/kg	< 0.5			0.5	Pass	
Heptachlor	mg/kg	< 0.5			0.5	Pass	
Heptachlor epoxide	mg/kg	< 0.5			0.5	Pass	
Hexachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
Hexachlorocyclopentadiene	mg/kg	< 1			1	Pass	
Hexachloroethane	mg/kg	< 0.5			0.5	Pass	
Malathion	mg/kg	< 0.5			0.5	Pass	
Methoxychlor	mg/kg	< 0.5			0.5	Pass	
Methyl azinphos	mg/kg	< 0.5			0.5	Pass	
Methyl parathion	mg/kg	< 0.5			0.5	Pass	
Mevinphos	mg/kg	< 0.5			0.5	Pass	
Monocrotophos	mg/kg	< 10			10	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5			0.5	Pass	
Nitrobenzene	mg/kg	< 0.5			0.5	Pass	
Parathion	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pentachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Phorate	mg/kg	< 0.5			0.5	Pass	
Profenofos	mg/kg	< 0.5			0.5	Pass	
Prothiofos	mg/kg	< 0.5			0.5	Pass	
Ronnel	mg/kg	< 0.5			0.5	Pass	
Stirophos	mg/kg	< 0.5			0.5	Pass	
Trichloronate	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Metals M8 E022 Acid Extractable metals in Soils & E026 Mercury							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions E004 Petroleum Hydrocarbons (TPH)							
TRH C6-C9	%	83			70-130	Pass	
TRH C10-C14	%	100			70-130	Pass	
LCS - % Recovery							
BTEX E029/E016 BTEX							
Benzene	%	91			70-130	Pass	
Toluene	%	85			70-130	Pass	
Ethylbenzene	%	96			70-130	Pass	
Total m+p-Xylenes	%	94			70-130	Pass	
o-Xylene	%	94			70-130	Pass	
Xylenes(ortho.meta and para)	%	94			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010							
Naphthalene	%	109			70-130	Pass	
TRH C6-C10	%	79			70-130	Pass	
TRH >C10-C16	%	99			70-130	Pass	
LCS - % Recovery							
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)							
Acenaphthene	%	97			70-130	Pass	
Acenaphthylene	%	98			70-130	Pass	
Anthracene	%	116			70-130	Pass	
Benz(a)anthracene	%	92			70-130	Pass	
Benzo(a)pyrene	%	82			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	%	87			70-130	Pass	
Benzo(g,h,i)perylene	%	79			70-130	Pass	
Chrysene	%	103			70-130	Pass	
Dibenz(a,h)anthracene	%	82			70-130	Pass	
Fluoranthene	%	98			70-130	Pass	
Fluorene	%	86			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	81			70-130	Pass	
Naphthalene	%	98			70-130	Pass	
Phenanthrene	%	82			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pyrene			%	99			70-130	Pass	
LCS - % Recovery									
Semivolatile Organic Compounds (SVOC) E017 Semivolatile Organic Compounds (SVOC)									
2-Chlorophenol			%	99			70-130	Pass	
4-Chloro-3-methylphenol			%	86			70-130	Pass	
Chlorpyrifos			%	105			70-130	Pass	
Coumaphos			%	89			70-130	Pass	
Demeton-O			%	97			70-130	Pass	
Demeton-S			%	101			70-130	Pass	
Diazinon			%	102			70-130	Pass	
Dichlorvos			%	113			70-130	Pass	
Dimethoate			%	97			70-130	Pass	
Disulfoton			%	101			70-130	Pass	
Ethoprop			%	101			70-130	Pass	
Fenitrothion			%	95			70-130	Pass	
Fensulfothion			%	100			70-130	Pass	
Fenthion			%	106			70-130	Pass	
Malathion			%	105			70-130	Pass	
Methyl azinphos			%	81			70-130	Pass	
Methyl parathion			%	106			70-130	Pass	
Mevinphos			%	104			70-130	Pass	
Monocrotophos			%	97			70-130	Pass	
N-Nitrosodipropylamine			%	71			70-130	Pass	
Parathion			%	105			70-130	Pass	
Phenol			%	92			70-130	Pass	
Phorate			%	102			70-130	Pass	
Profenofos			%	102			70-130	Pass	
Prothiofos			%	103			70-130	Pass	
Ronnel			%	112			70-130	Pass	
Stirophos			%	103			70-130	Pass	
Trichloronate			%	109			70-130	Pass	
LCS - % Recovery									
Metals M8 E022 Acid Extractable metals in Soils & E026 Mercury									
Arsenic			%	95			70-130	Pass	
Cadmium			%	92			70-130	Pass	
Chromium			%	87			70-130	Pass	
Copper			%	94			70-130	Pass	
Lead			%	100			70-130	Pass	
Mercury			%	114			70-130	Pass	
Nickel			%	93			70-130	Pass	
Zinc			%	108			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S12-De08030	NCP	%	74			70-130	Pass	
TRH C10-C14	S12-De11734	NCP	%	128			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S12-De08030	NCP	%	83			70-130	Pass	
Toluene	S12-De08030	NCP	%	77			70-130	Pass	
Ethylbenzene	S12-De08030	NCP	%	84			70-130	Pass	
Total m+p-Xylenes	S12-De08030	NCP	%	85			70-130	Pass	
o-Xylene	S12-De08030	NCP	%	85			70-130	Pass	
Xylenes(ortho.meta and para)	S12-De08030	NCP	%	85			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C6-C9			%	88			70-130	Pass	
TRH C10-C14			%	119			70-130	Pass	
LCS - % Recovery									
BTEX E029/E016 BTEX									
Benzene			%	88			70-130	Pass	
Toluene			%	92			70-130	Pass	
Ethylbenzene			%	94			70-130	Pass	
Total m+p-Xylenes			%	90			70-130	Pass	
o-Xylene			%	94			70-130	Pass	
Xylenes(ortho.meta and para)			%	91			70-130	Pass	
LCS - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions * LM-LTM-ORG2010									
Naphthalene			%	90			70-130	Pass	
TRH C6-C10			%	88			70-130	Pass	
TRH >C10-C16			%	105			70-130	Pass	
LCS - % Recovery									
Polyaromatic Hydrocarbons (PAH) E007 Polyaromatic Hydrocarbons (PAH)									
Acenaphthene			%	108			70-130	Pass	
Acenaphthylene			%	100			70-130	Pass	
Anthracene			%	112			70-130	Pass	
Benz(a)anthracene			%	88			70-130	Pass	
Benzo(a)pyrene			%	108			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene			%	108			70-130	Pass	
Benzo(g,h,i)perylene			%	112			70-130	Pass	
Chrysene			%	109			70-130	Pass	
Dibenz(a,h)anthracene			%	103			70-130	Pass	
Fluoranthene			%	85			70-130	Pass	
Fluorene			%	102			70-130	Pass	
Indeno(1,2,3-cd)pyrene			%	106			70-130	Pass	
Naphthalene			%	108			70-130	Pass	
Phenanthrene			%	95			70-130	Pass	
Pyrene			%	86			70-130	Pass	
LCS - % Recovery									
Metals M8 E022 Acid Extractable metals in Soils & E026 Mercury									
Arsenic			%	92			70-130	Pass	
Cadmium			%	91			70-130	Pass	
Chromium			%	89			70-130	Pass	
Copper			%	74			70-130	Pass	
Lead			%	83			70-130	Pass	
Mercury			%	102			70-130	Pass	
Nickel			%	89			70-130	Pass	
Zinc			%	71			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions									
				Result 1					
TRH C6-C9	S12-De05524	CP	%	84			70-130	Pass	
TRH C10-C14	S12-De05524	CP	%	98			70-130	Pass	
Spike - % Recovery									
BTEX									
				Result 1					
Benzene	S12-De05524	CP	%	93			70-130	Pass	
Toluene	S12-De05524	CP	%	98			70-130	Pass	
Ethylbenzene	S12-De05524	CP	%	103			70-130	Pass	
Total m+p-Xylenes	S12-De05524	CP	%	104			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
o-Xylene	S12-De05524	CP	%	105			70-130	Pass	
Xylenes(ortho.meta and para)	S12-De05524	CP	%	104			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1					
Naphthalene	S12-De05524	CP	%	97			70-130	Pass	
TRH C6-C10	S12-De05524	CP	%	92			70-130	Pass	
TRH >C10-C16	S12-De05524	CP	%	86			70-130	Pass	
Spike - % Recovery									
Polyaromatic Hydrocarbons (PAH)				Result 1					
Acenaphthene	S12-De05524	CP	%	99			70-130	Pass	
Acenaphthylene	S12-De05524	CP	%	94			70-130	Pass	
Anthracene	S12-De05524	CP	%	96			70-130	Pass	
Benz(a)anthracene	S12-De05524	CP	%	91			70-130	Pass	
Benzo(a)pyrene	S12-De05524	CP	%	113			70-130	Pass	
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S12-De05524	CP	%	109			70-130	Pass	
Benzo(g,h,i)perylene	S12-De05524	CP	%	107			70-130	Pass	
Chrysene	S12-De05524	CP	%	102			70-130	Pass	
Dibenz(a,h)anthracene	S12-De05524	CP	%	100			70-130	Pass	
Fluoranthene	S12-De05524	CP	%	81			70-130	Pass	
Fluorene	S12-De05524	CP	%	92			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S12-De05524	CP	%	104			70-130	Pass	
Naphthalene	S12-De05524	CP	%	102			70-130	Pass	
Phenanthrene	S12-De05524	CP	%	92			70-130	Pass	
Pyrene	S12-De05524	CP	%	81			70-130	Pass	
Spike - % Recovery									
Metals M8				Result 1					
Zinc	S12-De04817	NCP	%	129			70-130	Pass	
Spike - % Recovery									
Metals M8				Result 1					
Arsenic	S12-De05525	CP	%	95			70-130	Pass	
Cadmium	S12-De05525	CP	%	126			70-130	Pass	
Chromium	S12-De05525	CP	%	116			70-130	Pass	
Copper	S12-De05525	CP	%	100			70-130	Pass	
Lead	S12-De05525	CP	%	116			70-130	Pass	
Mercury	S12-De05525	CP	%	102			70-130	Pass	
Nickel	S12-De05525	CP	%	130			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S12-De05524	CP	mg/kg	< 10	< 10	<1	30%	Pass	
TRH C10-C14	S12-De05524	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C15-C28	S12-De05524	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH C29-C36	S12-De05524	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Toluene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Ethylbenzene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total m+p-Xylenes	S12-De05524	CP	mg/kg	< 1	< 1	<1	30%	Pass	
o-Xylene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Xylenes(ortho.meta and para)	S12-De05524	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	
Total BTEX	S12-De05524	CP	mg/kg	< 1.5	< 1.5	<1	30%	Pass	

Duplicate								
Total Recoverable Hydrocarbons - Draft 2010 NEPM Fractions *				Result 1	Result 2	RPD		
Naphthalene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	S12-De05524	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C6-C10 less BTEX (F1)	S12-De05524	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH >C10-C16	S12-De05524	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	S12-De05524	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	S12-De05524	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Polyaromatic Hydrocarbons (PAH)				Result 1	Result 2	RPD		
Acenaphthene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b)fluoranthene & Benzo(k)fluoranthene	S12-De05524	CP	mg/kg	< 1	< 1	<1	30%	Pass
Benzo(g,h,i)perylene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S12-De05524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Metals M8				Result 1	Result 2	RPD		
Arsenic	S12-De05524	CP	mg/kg	< 2	< 2	67	30%	Fail Q15
Cadmium	S12-De05524	CP	mg/kg	< 0.4	< 0.4	8.0	30%	Pass
Chromium	S12-De05524	CP	mg/kg	< 5	< 5	<1	30%	Pass
Copper	S12-De05524	CP	mg/kg	67	80	18	30%	Pass
Mercury	S12-De05524	CP	mg/kg	0.10	< 0.05	86	30%	Fail Q15
Nickel	S12-De05524	CP	mg/kg	81	95	17	30%	Pass
Zinc	S12-De05524	CP	mg/kg	92	79	16	30%	Pass
Duplicate								
Metals M8				Result 1	Result 2	RPD		
Lead	S12-De05982	NCP	mg/kg	50	44	14	30%	Pass

Comments

Sample Integrity

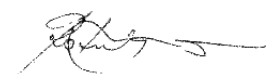
Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Organic samples had Teflon liners	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q15	The RPD reported passes mgt-LabMark's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Jean Heng	Client Services
James Norford	Senior Analyst-Metal (NSW)
Laura Schofield	Senior Analyst-Volatile (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)



Dr. Bob Symons

Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

mgt-LabMark shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall mgt-LabMark be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.



AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET31875/ 35055 / 1 - 3

Your ref : 362306

NATA Accreditation No: 14484

11 December 2012

MGT- Labmark Environmental Pty Ltd
Unit F3, Building F, 16 Mars Road
Lane Cove NSW 2066

Attn: Dr Robert Symons
Laboratory & Technical Manager

Dear Robert

Asbestos Identification

This report presents the results of three samples, forwarded by MGT- Labmark Environmental Pty Ltd on 10 December 2012, for analysis for asbestos.

1.Introduction: Three samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Safer Environment Method 1.**)

3. Results : **Sample No. 1. ASET31875 / 35055 / 1. 362306 - BH107 - 0.4- 0.5m - De05526.**
Approx dimensions 7.0 cm x 7.0 cm x 2.25 cm
The sample consisted of a mixture of sandy soil, stones, sandstone and plant matter.
No asbestos detected.

Sample No. 2. ASET31875 / 35055 / 2. 362306 - BH107 - 0.9- 1.0m - De05527.
Approx dimensions 7.0 cm x 7.0 cm x 2.0 cm
The sample consisted of a mixture of sandy soil, stones, plant matter and fragments of cement and brick.
No asbestos detected.

Sample No. 3. ASET31875 / 35055 / 3. 362306 - BH115 - 0.33- 0.43m - De05545.
Approx dimensions 7.0 cm x 7.0 cm x 2.2 cm
The sample consisted of a mixture of sandy soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Analysed and reported by,

Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier
Approved Signatory



This document is issued in accordance with
NATA's Accreditation requirements. Accredited
for compliance with ISO/IEC 17025.

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