

3 April 2018

Stephen Simpson
Mirvac Projects Pty Ltd
Via email: stephen.simpson@mirvac.com

Blacksmith's Workshop Ambient Air Assessment, Locomotive Workshop Bays 1 – 2 – Australian Technology Park, Eveleigh, NSW

Dear Stephen,

1. Introduction and Background

JBS&G Australia Pty Ltd (JBS&G) has been engaged by Mirvac Projects Pty Ltd (Mircvac, the client) for the provision of environmental and occupational health services associated with the remediation/redevelopment of the Australian Technology Park (ATP, herein referred to as the site), as shown on **Figures 1 and 2 (Attachment 2)**.

As part of the redevelopment of the site, Mirvac is seeking approval for the urban regeneration of the locomotive workshops for ongoing commercial land uses (retail spaces within bays 1-5, and commercial spaces within bays 6-16), as documented in State Significant Development Applications (SSDAs) 8449 and 8517. Based on review of the development applications and information provided by Mirvac, the development will largely involve internal remodelling of the locomotive workshops rather than demolition of heritage structures. The development application (8517) proposes adaptive reuse of bays 1 and 2 of the locomotive workshops, herein referred to as the assessment area (**Figures 1 and 2, Attachment 2**). The proposed redevelopment of the assessment area will comprise retail spaces in the northern half of bays 1 and 2 on both the ground floor and level 1 (refer **Figure 2, attachment 2**), including food and beverage handling areas, as well as retention of the existing blacksmith's workshop, currently located at the southern extent of the assessment area.

Previous assessments of the blacksmith's workshop as undertaken by JBS&G staff several years prior have identified a potential for emissions of heavy metals and polycyclic aromatic hydrocarbons (PAHs) from blacksmith / foundry activities. Further petroleum-based products are combusted within the workshop, causing an associated potential for discharge of a range of volatile organic compounds (VOCs).

Mircvac has requested JBS&G assess the suitability of the proposed redevelopment with a specific focus on the integration of the existing blacksmith's workshop with the proposed retail spaces. The findings of this assessment are proposed to be submitted as part of the resubmission of the SSDA to council.

An assessment of the air quality within the operational blacksmith's workshop has been undertaken to assess the potential for VOCs, PAHs and/or heavy metal emissions to be occurring from the blacksmithing operations, and to further assess the potential for any airborne emissions to adversely affect proposed additional uses in proximity of the blacksmith's workshop.

This letter report documents ambient air assessment activities within bays 1 and 2 of the locomotive workshops. The assessment has been undertaken in accordance with relevant guidelines made or approved by NSW Environmental Protection Authority and Safe Work Australia.

1.1 Objectives

The objective of the investigation is to determine whether integration of the existing blacksmith's workshop with the proposed retail spaces will have adverse effects on ambient air quality within the northern half of bays 1 and 2 of the locomotive workshops.

This letter, including findings of the investigation will be submitted as part of the resubmission of the SSDA to council.

1.2 Scope

The scope of works completed for this assessment comprised:

- Collection of 4 ambient air samples from the blacksmith's workshop within bays 1 and 2 of the locomotive workshops representative of normal working conditions on 19 March 2018;
- Collection of 4 ambient air samples from the blacksmith's workshop within bays 1 and 2 of the locomotive workshops representative of increased (worst case) working conditions on 20 March 2018;
- Laboratory analysis of collected samples for contaminants of potential concern (COPC) including: heavy metals, PAH's and VOC's; and
- Documentation of the assessment activities, laboratory analysis results and assessment outcomes documenting the suitability of the proposed redevelopment to co-exist with the existing blacksmith's workshop within bays 1 and 2 of the locomotive workshops.

2. Assessment Criteria

A range of assessment criteria have been derived to determine the potential for adverse effects to potential future occupants of bays 1 and 2 in proximity of the blacksmith's workshop, and as such a range of sources of assessment criteria have been referred to. The assessment criterion for each constituent assessed is summarised in **Table 1.1** following. A brief description of the source, derivation and applicability of the criterion is further provided in **Table 1.1**.

Table 1.1: Summary of Adopted Assessment Criteria for Airborne Constituents (mg/m³)

Constituent	Assessment Criteria	Source and Derivation
Heavy Metals		
Arsenic	0.005	Occupational criteria adopted with a safety factor of 10 incorporated for potential sensitive receptors whom may occur with proposed retail / speciality commercial uses in proximity. Occupational criteria preferred as the derivation of the criteria is specific to the form of each metal as would be anticipated in an industrial setting such as a Blacksmith’s workshop. Given the increased activity in the blacksmith’s workshop at the time of sampling, the sample duration, based on a commercial / industrial (i.e. occupational) exposure is also consistent with the worst case exposure scenario anticipated with the co-existing uses.
Cadmium	0.001	
Chromium	0.005	
Copper	0.1	
Lead	0.015	
Manganese	0.1	
Nickel	0.1	Workplace Exposure Standards for Airborne Contaminants, 18 April 2013, Safe Work Australia (SWA 2013)
Tin	0.2	Cr criteria as based on Cr(VI) and lowest of available criteria
Zinc	1.0	
PAHs		

Constituent	Assessment Criteria	Source and Derivation
Naphthalene	0.014	Reference concentration as nominated by <i>Vapour Intrusion: Technical Practice Note</i> , September 2010, NSW Department of Environment, Climate Change and Water (DECCW 2010). Increased by factor of (24/8) hours *(365/240) days to account for reduced exposure within commercial / industrial settings
Benzo(a)pyrene (carcinogenic PAHs)	0.02	Adopted as consistent with current ACGIH guidance and nominated in <i>Polycyclic Aromatic Hydrocarbons (PAHs) and Occupational Health Issues Position Paper</i> , June 2016, Australia institute of Occupational Hygienists. Reduced by an order of magnitude consistent with protection of potentially sensitive receptors.
VOCs		
Benzene	0.008	DECCW (2010) adjusted for commercial / industrial duration
Toluene	1.2	DECCW (2010) adjusted for commercial / industrial duration
Ethylbenzene	5.9	DECCW (2010) adjusted for commercial / industrial duration
Xylenes	4.0	DECCW (2010) adjusted for commercial / industrial duration
Chloromethane	0.082	DECCW (2010) adjusted for commercial / industrial duration
Chloroform	0.64	DECCW (2010) adjusted for commercial / industrial duration
Vinyl chloride	0.005	DECCW (2010) adjusted for commercial / industrial duration
1,1-dichloroethene	0.91	DECCW (2010) adjusted for commercial / industrial duration
Cis-1,2-dichloroethene	0.14	DECCW (2010) adjusted for commercial / industrial duration
1,2-dichloroethane	3.2	DECCW (2010) adjusted for commercial / industrial duration
1,1,1-trichloroethane	23	DECCW (2010) adjusted for commercial / industrial duration
Trichloroethene	0.1	DECCW (2010) adjusted for commercial / industrial duration
Tetrachloroethene	0.91	DECCW (2010) adjusted for commercial / industrial duration

It is noted that assessment criteria are not provided for the full extent of compounds as assessed and presented in the results summary table (**Table 1, Attachment 3**). However, assessment criteria have been provided for the most common constituents that would be anticipated to occur in industrial emissions. Where other constituents are present other than those nominated in **Table 1.1**, they would be reasonably considered to co-occur with the constituents as listed in **Table 1.1**. To this extent, assessment to the constituents in **Table 1.1** will be appropriately protective of the potential co-occurrence of other constituents as not listed in **Table 1.1**.

3. Observations During Sampling

Field notes documenting the March 2018 sampling event are included in **Attachment 4**. Two conditions were observed during the sampling works comprising;

- A period described as typical activity, which occurred for a longer duration (normal working conditions); and
- An alternate period of high activity which occurred for a short duration (increased (worst case) working conditions).

Both activities were assessed as per the results provided in **Attachment 3** as specific to the 19/3 and the 20/3 respectively.

No recognisable odours were observed during the sampling works, further no clearly visible / discernible fumes and/or dusts were observed. The assessment area was further observed to be generally free of significant collections of dust, industrial refuse or similar.

4. Results and Comparison to Assessment Criteria

Analytical results as derived from the sampling works have been summarised in the results summary table provided as **Table 1, Attachment 3**. Detailed laboratory analysis certificates are provided as **Attachment 5**. Each of the constituents has been reported below the detection limits able to be achieved apart from toluene. However, the reported concentration of toluene is two orders of magnitude below the adopted assessment criteria.

A further comparison has been made of the laboratory detection limit achieved to the scale of the assessment criteria proposed. In general, the lowest laboratory detection achieved for the heavy metals was at least an order of magnitude below the adopted assessment criterion. The lowest of the detection limits for PAHs were below the adopted assessment criteria, and the lowest of the detection limits for VOCs were similarly below the adopted assessment criteria.

It is noted that a lower detection limit, by an order of magnitude, was able to be achieved for the 'normal activity' sampling event than that achieved during the 'increased activity' sampling event. This is consequent of the relative duration of each of the activities (and the associated volume of sample able to be collected). This is not considered to significantly compromise the results as the 'increased activity' works have been advised as only being able to occur over a very short duration. Further the 'increased activity' works are not commonly undertaken.

5. Assessment of Potential for Impact

Based on the above, and in accordance with the limitations provided as **Attachment 1**, the results of the airborne sampling and analysis as undertaken during blacksmithing activities is not considered to pose a potential health risk to co-occurring retail uses (including food handling and distribution) within bays 1 and 2 of the locomotive workshop building.

Should you require clarification, please contact the undersigned on 02 8245 0300 or by email jlyons@jbsg.com.au.

Yours sincerely:



Jordan Lyons
Environmental Consultant
JBS&G Australia Pty Ltd

Reviewed/Approved by:



Matthew Parkinson
Principal Consultant
JBS&G Australia Pty Ltd

Attachments:

- 1) Limitations
- 2) Figures
- 3) Summary Tables
- 4) Sampling Notes
- 5) Laboratory Certificates of Analysis and Chain of Custody Documentation

Attachment 1 – Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquires.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

Attachment 2 – Figures

**Legend:**

-  Approximate Site Boundary
-  Cadastral Boundaries
-  Locomotive Workshop - Bay Number
-  Assessment Area - Blacksmith



Job No: 51142

Client: Mirvac

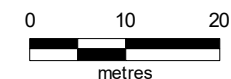
Version: L085 Rev 0

Date: 03-Apr-2018

Drawn By: RF

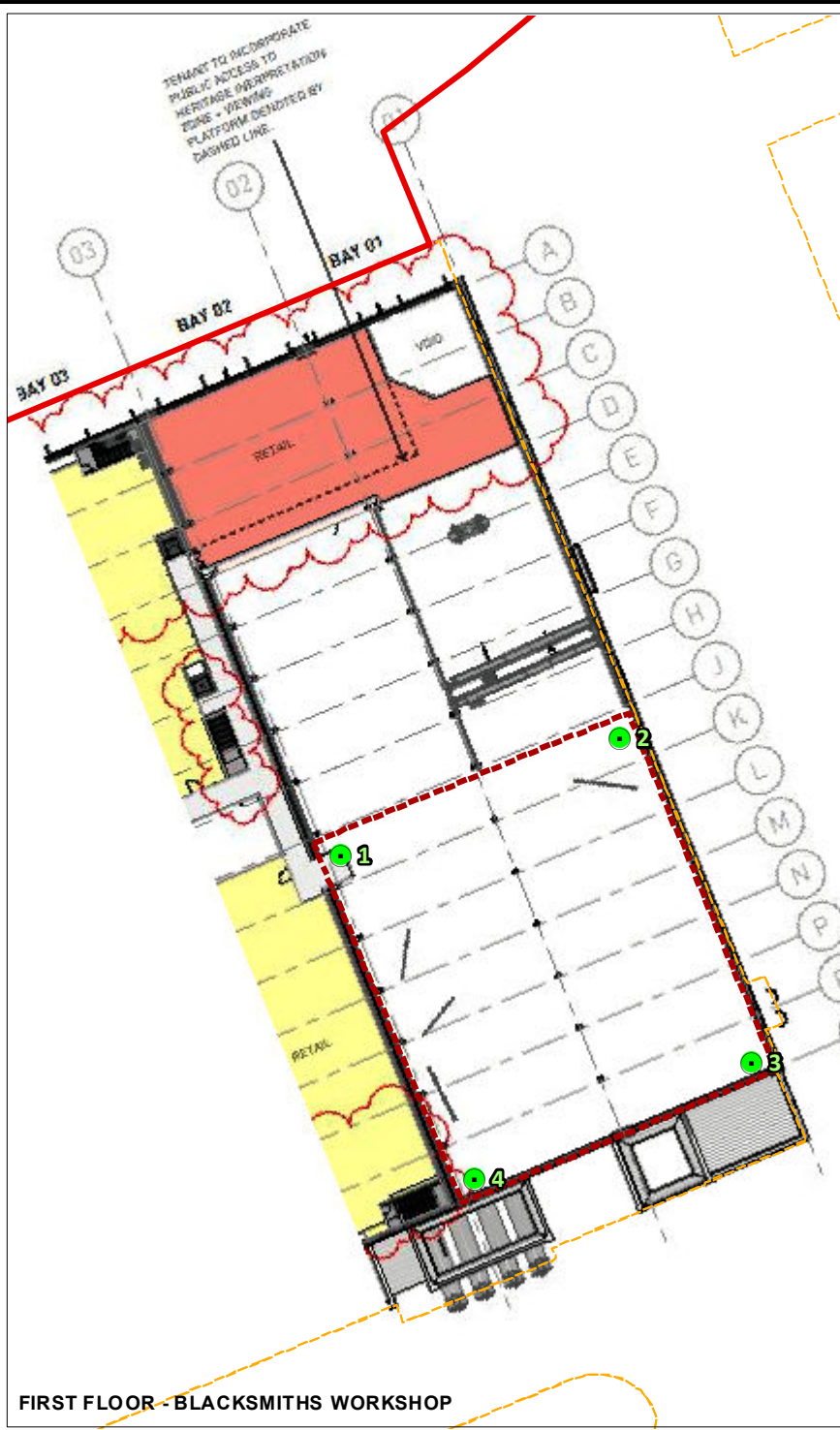
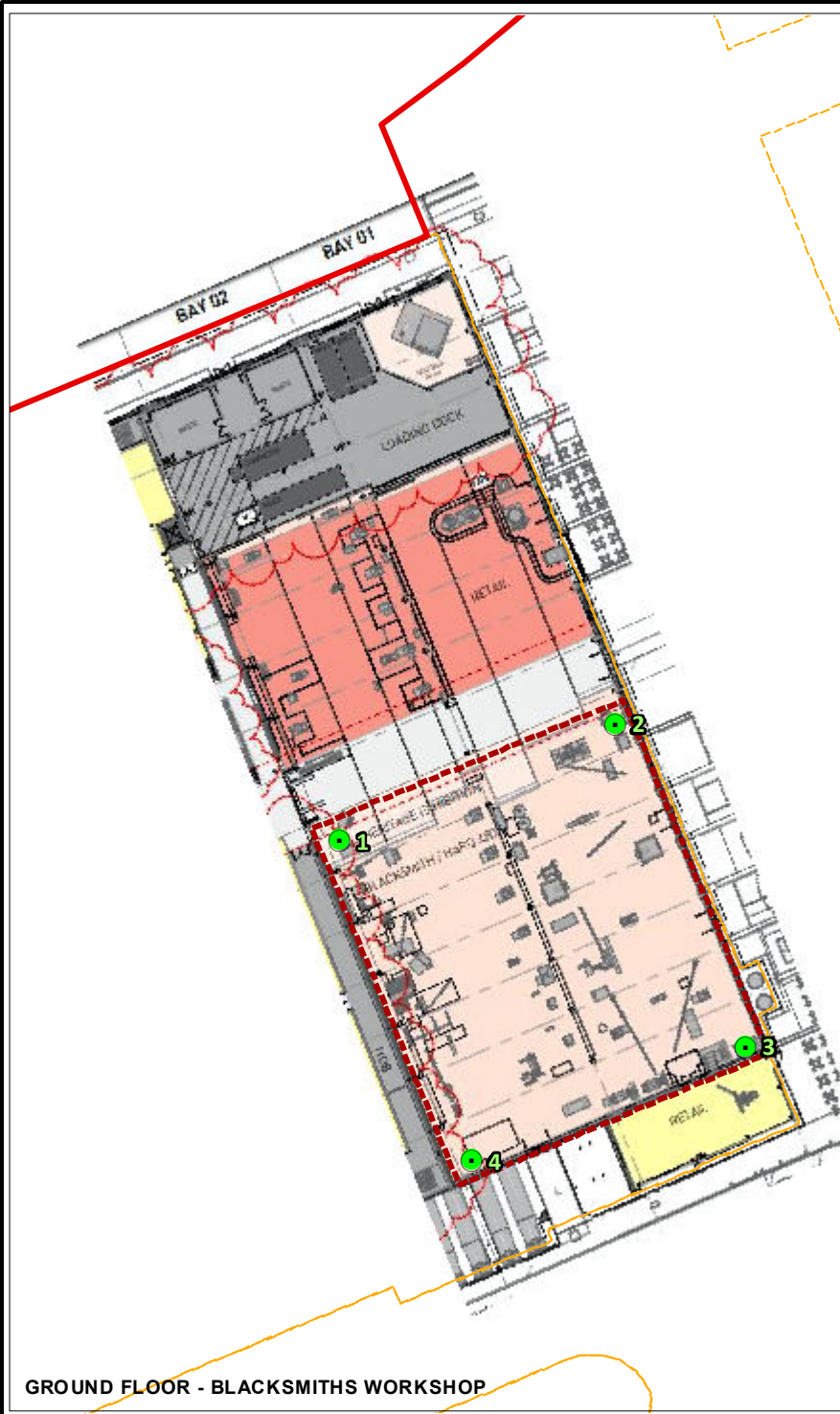
Checked By: JL

Scale 1:800



Coor. Sys. GDA 1994 MGA Zone 56

**Australia Technology Park
Eveleigh, NSW****SITE LAYOUT AND
SAMPLE LOCATIONS****FIGURE 1:**



- Legend:**
- Approximate Site Boundary
 - Cadastral Boundaries
 - Assessment Area - Blacksmith
 - Sample Locations - Blacksmiths Workshop



Job No: 51142

Client: Mirvac

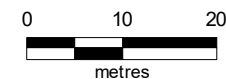
Version: L085 Rev 0

Date: 03-Apr-2018

Drawn By: RF

Checked By: JL

Scale 1:800



Coor. Sys. GDA 1994 MGA Zone 56

**Australia Technology Park
Eveleigh, NSW**

**PROPOSED DEVELOPMENT
AND SAMPLE LOCATIONS**

FIGURE 2:

Attachment 3 – Summary Tables

Table 1: Ambient Air Results Summary
Project Number: 51142
Project Name: Blacksmith's Workshop Ambient Air Assessment

		Polycyclic Aromatic Hydrocarbons (PAHs)																
		Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Naphthalene	Benzo(a)anthracene	Chrysene	Benzo(b,j,k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	Surrogate p-Terphenyl-D14
		mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3
Sample Round 1 Summary (Normal Activity)																		
Sample Location	Sample Date																	
Location 1	19/03/2018	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.01	<0.00523	<0.00523	<0.00523	<0.00523	80.00
Location 2	19/03/2018	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.01	<0.00523	<0.00523	<0.00523	<0.00523	94
Location 3	19/03/2018	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.00523	<0.01	<0.00523	<0.00523	<0.00523	<0.00523	82
Location 4	19/03/2018	<0.00529	<0.00529	<0.00529	<0.00529	<0.00529	<0.00529	<0.00529	<0.00529	<0.00529	<0.00529	<0.00529	<0.011	<0.00529	<0.00529	<0.00529	<0.00529	80
Sample Round 2 Summary (Increased Activity)																		
Sample Location	Sample Date																	
Location 1	20/03/2018	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.0128	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	88
Location 2	20/03/2018	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.0128	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	74
Location 3	20/03/2018	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.0128	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	84
Location 4	20/03/2018	<0.00639	<0.00639	<0.00639	<0.00639	<0.00639	<0.00639	<0.00639	<0.00639	<0.00639	<0.00639	<0.0128	<0.00639	<0.00639	<0.00639	<0.00639	<0.00639	84

Attachment 4 – Sampling Notes

360



VOC MONITORING FIELD WORKSHEET

PROJECT NO. 51142		LAB BATCH NO.	
PROJECT NAME: Australian Technology Park		SAMPLER/S:	On: MM Off: MM
SAMPLING DATE:		PHONE: 0405733369	EMAIL:
REPORT DOCUMENT:		ROTAMETER TYPE & ID: Low Flow	
REPORT RECIPIENT:			

SAMPLING DETAILS: PAH air monitoring during excavation of potentially impacted soils

SAMPLE ID (Filter)	HOLDER ID	PUMP ID	INITIAL FLOW RATE (L/min)	FINAL FLOW RATE (L/min)	AVERAGE FLOW RATE (L/min)	START TIME (24hr)	END TIME (24 hr)	SAMPLE DURATION (minutes)	VOLUME (m ³)	LAB RESULT (ug/tube)	CALCULATED CONCENTRATION (mg/m ³)	SAMPLE LOCATION INFORMATION (details of sample location or attach map)
19/3 2755-loc1	-	AC030	0.2	0.2	0.2	0817	1615	478	95.6			Location 1
19/3 7976-loc2	-	AC53				0826	1621	475	95			Location 2
2754-loc3	-	AC58				0835	1630	475	95			Location 3
2756-loc4	-	AC44				0842	1635	473	94.6			Location 4
B-19/3	-	-				-	-	-	-			BLANK - 19/3
20/3 2760-loc1	-	AC44				0813	1445	392	78.4			Location 1
7967-loc2	-	AC53				0818	1450	392	78.4			Location 2
7973-loc3	-	AC030				0825	1456	391	78.2			Location 3
2752-loc4	-	AC58				0831	1502	391	78.2			Location 4
B-20/3	-	-				-	-	-	-			BLANK - 20/3

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME:	DATE:	CONSIGNMENT NOTE NO.	NAME:	DATE:	NAME:	COOLER SEAL - Yes..... No Intact Broken	
OF: JBS&G		TRANSPORT CO.	OF:			COOLER TEMP deg C	

LEAD MONITORING FIELD WORKSHEET



PROJECT NO. 51142		LAB BATCH NO	
PROJECT NAME: Australian Technology Park		SAMPLER/S: On: Off:	
SAMPLING DATE:		PHONE: 0405 733 369	
REPORT DOCUMENT:		EMAIL: mmurray@jbsg.com.au	
REPORT RECIPIENT:		ROTAMETER TYPE & ID: R005	

SAMPLING DETAILS:

SAMPLE ID (Filter)	HOLDER ID (IOM)	PUMP ID	INITIAL FLOW RATE (L/min)	FINAL FLOW RATE (L/min)	AVERAGE FLOW RATE (L/min)	START TIME (24hr)	END TIME (24 hr)	SAMPLE DURATION (minutes)	VOLUME (m3)	LAB RESULT (ug/filter)	CALCULATED CONCENTRATION (mg/m3)	SAMPLE LOCATION INFORMATION (details of sample location or attach map)
HM01-19/3	0	AC019	2.0	2.0	2.0	0817	1615	478	956			loc 1
HM02-19/3	3	AC014				0826	1621	475	950			loc 2
HM03-19/3	2	AC013				0835	1630	475	950			loc 3
HM04-19/3	5	AC010				0842	1635	473	946			loc 4
B-19/3	-	-				-	-	-	-			BLANK 19/3
HM01-20/3	5	AC017				0813	1445	392	784			loc 1
HM02-20/3	3	AC013				0818	1450	392	784			loc 2
HM03-20/3	0	AC019				0825	1456	391	782			loc 3
HM04-20/3	2	AC003				0831	1502	391	782			loc 4
B-20/3	-	-				-	-	-	-			BLANK 20/3

RELINQUISHED BY:		METHOD OF SHIPMENT:		RECEIVED BY:		FOR RECEIVING LAB USE ONLY:	
NAME:	DATE:	CONSIGNMENT NOTE NO.	NAME:	DATE:	COOLER SEAL - Yes..... No Intact Broken	COOLER TEMP deg C	
OF: JBS&G		TRANSPORT CO.	OF:				



PAH MONITORING FIELD WORKSHEET

PROJECT NO. 51142		LAB BATCH NO											
PROJECT NAME: Australian Technology Park		SAMPLER/S: On: MM Off: MM											
SAMPLING DATE:		PHONE: 0405733369 EMAIL: mmurray@jbsg.com.au											
REPORT DOCUMENT:		ROTAMETER TYPE & ID: R005											
REPORT RECIPIENT:													
SAMPLING DETAILS: PAH air monitoring during excavation of potentially impacted soils													
SAMPLE ID (Filter)	HOLDER ID	PUMP ID	INITIAL FLOW RATE (L/min)	FINAL FLOW RATE (L/min)	AVERAGE FLOW RATE (L/min)	START TIME (24hr)	END TIME (24 hr)	SAMPLE DURATION (minutes)	VOLUME (m3)	LAB RESULT (ug/tube)	CALCULATED CONCENTRATION (mg/m3)	SAMPLE LOCATION INFORMATION (details of sample location or attach map)	
0882	-	AC57	2.0	2.0	2.0	0817	1615	478	956			Location 1	
0883	-	AC011				0826	1621	475	950			Location 2	
0887	-	AC003				0835	1630	475	950			Location 3	
0891	-	AC035				0842	1635	473	946			Location 4	
B-19/3	-	-				-	-	-	-			BLANK 19/3	
0872	-	AC035				0813	1445	392	784			Location 1	
0888	-	AC40				0818	1450	392	784			Location 2	
0886	-	AC014				0825	1456	391	782			Location 3	
0884	-	AC011				0831	1502	391	782			Location 4	
B-20/3	-	-				-	-	-	-			BLANK 20/3	
RELINQUISHED BY:						METHOD OF SHIPMENT:			RECEIVED BY:			FOR RECEIVING LAB USE ONLY:	
NAME:		DATE:		CONSIGNMENT NOTE NO.		NAME:		DATE:		COOLER SEAL - Yes..... No Intact Broken		COOLER TEMP deg C	
OF: JBS&G				TRANSPORT CO.		OF:							



Daily Field Report

Page ___ of ___

Date: 19/3/2018
Arrival Time: 0745
Depart Time: _____
Site Address: EDP-BG Blacksmith/Workshop - ATD

Completed by: CK MM
Weather: _____
Subcontractor(s): _____

Purpose of Visit: Control Monitoring - PAHs, VOCs, H-Metals

Notes: 0745 - Sign in at security

(include sketch or attach site map/plan) 0800 - Set up monitors, speak to supervisor. He mentions that workers will be coming/going and working on projects.

Activities identified during inspection include forging, treating wood + metal + painting of objects, grinding, blacksmithing and cutting of metal.

Potential contaminants of concern⁺: metal primers and paints, LNB used to heat new furnaces, waste oil used to heat older furnace, hydraulic oil for machinery, ash + slag from furnaces, WD40

1630: Most people have departed. Talking with the blacksmiths it appears approx 5-10 people have been working on separate projects

Begin taking down monitors

Associated Completed Forms

(eg, bore logs, PID/XRF calibration forms)

Note

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Daily Field Report

Page ___ of ___

Date:

20/3

Arrival Time

Depart Time

Site Address

BLACKSMITH/WORKSHOP

Completed by

MM

Weather

Subcontractor(s)

Purpose of Visit

Control Monitoring - PAHs, VOCs, H.Metals

Notes

(include sketch
or attach site
map/plan)

0730 - Sign in at security and wait for activities to begin

0800 - Begin setting up monitors. Blacksmith indicates that today will be more busy than previous days. Approx 10-20 people working on projects

- Activities identified and potential COPC sources are same as previously mentioned.

1430 - Take down monitors and drive to both labs to achieve TAT requirements

Associated
Completed
Forms

(eg, bore logs,
PID/XRF
calibration
forms)

Note

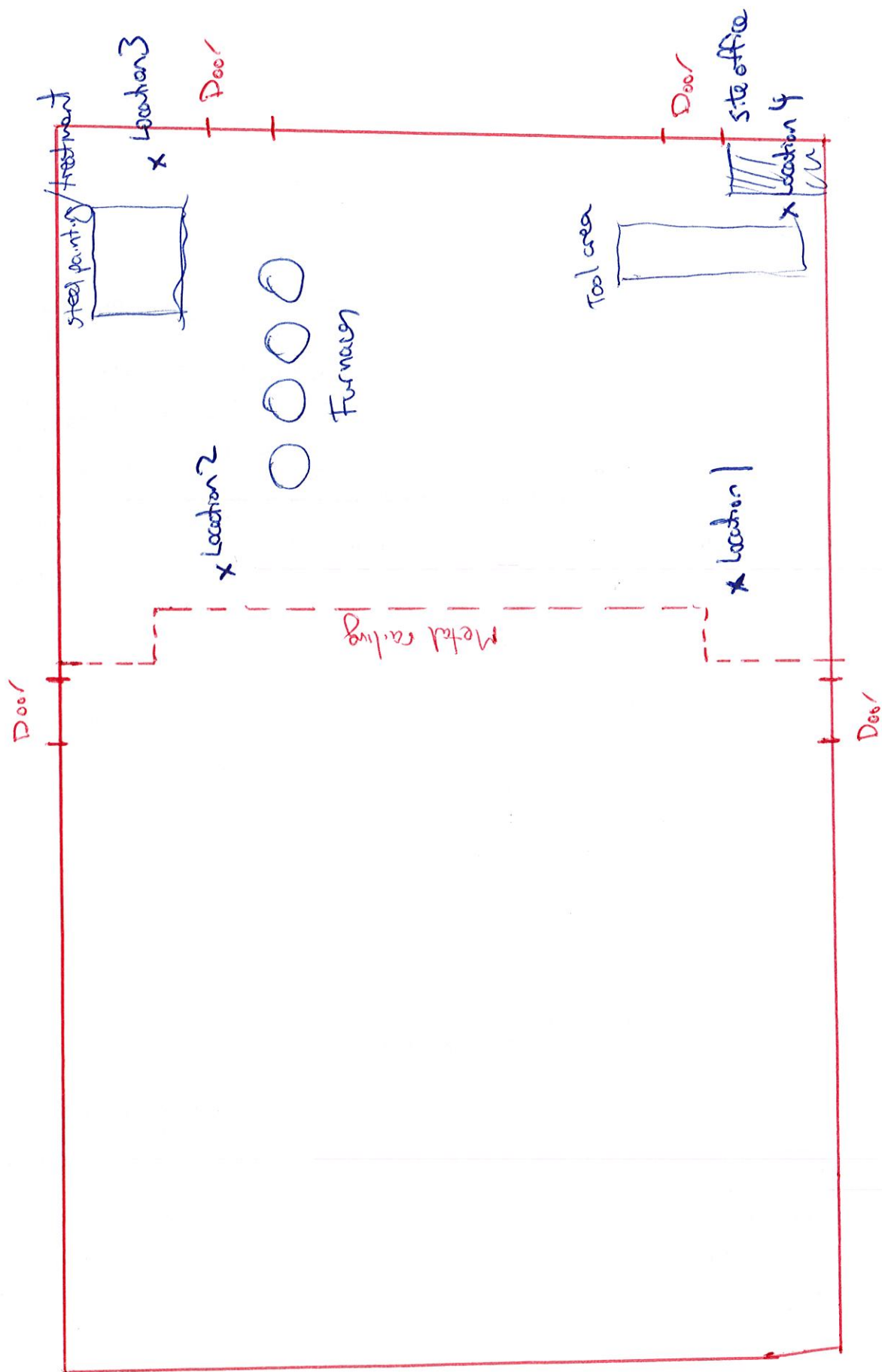
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IMSO Forms001 - Daily Field Report

2 ←



Attachment 5 – Laboratory Certificates of Analysis and Chain of Custody Documentation

#509152



PROJECT NO. 51142					LABORATORY BATCH NO.:															
PROJECT NAME: Australian Technology Park, Blacksmith					SAMPLER/S: On: Matt Murray Off. Matt Murray															
PROJECT MANAGER: Matt Murray					PHONE: 0402 058 230 EMAIL: mmurray@ibsq.com.au , JLYONS															
SEND REPORT TO: Matt Murray SEND INVOICE TO: AdminNSW@ibsq.com.au																				
DATE NEEDED BY: 24 HR TAT																				
COMMENTS / SPECIAL HANDLING / STORAGE OR DISPOSAL:																				
					TYPE OF ASBESTOS ANALYSIS															
					IDENTIFICATION NEPM/WA															
					NOTES:															
SAMPLE ID	MATRIX	DATE	TIME	TYPE & PRESERVATIVE	pH															
HM01-19/3	Filter	19/3		Dust		X	V	X	X	X	X	X								
HM02-19/3																				
HM03-19/3																				
HM04-19/3																				
B-19/3																				
HM01-20/3		20/3																		
HM02-20/3																				
HM03-20/3																				
HM04-20/3																				
B-20/3																				
RELINQUISHED BY:					METHOD OF SHIPMENT:					RECEIVED BY:					FOR RECEIVING LAB USE ONLY:					
NAME: [Signature] DATE: 20/3					CONSIGNMENT NOTE NO.					NAME: [Signature] DATE: 20/03/2018 9:56pm					COOLER SEAL - Yes..... No Intact Broken					
OF: JBS&G					TRANSPORT CO.					OF: [Signature]					COOLER TEMP deg C					
NAME:					CONSIGNMENT NOTE NO.					NAME:					COOLER SEAL - Yes..... No Intact Broken					
DATE:										DATE:										
OF:					TRANSPORT CO.					OF:					COOLER TEMP deg C					
Container & Preservative Codes: P = Plastic; J = Soil Jar; B = Glass Bottle; N = Nitric Acid Prsrd.; C = Sodium Hydroxide Prsrd; VC = Hydrochloric Acid Prsrd Vial; VS = Sulfuric Acid Prsrd Vial; S = Sulfuric Acid Prsrd; Z = Zinc Prsrd; E = EDTA Prsrd; ST = Sterile Bottle; O = Other																				

Sample Receipt Advice

Company name: **JBS & G Australia (NSW) P/L**
Contact name: **Matt Murray**
Project name: **AUSTRALIAN TECHNOLOGY PARK**
Project ID: **51142**
COC number: **Not provided**
Turn around time: **1 Day**
Date/Time received: **Mar 20, 2018 4:06 PM**
Eurofins | mgt reference: **590152**

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 Eurofins | mgt Sample Receipt : 17.6 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.
- ☒ Appropriate sample containers have been used.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Contact notes

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

Nibha Vaidya on Phone : +61 (2) 9900 8400 or by e.mail: NibhaVaidya@eurofins.com

Results will be delivered electronically via e.mail to Matt Murray - MMurray@jbsg.com.au.

Note: A copy of these results will also be delivered to the general JBS & G Australia (NSW) P/L email address.

Certificate of Analysis

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



NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: Matt Murray

Report 590152-A
Project name AUSTRALIAN TECHNOLOGY PARK
Project ID 51142
Received Date Mar 20, 2018

Client Sample ID			HM01-19/3	HM02-19/3	HM03-19/3	HM04-19/3
Sample Matrix			Filter paper	Filter paper	Filter paper	Filter paper
Eurofins mgt Sample No.			S18-Ma23024	S18-Ma23025	S18-Ma23026	S18-Ma23027
Date Sampled			Mar 19, 2018	Mar 19, 2018	Mar 19, 2018	Mar 19, 2018
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	1	Total ug	< 1	< 1	< 1	< 1
Cadmium	0.1	Total ug	< 0.1	< 0.1	< 0.1	< 0.1
Chromium	1	Total ug	< 1	< 1	< 1	< 1
Copper	1	Total ug	< 1	< 1	< 1	< 1
Lead	1	Total ug	< 1	< 1	< 1	< 1
Manganese	1	Total ug	< 1	< 1	< 1	< 1
Nickel	1	Total ug	< 1	< 1	< 1	< 1
Tin	1.0	Total ug	< 1	< 1	< 1	< 1
Zinc	5	Total ug	< 5	< 5	< 5	< 5

Client Sample ID			B-19/3	HM01-20/3	HM02-20/3	HM03-20/3
Sample Matrix			Filter paper	Filter paper	Filter paper	Filter paper
Eurofins mgt Sample No.			S18-Ma23028	S18-Ma23029	S18-Ma23030	S18-Ma23031
Date Sampled			Mar 19, 2018	Mar 20, 2018	Mar 20, 2018	Mar 20, 2018
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	1	Total ug	< 1	< 1	< 1	< 1
Cadmium	0.1	Total ug	< 0.1	< 0.1	< 0.1	< 0.1
Chromium	1	Total ug	< 1	< 1	< 1	< 1
Copper	1	Total ug	< 1	< 1	< 1	< 1
Lead	1	Total ug	< 1	< 1	< 1	< 1
Manganese	1	Total ug	< 1	< 1	< 1	< 1
Nickel	1	Total ug	< 1	< 1	< 1	< 1
Tin	1.0	Total ug	< 1	< 1	< 1	< 1
Zinc	5	Total ug	< 5	< 5	< 5	< 5

Client Sample ID			HM04-20/3	B-20/3
Sample Matrix			Filter paper	Filter paper
Eurofins mgt Sample No.			S18-Ma23032	S18-Ma23033
Date Sampled			Mar 20, 2018	Mar 20, 2018
Test/Reference	LOR	Unit		
Heavy Metals				
Arsenic	1	Total ug	< 1	< 1
Cadmium	0.1	Total ug	< 0.1	< 0.1
Chromium	1	Total ug	< 1	< 1
Copper	1	Total ug	< 1	< 1
Lead	1	Total ug	< 1	< 1
Manganese	1	Total ug	< 1	< 1
Nickel	1	Total ug	< 1	< 1
Tin	1.0	Total ug	< 1	< 1
Zinc	5	Total ug	< 5	< 5

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

Heavy Metals

Testing Site

Sydney

Extracted

Mar 20, 2018

Holding Time

180 Day

- Method: E022.4 Acid Extractable Metals in Filters and Wipes

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

Project Name: AUSTRALIAN TECHNOLOGY PARK
Project ID: 51142

Order No.:
Report #: 590152
Phone: 02 8245 0300
Fax:

Received: Mar 20, 2018 4:06 PM
Due: Mar 21, 2018
Priority: 1 Day
Contact Name: Matt Murray

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Nickel	Tin	Zinc
Melbourne Laboratory - NATA Site # 1254 & 14271														
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
External Laboratory														
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID									
1	HM01-19/3	Mar 19, 2018		Filter paper	S18-Ma23024	X	X	X	X	X	X	X	X	X
2	HM02-19/3	Mar 19, 2018		Filter paper	S18-Ma23025	X	X	X	X	X	X	X	X	X
3	HM03-19/3	Mar 19, 2018		Filter paper	S18-Ma23026	X	X	X	X	X	X	X	X	X
4	HM04-19/3	Mar 19, 2018		Filter paper	S18-Ma23027	X	X	X	X	X	X	X	X	X
5	B-19/3	Mar 19, 2018		Filter paper	S18-Ma23028	X	X	X	X	X	X	X	X	X
6	HM01-20/3	Mar 20, 2018		Filter paper	S18-Ma23029	X	X	X	X	X	X	X	X	X
7	HM02-20/3	Mar 20, 2018		Filter paper	S18-Ma23030	X	X	X	X	X	X	X	X	X
8	HM03-20/3	Mar 20, 2018		Filter paper	S18-Ma23031	X	X	X	X	X	X	X	X	X
9	HM04-20/3	Mar 20, 2018		Filter paper	S18-Ma23032	X	X	X	X	X	X	X	X	X

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: AUSTRALIAN TECHNOLOGY PARK
Project ID: 51142

Order No.:
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Phone: 02 8245 0300
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Received: Mar 20, 2018 4:06 PM
Due: Mar 21, 2018
Priority: 1 Day
Contact Name: Matt Murray

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Nickel	Tin	Zinc
Melbourne Laboratory - NATA Site # 1254 & 14271														
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
10	B-20/3	Mar 20, 2018		Filter paper	S18-Ma23033	X	X	X	X	X	X	X	X	X
Test Counts						10	10	10	10	10	10	10	10	10

Internal Quality Control Review and Glossary

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. All biota results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. 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 SRA.

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.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****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: Nephelometric Turbidity 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 and 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.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
NC	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

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 & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

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.
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, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene 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 Aroclor 1260 in Matrix Spikes and LCS.
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 RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Comments

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

Authorised By

Nibha Vaidya

Analytical Services Manager



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please [click here](#).

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Eurofins | mgt Analytical Services Manager : Nibha Vaidya[illegible]

IMSO FormsO13 - Chain of Custody - Generic

CERTIFICATE OF ANALYSIS 208354**Client Details**

Client	JBS&G Australia Pty Ltd - NSW
Attention	Matt Murray
Address	Level 1, 50 Margaret St, SYDNEY, NSW, 2000

Sample Details

Your Reference	<u>51142 ATP Blacksmith</u>
Number of Samples	10 XAD Tubes
Date samples received	21/03/2018
Date completed instructions received	21/03/2018
Sampler Name	Not applicable for this job

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.

Report Details

Date results requested by	22/03/2018
Date of Issue	22/03/2018
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Michael Kubiak, Organics Supervisor

Authorised By

Todd Lee, Laboratory Manager

PAH in Tube							
Our Reference			208354-1	208354-2	208354-3	208354-4	208354-5
Your Reference	UNITS	PQL	6525800892 Location 1	6525800883 Location 2	6525800887 Location 3	6525800891 Location 4	6525800890 B 19/3
Date Sampled			19/03/2018	19/03/2018	19/03/2018	19/03/2018	19/03/2018
Type of sample			XAD 2 Tube	XAD 2 Tube	XAD 2 Tube	XAD 2 Tube	XAD 2 Tube
Date extracted	-		21/03/2018	21/03/2018	21/03/2018	21/03/2018	21/03/2018
Date analysed	-		22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Naphthalene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)anthracene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b,j+k)fluoranthene	µg/tube	1	<1	<1	<1	<1	<1
Benzo(a)pyrene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-c,d)pyrene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzo(a,h)anthracene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-D ₁₄	%		80	94	82	80	78

PAH in Tube							
Our Reference			208354-6	208354-7	208354-8	208354-9	208354-10
Your Reference	UNITS	PQL	6525800872 Location 1	6525800888 Location 2	6525800886 Location 3	6525800884 Location 4	6525800885 B 20/3
Date Sampled			20/03/2018	20/03/2018	20/03/2018	20/03/2018	20/03/2018
Type of sample			XAD 2 Tube	XAD 2 Tube	XAD 2 Tube	XAD 2 Tube	XAD 2 Tube
Date extracted	-		21/03/2018	21/03/2018	21/03/2018	21/03/2018	21/03/2018
Date analysed	-		22/03/2018	22/03/2018	22/03/2018	22/03/2018	22/03/2018
Naphthalene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)anthracene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b,j+k)fluoranthene	µg/tube	1	<1	<1	<1	<1	<1
Benzo(a)pyrene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-c,d)pyrene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzo(a,h)anthracene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	µg/tube	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-D ₁₄	%		88	74	84	84	82

Method ID	Methodology Summary
Ext-054	Analysed by Envirolab Services Sydney, accreditation number 2901
ORG-012/017/033	SVOC on Sorbents extracted with various solvents and analysed by GC-MS and/or GC-MS/MS.

Client Reference: 51142 ATP Blacksmith

QUALITY CONTROL: PAH in Tube					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			21/03/2018	[NT]	[NT]	[NT]	[NT]	21/03/2018	[NT]
Date analysed	-			22/03/2018	[NT]	[NT]	[NT]	[NT]	22/03/2018	[NT]
Naphthalene	µg/tube	0.5	ORG-012/017/033	<0.5	[NT]	[NT]	[NT]	[NT]	87	[NT]
Acenaphthylene	µg/tube	0.5	ORG-012/017/033	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	µg/tube	0.5	ORG-012/017/033	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	µg/tube	0.5	ORG-012/017/033	<0.5	[NT]	[NT]	[NT]	[NT]	93	[NT]
Phenanthrene	µg/tube	0.5	ORG-012/017/033	<0.5	[NT]	[NT]	[NT]	[NT]	91	[NT]
Anthracene	µg/tube	0.5	ORG-012/017/033	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	µg/tube	0.5	ORG-012/017/033	<0.5	[NT]	[NT]	[NT]	[NT]	90	[NT]
Pyrene	µg/tube	0.5	ORG-012/017/033	<0.5	[NT]	[NT]	[NT]	[NT]	88	[NT]
Benzo(a)anthracene	µg/tube	0.5	ORG-012/017/033	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	µg/tube	0.5	ORG-012/017/033	<0.5	[NT]	[NT]	[NT]	[NT]	91	[NT]
Benzo(b,j+k)fluoranthene	µg/tube	1	ORG-012/017/033	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	µg/tube	0.5	ORG-012/017/033	<0.5	[NT]	[NT]	[NT]	[NT]	89	[NT]
Indeno(1,2,3-c,d)pyrene	µg/tube	0.5	ORG-012/017/033	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/tube	0.5	ORG-012/017/033	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	µg/tube	0.5	ORG-012/017/033	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-D ₁₄	%		Ext-054	80	[NT]	[NT]	[NT]	[NT]	80	[NT]

Result Definitions

DOL	Samples rejected due to particulate overload
RPF	Sample rejected due to pump failure
RFD	Sample rejected due to filter damage
RUD	Sample rejected due to uneven deposition
PQL	Practical quantitation limit

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	

Laboratory Acceptance Criteria

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

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

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

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

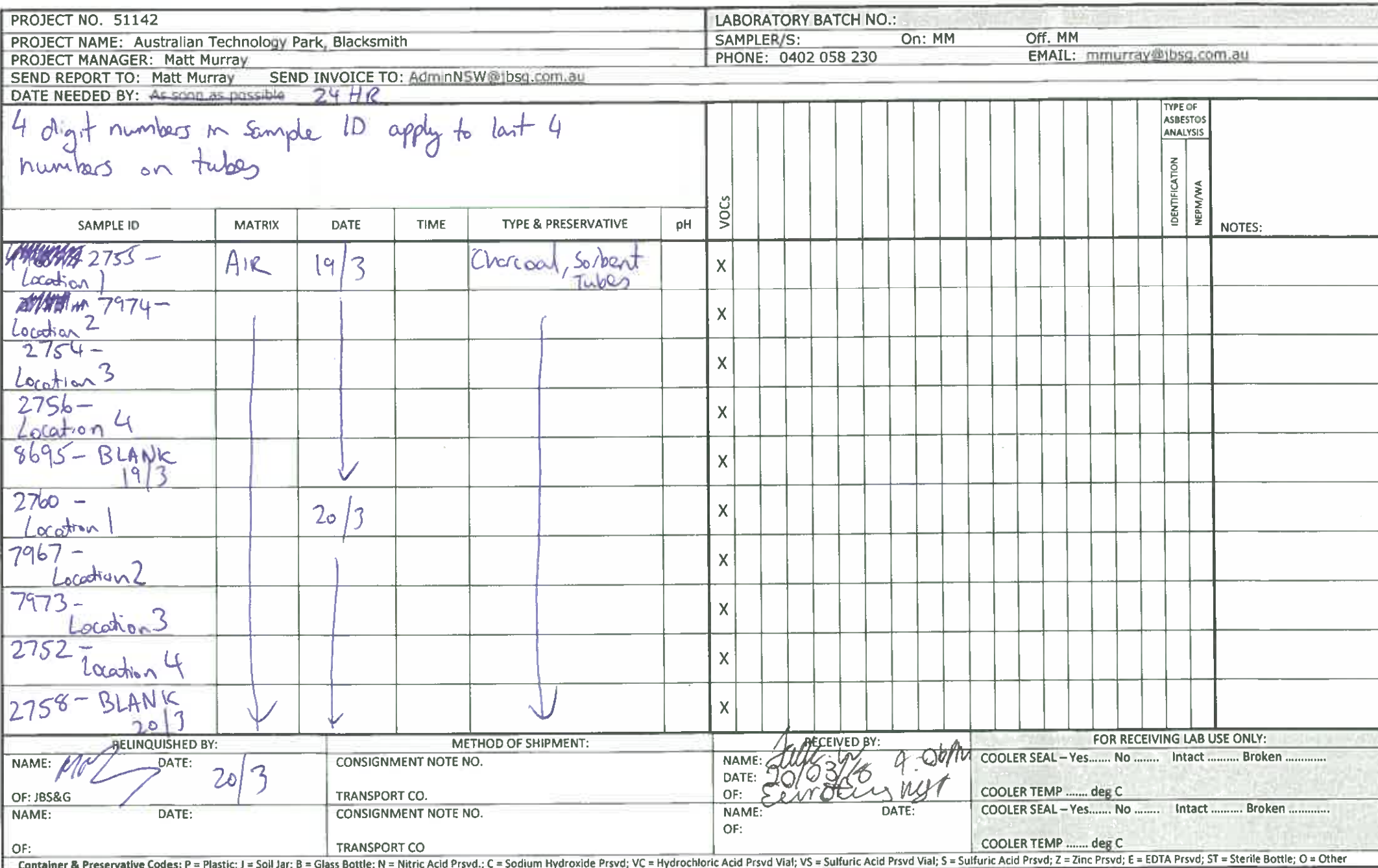
In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

SA0160



Sample Receipt Advice

Company name: **JBS & G Australia (NSW) P/L**
Contact name: **Matt Murray**
Project name: **AUSTRALIAN TECHNOLOGY PARK BLACKSMITH**
Project ID: **51142**
COC number: **Not provided**
Turn around time: **1 Day**
Date/Time received: **Mar 20, 2018 4:06 PM**
Eurofins | mgt reference: **590160**

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 Eurofins | mgt
Sample Receipt : 24 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.
- ☒ Appropriate sample containers have been used.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Contact notes

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

Nibha Vaidya on Phone : +61 (2) 9900 8400 or by e.mail: NibhaVaidya@eurofins.com

Results will be delivered electronically via e.mail to Matt Murray - MMurray@jbsg.com.au.

Note: A copy of these results will also be delivered to the general JBS & G Australia (NSW) P/L email address.

Certificate of Analysis

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



NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Matt Murray**

Report **590160-A**
Project name **AUSTRALIAN TECHNOLOGY PARK BLACKSMITH**
Project ID **51142**
Received Date **Mar 20, 2018**

Client Sample ID			2755 - LOCATION 1 (FRONT)	2755 - LOCATION 1 (BACK)	7974 - LOCATION 2 (FRONT)	7974 - LOCATION 2 (BACK)
Sample Matrix			Air	Air	Air	Air
Eurofins mgt Sample No.			S18-Ma23048	S18-Ma23049	S18-Ma23050	S18-Ma23051
Date Sampled			Mar 19, 2018	Mar 19, 2018	Mar 19, 2018	Mar 19, 2018
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
Naphthalene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromo-3-chloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Propylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			2755 - LOCATION 1 (FRONT)	2755 - LOCATION 1 (BACK)	7974 - LOCATION 2 (FRONT)	7974 - LOCATION 2 (BACK)
Sample Matrix			Air	Air	Air	Air
Eurofins mgt Sample No.			S18-Ma23048	S18-Ma23049	S18-Ma23050	S18-Ma23051
Date Sampled			Mar 19, 2018	Mar 19, 2018	Mar 19, 2018	Mar 19, 2018
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
p-Isopropyltoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
sec-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	5	Total ug	< 5	< 5	< 5	< 5
tert-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	Total ug	0.6	< 0.5	0.6	< 0.5
trans-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	Total ug	< 1.5	< 1.5	< 1.5	< 1.5
Fluorobenzene (surr.)	1	%	127	119	105	115
4-Bromofluorobenzene (surr.)	1	%	98	100	91	94
Dibromofluoromethane (surr.)	1	%	119	115	102	114
1.2-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			2754 - LOCATION 3 (FRONT)	2754 - LOCATION 3 (BACK)	2756 - LOCATION 4 (FRONT)	2756 - LOCATION 4 (BACK)
Sample Matrix			Air	Air	Air	Air
Eurofins mgt Sample No.			S18-Ma23052	S18-Ma23053	S18-Ma23054	S18-Ma23055
Date Sampled			Mar 19, 2018	Mar 19, 2018	Mar 19, 2018	Mar 19, 2018
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
Naphthalene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromo-3-chloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			2754 - LOCATION 3 (FRONT)	2754 - LOCATION 3 (BACK)	2756 - LOCATION 4 (FRONT)	2756 - LOCATION 4 (BACK)
Sample Matrix			Air	Air	Air	Air
Eurofins mgt Sample No.			S18-Ma23052	S18-Ma23053	S18-Ma23054	S18-Ma23055
Date Sampled			Mar 19, 2018	Mar 19, 2018	Mar 19, 2018	Mar 19, 2018
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
Benzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Propylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
p-Isopropyltoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
sec-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	5	Total ug	< 5	< 5	< 5	< 5
tert-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	Total ug	< 1.5	< 1.5	< 1.5	< 1.5
Fluorobenzene (surr.)	1	%	109	112	108	93
4-Bromofluorobenzene (surr.)	1	%	87	93	93	103
Dibromofluoromethane (surr.)	1	%	106	117	114	95
1.2-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			8695-BLANK (FRONT)	8695-BLANK (BACK)	2760 - LOCATION 1 (FRONT)	2760 - LOCATION 1 (BACK)
Sample Matrix			Air	Air	Air	Air
Eurofins mgt Sample No.			S18-Ma23056	S18-Ma23057	S18-Ma23058	S18-Ma23059
Date Sampled			Mar 19, 2018	Mar 19, 2018	Mar 20, 2018	Mar 20, 2018
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
Naphthalene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromo-3-chloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Propylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
p-Isopropyltoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
sec-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	5	Total ug	< 5	< 5	< 5	< 5
tert-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	Total ug	< 1.5	< 1.5	< 1.5	< 1.5
Fluorobenzene (surr.)	1	%	130	93	121	97
4-Bromofluorobenzene (surr.)	1	%	100	109	91	100
Dibromofluoromethane (surr.)	1	%	122	95	95	97

Client Sample ID			8695-BLANK (FRONT)	8695-BLANK (BACK)	2760 - LOCATION 1 (FRONT)	2760 - LOCATION 1 (BACK)
Sample Matrix			Air	Air	Air	Air
Eurofins mgt Sample No.			S18-Ma23056	S18-Ma23057	S18-Ma23058	S18-Ma23059
Date Sampled			Mar 19, 2018	Mar 19, 2018	Mar 20, 2018	Mar 20, 2018
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
1.2-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			7967 - LOCATION 2 (FRONT)	7967 - LOCATION 2 (BACK)	7973 - LOCATION 3 (FRONT)	7973 - LOCATION 3 (BACK)
Sample Matrix			Air	Air	Air	Air
Eurofins mgt Sample No.			S18-Ma23060	S18-Ma23061	S18-Ma23062	S18-Ma23063
Date Sampled			Mar 20, 2018	Mar 20, 2018	Mar 20, 2018	Mar 20, 2018
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
Naphthalene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromo-3-chloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			7967 - LOCATION 2 (FRONT)	7967 - LOCATION 2 (BACK)	7973 - LOCATION 3 (FRONT)	7973 - LOCATION 3 (BACK)
Sample Matrix			Air	Air	Air	Air
Eurofins mgt Sample No.			S18-Ma23060	S18-Ma23061	S18-Ma23062	S18-Ma23063
Date Sampled			Mar 20, 2018	Mar 20, 2018	Mar 20, 2018	Mar 20, 2018
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
n-Propylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
p-Isopropyltoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
sec-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	5	Total ug	< 5	< 5	< 5	< 5
tert-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	Total ug	< 1.5	< 1.5	< 1.5	< 1.5
Fluorobenzene (surr.)	1	%	119	109	114	121
4-Bromofluorobenzene (surr.)	1	%	95	124	92	148
Dibromofluoromethane (surr.)	1	%	117	100	107	103
1.2-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			2752 - LOCATION 4 (FRONT)	2752 - LOCATION 4 (BACK)	2758 - BLANK (FRONT)	2758 - BLANK (BACK)
Sample Matrix			Air	Air	Air	Air
Eurofins mgt Sample No.			S18-Ma23064	S18-Ma23065	S18-Ma23066	S18-Ma23067
Date Sampled			Mar 20, 2018	Mar 20, 2018	Mar 20, 2018	Mar 20, 2018
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
Naphthalene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromo-3-chloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
2.2-Dichloropropane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			2752 - LOCATION 4 (FRONT)	2752 - LOCATION 4 (BACK)	2758 - BLANK (FRONT)	2758 - BLANK (BACK)
Sample Matrix			Air	Air	Air	Air
Eurofins mgt Sample No.			S18-Ma23064	S18-Ma23065	S18-Ma23066	S18-Ma23067
Date Sampled			Mar 20, 2018	Mar 20, 2018	Mar 20, 2018	Mar 20, 2018
Test/Reference	LOR	Unit				
VOCs in Ambient Air by GC/MS						
4-Chlorotoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
n-Propylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
p-Isopropyltoluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
sec-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	5	Total ug	< 5	< 5	< 5	< 5
tert-Butylbenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total	1.5	Total ug	< 1.5	< 1.5	< 1.5	< 1.5
Fluorobenzene (surr.)	1	%	115	133	127	146
4-Bromofluorobenzene (surr.)	1	%	96	86	79	98
Dibromofluoromethane (surr.)	1	%	120	105	97	108
1.2-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	Total ug	< 0.5	< 0.5	< 0.5	< 0.5

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

VOCs in Ambient Air by GC/MS

Testing Site

Melbourne

Extracted

Mar 20, 2018

Holding Time

14 Day

- Method: LTM-ORG-2030 VOCs in Ambient Air by GC/MS

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: AUSTRALIAN TECHNOLOGY PARK BLACKSMITH
Project ID: 51142

Order No.:
Report #: 590160
Phone: 02 8245 0300
Fax:

Received: Mar 20, 2018 4:06 PM
Due: Mar 21, 2018
Priority: 1 Day
Contact Name: Matt Murray

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						VOCs in Ambient Air by GC/MS
Melbourne Laboratory - NATA Site # 1254 & 14271						X
Sydney Laboratory - NATA Site # 18217						
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
External Laboratory						
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	2755 - LOCATION 1 (FRONT)	Mar 19, 2018		Air	S18-Ma23048	X
2	2755 - LOCATION 1 (BACK)	Mar 19, 2018		Air	S18-Ma23049	X
3	7974 - LOCATION 2 (FRONT)	Mar 19, 2018		Air	S18-Ma23050	X
4	7974 - LOCATION 2 (BACK)	Mar 19, 2018		Air	S18-Ma23051	X

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

Project Name: AUSTRALIAN TECHNOLOGY PARK BLACKSMITH
Project ID: 51142

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Contact Name: Matt Murray

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						VOCs in Ambient Air by GC/MS
Melbourne Laboratory - NATA Site # 1254 & 14271						X
Sydney Laboratory - NATA Site # 18217						
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
5	2754 - LOCATION 3 (FRONT)	Mar 19, 2018		Air	S18-Ma23052	X
6	2754 - LOCATION 3 (BACK)	Mar 19, 2018		Air	S18-Ma23053	X
7	2756 - LOCATION 4 (FRONT)	Mar 19, 2018		Air	S18-Ma23054	X
8	2756 - LOCATION 4 (BACK)	Mar 19, 2018		Air	S18-Ma23055	X
9	8695-BLANK (FRONT)	Mar 19, 2018		Air	S18-Ma23056	X
10	8695-BLANK	Mar 19, 2018		Air	S18-Ma23057	X

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

Project Name: AUSTRALIAN TECHNOLOGY PARK BLACKSMITH
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Contact Name: Matt Murray

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						VOCs in Ambient Air by GC/MS
Melbourne Laboratory - NATA Site # 1254 & 14271						X
Sydney Laboratory - NATA Site # 18217						
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
	(BACK)					
11	2760 - LOCATION 1 (FRONT)	Mar 20, 2018		Air	S18-Ma23058	X
12	2760 - LOCATION 1 (BACK)	Mar 20, 2018		Air	S18-Ma23059	X
13	7967 - LOCATION 2 (FRONT)	Mar 20, 2018		Air	S18-Ma23060	X
14	7967 - LOCATION 2 (BACK)	Mar 20, 2018		Air	S18-Ma23061	X
15	7973 - LOCATION 3	Mar 20, 2018		Air	S18-Ma23062	X

Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: AUSTRALIAN TECHNOLOGY PARK BLACKSMITH
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Order No.:
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Contact Name: Matt Murray

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						VOCs in Ambient Air by GC/MS
Melbourne Laboratory - NATA Site # 1254 & 14271						X
Sydney Laboratory - NATA Site # 18217						
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
	(FRONT)					
16	7973 - LOCATION 3 (BACK)	Mar 20, 2018		Air	S18-Ma23063	X
17	2752 - LOCATION 4 (FRONT)	Mar 20, 2018		Air	S18-Ma23064	X
18	2752 - LOCATION 4 (BACK)	Mar 20, 2018		Air	S18-Ma23065	X
19	2758 - BLANK (FRONT)	Mar 20, 2018		Air	S18-Ma23066	X
20	2758 - BLANK (BACK)	Mar 20, 2018		Air	S18-Ma23067	X
Test Counts						20

Internal Quality Control Review and Glossary

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. All biota results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. 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 SRA.

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.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****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: Nephelometric Turbidity 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 and 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.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
NC	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

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 & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

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.
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, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene 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 Aroclor 1260 in Matrix Spikes and LCS.
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 RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
VOCs in Ambient Air by GC/MS							
Naphthalene	Total ug	< 0.5			0.5	Pass	
1.1-Dichloroethane	Total ug	< 0.5			0.5	Pass	
1.1-Dichloroethene	Total ug	< 0.5			0.5	Pass	
1.1-Dichloropropene	Total ug	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	Total ug	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	Total ug	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	Total ug	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	Total ug	< 0.5			0.5	Pass	
1.2-Dibromo-3-chloropropane	Total ug	< 0.5			0.5	Pass	
1.2-Dibromoethane	Total ug	< 0.5			0.5	Pass	
1.2-Dichloroethane	Total ug	< 0.5			0.5	Pass	
1.2-Dichloropropane	Total ug	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	Total ug	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	Total ug	< 0.5			0.5	Pass	
1.3-Dichloropropane	Total ug	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	Total ug	< 0.5			0.5	Pass	
2-Chlorotoluene	Total ug	< 0.5			0.5	Pass	
2.2-Dichloropropane	Total ug	< 0.5			0.5	Pass	
4-Chlorotoluene	Total ug	< 0.5			0.5	Pass	
Benzene	Total ug	< 0.5			0.5	Pass	
Bromochloromethane	Total ug	< 0.5			0.5	Pass	
Bromodichloromethane	Total ug	< 0.5			0.5	Pass	
Bromoform	Total ug	< 0.5			0.5	Pass	
Carbon Tetrachloride	Total ug	< 0.5			0.5	Pass	
Chlorobenzene	Total ug	< 0.5			0.5	Pass	
Chloroform	Total ug	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	Total ug	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	Total ug	< 0.5			0.5	Pass	
Dibromochloromethane	Total ug	< 0.5			0.5	Pass	
Dibromomethane	Total ug	< 0.5			0.5	Pass	
Ethylbenzene	Total ug	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	Total ug	< 0.5			0.5	Pass	
n-Butylbenzene	Total ug	< 0.5			0.5	Pass	
n-Propylbenzene	Total ug	< 0.5			0.5	Pass	
p-Isopropyltoluene	Total ug	< 0.5			0.5	Pass	
sec-Butylbenzene	Total ug	< 0.5			0.5	Pass	
Styrene	Total ug	< 5			5	Pass	
tert-Butylbenzene	Total ug	< 0.5			0.5	Pass	
Tetrachloroethene	Total ug	< 0.5			0.5	Pass	
Toluene	Total ug	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	Total ug	< 0.5			0.5	Pass	
Trichloroethene	Total ug	< 0.5			0.5	Pass	
Trichlorofluoromethane	Total ug	< 0.5			0.5	Pass	
Vinyl chloride	Total ug	< 0.5			0.5	Pass	
Xylenes - Total	Total ug	< 1.5			1.5	Pass	
1.2-Dichlorobenzene	Total ug	< 0.5			0.5	Pass	
1.2.3-Trichlorobenzene	Total ug	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	Total ug	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	Total ug	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	Total ug	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Hexachlorobutadiene	Total ug	< 0.5			0.5	Pass	
LCS - % Recovery							
VOCs in Ambient Air by GC/MS							
Naphthalene	%	73			70-130	Pass	
1.1-Dichloroethene	%	75			70-130	Pass	
1.1-Dichloropropene	%	94			70-130	Pass	
1.1.1-Trichloroethane	%	92			70-130	Pass	
1.2-Dibromo-3-chloropropane	%	78			75-125	Pass	
1.2-Dichloroethane	%	83			70-130	Pass	
Benzene	%	93			70-130	Pass	
Ethylbenzene	%	94			70-130	Pass	
Toluene	%	95			70-130	Pass	
Trichloroethene	%	92			70-130	Pass	
Xylenes - Total	%	93			70-130	Pass	
1.2-Dichlorobenzene	%	88			70-130	Pass	
1.2.3-Trichlorobenzene	%	94			70-130	Pass	
1.2.4-Trichlorobenzene	%	89			70-130	Pass	
1.4-Dichlorobenzene	%	93			70-130	Pass	

Comments

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

Authorised By

Nibha Vaidya	Analytical Services Manager
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)



Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please [click here](#).

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Company Name: JBS & G Australia (NSW) P/L
Address: Level 1, 50 Margaret St
Sydney
NSW 2000
Project Name: AUSTRALIAN TECHNOLOGY PARK BLACKSMITH
Project ID: 51142

Order No.:
Report #: 590160
Phone: 02 8245 0300
Fax:

Received: Mar 20, 2018 4:06 PM
Due: Mar 21, 2018
Priority: 1 Day
Contact Name: Matt Murray

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						VOCs in Ambient Air by GC/MS
Melbourne Laboratory - NATA Site # 1254 & 14271						X
Sydney Laboratory - NATA Site # 18217						
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
External Laboratory						
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	2755 - LOCATION 1 (FRONT)	Mar 19, 2018		Air	S18-Ma23048	X
2	2755 - LOCATION 1 (BACK)	Mar 19, 2018		Air	S18-Ma23049	X
3	7974 - LOCATION 2 (FRONT)	Mar 19, 2018		Air	S18-Ma23050	X
4	7974 - LOCATION 2 (BACK)	Mar 19, 2018		Air	S18-Ma23051	X

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Melbourne Laboratory - NATA Site # 1254 & 14271						X
Sydney Laboratory - NATA Site # 18217						
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
5	2754 - LOCATION 3 (FRONT)	Mar 19, 2018		Air	S18-Ma23052	X
6	2754 - LOCATION 3 (BACK)	Mar 19, 2018		Air	S18-Ma23053	X
7	2756 - LOCATION 4 (FRONT)	Mar 19, 2018		Air	S18-Ma23054	X
8	2756 - LOCATION 4 (BACK)	Mar 19, 2018		Air	S18-Ma23055	X
9	8695-BLANK (FRONT)	Mar 19, 2018		Air	S18-Ma23056	X
10	8695-BLANK	Mar 19, 2018		Air	S18-Ma23057	X

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Sample Detail						VOCs in Ambient Air by GC/MS
Melbourne Laboratory - NATA Site # 1254 & 14271						X
Sydney Laboratory - NATA Site # 18217						
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
	(BACK)					
11	2760 - LOCATION 1 (FRONT)	Mar 20, 2018		Air	S18-Ma23058	X
12	2760 - LOCATION 1 (BACK)	Mar 20, 2018		Air	S18-Ma23059	X
13	7967 - LOCATION 2 (FRONT)	Mar 20, 2018		Air	S18-Ma23060	X
14	7967 - LOCATION 2 (BACK)	Mar 20, 2018		Air	S18-Ma23061	X
15	7973 - LOCATION 3	Mar 20, 2018		Air	S18-Ma23062	X

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Sample Detail						VOCs in Ambient Air by GC/MS
Melbourne Laboratory - NATA Site # 1254 & 14271						X
Sydney Laboratory - NATA Site # 18217						
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
	(FRONT)					
16	7973 - LOCATION 3 (BACK)	Mar 20, 2018		Air	S18-Ma23063	X
17	2752 - LOCATION 4 (FRONT)	Mar 20, 2018		Air	S18-Ma23064	X
18	2752 - LOCATION 4 (BACK)	Mar 20, 2018		Air	S18-Ma23065	X
19	2758 - BLANK (FRONT)	Mar 20, 2018		Air	S18-Ma23066	X
20	2758 - BLANK (BACK)	Mar 20, 2018		Air	S18-Ma23067	X
Test Counts						20