JBS&G (43017-59576)

23 October 2014

Doug Wu
Project Manager
Baulderstone Pty Ltd
Via email: Doug.Wu@lendlease.com

AMR224 - Daily Airborne Asbestos Fibre Monitoring
Randwick Barracks, 373a Avoca Street, Randwick NSW

Dear Doug,

Please find as **Attachment 1** the daily airborne asbestos fibre monitoring report for works completed at the Randwick Barracks Project site on **22 October 2014**.

All air monitoring was completed in strict accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres* [NOHSC: 3003(2005)], with NATA certification applying to all sample collection, handling and analytical procedures.

All reported results were satisfactory and below the minimum action levels for control monitoring as outlined in:

- Work, Health and Safety (2011) Regulation; and
- WorkCover Authority of NSW (2011) Code of Practice – *How to Safely Remove Asbestos.*

If you have any questions regarding these results, please feel free to contact the undersigned on 02 8245 0300 or by email msamuel@jbsg.com.au.

Yours sincerely

Michael Samuel
Licensed Asbestos Assessor (LAA 000157)
JBS&G Australia Pty Ltd

Attachment 1 – Daily Airborne Asbestos Fibre Monitoring Report

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.

JBS & G Australia (NSW & WA) P/L
Level 1, 50 Margaret St
Sydney
NSW 2000

Attention:	Michael Samuel
Report	436122-AFC
Project Name	RANDWICK 43017
Received Date	Oct 22, 2014
Date Reported	Oct 22, 2014

METHODOLOGY:

Asbestos Sampling	Sampling as per the National Occupational Health & Safety Commission - Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)]
Pump Calibration	Mini Buck Model M-5: Calibrated against National Institute of Standards & Technology (NIST) SOP 13 Standard Operating Procedure for Calibration of Volumetric Ware, Gravimetric Method utilising a 1000 mL burette with a digital stop watch.
Asbestos Counting	Conducted in accordance with the National Occupational Health & Safety Commission - Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and in-house Method LTM-ASB-8010.

Project Name RANDWICK 43017
Project ID
Date Sampled Oct 22, 2014
Report 436122-AFC

Eurofins | mgt Sample No.	Client Sample ID	Pump ID	Location	Start (time)	End (time)	Start Flow Rate (L/min)	End Flow Rate (L/min)	Average Flow Rate (L/min)	Result (Fibres/mL)
14-Oc15589	CM390412	SKC 144	NORTH PORTION OF SITE ADJACENT TO SITE SHEDS	7:45	12:40	1.5	1.5	1.5	< 0.01
14-Oc15590	CM390416	SKC 146	CENTRAL PORTION OF CONSTRUCTION SITE	7:47	12:42	1.5	1.5	1.5	< 0.01
14-Oc15591	CM389988	SKC 478	NORTH PORTION OF SITE ADJACENT TO CAR PARK	7:49	12:44	1.5	1.5	1.5	< 0.01
14-Oc15592	CM390023	SKC 136	WEST BOUNDARY, AVOCA ST	7:51	12:46	1.5	1.5	1.5	< 0.01
14-Oc15593	CM390277	SKC 130	SOUTH BOUNDARY, BESIDES HOUSES	7:53	12:48	1.5	1.5	1.5	< 0.01
14-Oc15594	CM390210	SKC 007	SOUTH FACE OF CONSTRUCTION SITE	7:55	12:50	1.5	1.5	1.5	< 0.01*
14-Oc15595	CM748505	BLANK	BLANK	-	-	-	-	-	0 fibres / 100 field

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos – LTM-ASB-8010	Sydney	Oct 22, 2014	Indefinite

eurofins | mgt

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com.au web : www.eurofins.com.au

Melbourne
3-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Company Name:	JBS & G Australia (NSW & WA) P/L	**Order No.:**		**Received:**	Oct 22, 2014 1:50 PM
Address:	Level 1, 50 Margaret St Sydney NSW 2000	**Report #:**	436122	**Due:**	Oct 22, 2014
		Phone:	02 8245 0300	**Priority:**	Same day
		Fax:		**Contact Name:**	Michael Samuel
Project Name:	RANDWICK 43017				

Eurofins | mgt Client Manager: Charl Du Preez

Sample Detail					Asbestos (concentration of fibres in air)
Laboratory where analysis is conducted					
Melbourne Laboratory - NATA Site # 1254 & 14271					
Sydney Laboratory - NATA Site # 18217					X
Brisbane Laboratory - NATA Site # 20794					
External Laboratory					
Sample ID	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**	
CM390412	Oct 22, 2014	12:40PM	Air	S14-Oc15589	X
CM390416	Oct 22, 2014	12:42PM	Air	S14-Oc15590	X
CM389988	Oct 22, 2014	12:44PM	Air	S14-Oc15591	X
CM390023	Oct 22, 2014	12:46PM	Air	S14-Oc15592	X
CM390277	Oct 22, 2014	12:48PM	Air	S14-Oc15593	X
CM390210	Oct 22, 2014	12:50PM	Air	S14-Oc15594	X
CM748505	Oct 22, 2014		Air	S14-Oc15595	X

Eurofins | mgt Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. 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 Advice.

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.

UNITS

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
COC	Chain of custody
SRA	Sample Receipt Advice
ISO	International Stardards Organisation
AS	Australian Standards
WA DOH	Western Australia Department of Health
NOHSC	National Occupational Health and Safety Commission
ACM	Bonded asbestos-containing material means any material containing more than 1% asbestos and comprises asbestos-containing-material which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin. Common examples of ACM include but are not limited to: pipe and boiler insulation, sprayed-on fireproofing, troweled-on acoustical plaster, floor tile and mastic, floor linoleum, transite shingles, roofing materials, wall and ceiling plaster, ceiling tiles, and gasket materials. This term is restricted to material that cannot pass a 7 mm x 7 mm sieve. This sieve size is selected because it approximates the thickness of common asbestos cement sheeting and for fragments to be smaller than this would imply a high degree of damage and hence potential for fibre release.
FA	FA comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded (crumbling).
PACM	Presumed Asbestos-Containing Material means thermal system insulation and surfacing material found in buildings, vessels, and vessel sections constructed no later than 1980 that are assumed to contain greater than one percent asbestos but have not been sampled or analyzed to verify or negate the presence of asbestos.
AF	Asbestos fines (AF) are defined as free fibres, or fibre bundles, smaller than 7mm. It is the free fibres which present the greatest risk to human health, although very small fibres (< 5 microns in length) are not considered to be such a risk. AF also includes small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve. (Note that for bonded ACM fragments to pass through a 7 mm x 7 mm sieve implies a substatntial degree of damage which increases the potential for fibre release.)
AC	Asbestos cement means a mixture of cement and asbestos fibres (typically 90:10 ratios).

Comments

Volume Measurement : M.HUNTER, JBS & G Australia (NSW & WA) P/L, has been trained by Eurofins | mgt and they conducted the sampling in accordance with the National Occupational Health & Safety Commission - Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)]methodology. Sampling pumps used by JBS & G Australia (NSW & WA) P/L were calibrated by Eurofins | mgt and therefore volume measurements contained in this report are traceable back to Eurofins | mgt. Eurofins | mgt are responsible for all data contained in this report.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Authorised by:

Nibha Vaidya Senior Analyst-Asbestos (NSW)

Glenn Jackson
National 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