

JBS&G (43017-59731)

04 November 2014

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

**AMR234 - 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 **03 November 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 437374-AFC
Project Name RANDWICK 43017
Received Date Nov 03, 2014
Date Reported Nov 03, 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 Nov 03, 2014
Report 437374-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-No00591 | CM389711 | SKC 144 | NORTH PORTION OF SITE ADJACANT TO SITE SHEDS | 7:50 | 12:45 | 1.5 | 1.5 | 1.5 | < 0.01 |
| 14-No00592 | CM389819 | SKC 152 | CENTRAL AREA OF CONSTRUCTION SITE | 7:52 | 12:47 | 1.5 | 1.5 | 1.5 | < 0.01 |
| 14-No00593 | CM389690 | SKC 146 | NORTH PORTION OF SITE ADJACANT TO CAR PARK | 7:54 | 12:49 | 1.5 | 1.5 | 1.5 | < 0.01 |
| 14-No00594 | CM390316 | SKC 478 | WEST BOUNDARY, AVOCA ST | 7:56 | 12:51 | 1.5 | 1.5 | 1.5 | < 0.01 |
| 14-No00595 | CM389713 | SKC 130 | SOUTH BOUNDARY, BESIDE HOUSES | 7:58 | 12:53 | 1.5 | 1.5 | 1.5 | < 0.01 |
| 14-No00596 | CM389714 | SKC 136 | SOUTH FACE OF CONSTRUCTION SITE | 8:00 | 12:55 | 1.5 | 1.5 | 1.5 | < 0.01 |
| 14-No00597 | CM389681 | 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 | Nov 03, 2014 | Indefinite |

Company Name: JBS & G Australia (NSW & WA) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: RANDWICK 43017

Order No.:
Report #: 437374
Phone: 02 8245 0300
Fax:

Received: Nov 3, 2014 1:35 PM
Due: Nov 3, 2014
Priority: Same day
Contact Name: Michael Samuel

Eurofins | mgt Client Manager: Charl Du Preez

Asbestos (concentration of fibres in air)

Sample Detail

Laboratory where analysis is conducted

Melbourne Laboratory - NATA Site # 1254 & 14271

Sydney Laboratory - NATA Site # 18217

Brisbane Laboratory - NATA Site # 20794

External Laboratory

| Sample ID | Sample Date | Sampling Time | Matrix | LAB ID | |
|-----------|--------------|---------------|--------|-------------|---|
| CM389711 | Nov 03, 2014 | 12:45PM | Air | S14-No00591 | X |
| CM389819 | Nov 03, 2014 | 12:47PM | Air | S14-No00592 | X |
| CM389690 | Nov 03, 2014 | 12:49PM | Air | S14-No00593 | X |
| CM390316 | Nov 03, 2014 | 12:51PM | Air | S14-No00594 | X |
| CM389713 | Nov 03, 2014 | 12:53PM | Air | S14-No00595 | X |
| CM389714 | Nov 03, 2014 | 12:55PM | Air | S14-No00596 | X |
| CM389681 | Nov 03, 2014 | | Air | S14-No00597 | 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 Standards 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 substantial 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

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