CH475-D230362

Inleel William
JK Williams Pty Ltd
39-53 Jack Williams Drive,
Penrith NSW 2750

iwilliam@jkw.com.au

Re: Dust Monitoring October 2023 – Westlink

Dear Sir,

Compliance Health & Environmental Consulting (CHEC) were engaged by JK Williams Pty Ltd to undertake monthly Depositional Dust Monitoring for the site located at 63 Abbotts Road, Kemps Creek, identified as Lot 11 in DP252503.

Six Dust Deposition Gauges (DDG1-DDG6) were installed at representative locations along the Site boundary nearest to sensitive receptors, in accordance with the guidelines provided by AS/NZS 3580.1.1:2016. Refer to **Figure 1**-Site layout with sample locations.

The gauges were constructed in accordance with AS/NZ3580.1.1:2016-Methods for sampling and analysis of ambient air. Method 10.1: Determination of particulate matter-deposited matter-Gravimetric method.

A 150mm diameter glass funnel was placed within a 4L glass collection bottle using a rubber stopper with a drain. Each DDG was then placed within a PVC casing for protection and fixed to a star picket on site. Bird protection was constructed on the PVC pipe to prevent birds perching on the funnel. Gauges were placed 2m above ground level. This dust report details results from 29th of September 2023 to 31th of October 2023.

DDGs 2 & 3 were removed at the end of this period, following the completion of works and handing over the Lot within the dust gauges proximity. With such, no further monthly dust analysis of DDGs 2 & 3 will continue following this report.

Dust is assessed as insoluble solids as defined by AS 3580.10.1–1991 (AM-19) and is made up of both combustible and non-combustible materials. The obligation to monitor dust relates to the primary activity, being soil disturbance as a result of earthworks, therefore, the non-combustible and dissolved component (generally recognised as mineral salts) are the primary measurements of concern to determine compliance.

The sampling method does not provide real time data, but provides an estimate of the mean surface concentration of deposited matter settling from the air over a period of one month.

The gauges were analysed at a NATA certified laboratory where the collected sediment was weighed and dried to measure particles in the air, less the combustible matter to give total non-combustible material collected in the deposition gauges. The resultant data represents the potential exposure to dust for those receptors, being local residences.

The depositional dust monitoring criteria are as follows:

- Annual average total deposited dust level is 4g/m^2/month.
- Maximum monthly increase in deposited dust level is 2g/m^2/month

Table 1 shows that the highest recorded dust concentration was observed at DDG4, having a total solids concentration of 19g/m^2 that included 18g/m^2 of insoluble solids. The insoluble solids contained 1.3g/m^2 of combustible solids, and 17g/m^2 of non-combustible solids (mineral dust). Refer to **Attachment 1** – NATA Certified Results.

Table 1 –October Dust Deposition Analysis (g/m^2/month)

Gauge	Insoluble	Combustible	Non-Combustible	Soluble	Total
DDG1	2.2	0.2	2	1.9	4.2
DDG2	5	0.3	4.6	2.5	7.4
DDG3	11	0.5	11	2.9	14
DDG4	18	1.3	17	0.5	19
DDG5	1.6	0.2	1.5	2.2	3.8
DDG6	13	0.5	12	2.3	15

Table 2 indicates that DDG2, DDG3, DDG4, & DDG6 exceeded the monthly change criteria of 2g/m^2 for insoluble solids and non-combustible solids, with a significant maximum exceedance of 12.5g/m^2/month at DDG4.

Rolling averages insoluble solids concentrations within DDG3, DDG4, & DDG6 also exceeded the annual average criteria of 4g/m^2/month with a maximum rolling average of 8.2g/m^2/month

Table 2 –Monthly Changes and Rolling Averages (g/m^2/month)

	Total Dust (AS3580.10.1-2016)		Non-Combustible Solids	
Gauge	Monthly Δ	Rolling Avg	Monthly Δ	Rolling Avg
DDG1	0.2	1.8	0.1	1.6
DDG2	**3.7**	2.4	3.4	2.2
DDG3	**6.7**	**5.4**	6.9	5.3
DDG4	**12.5**	**8.2**	11.8	7.7
DDG5	0.2	1.3	0.2	1.1
DDG6	**8.3**	**6.0**	7.4	5.6
Criteria	2	4	--	--

The prevailing wind for this month was from the south south-west as shown on **Figure 2.** The average wind speed for the month was 1.8km/hr with a maximum of 32.2km/h occurring from the south-east. The prevailing winds suggests that the associated exceedances within DDG2, DDG3 & DDG4 are likely attributed by onsite dust generative activities.

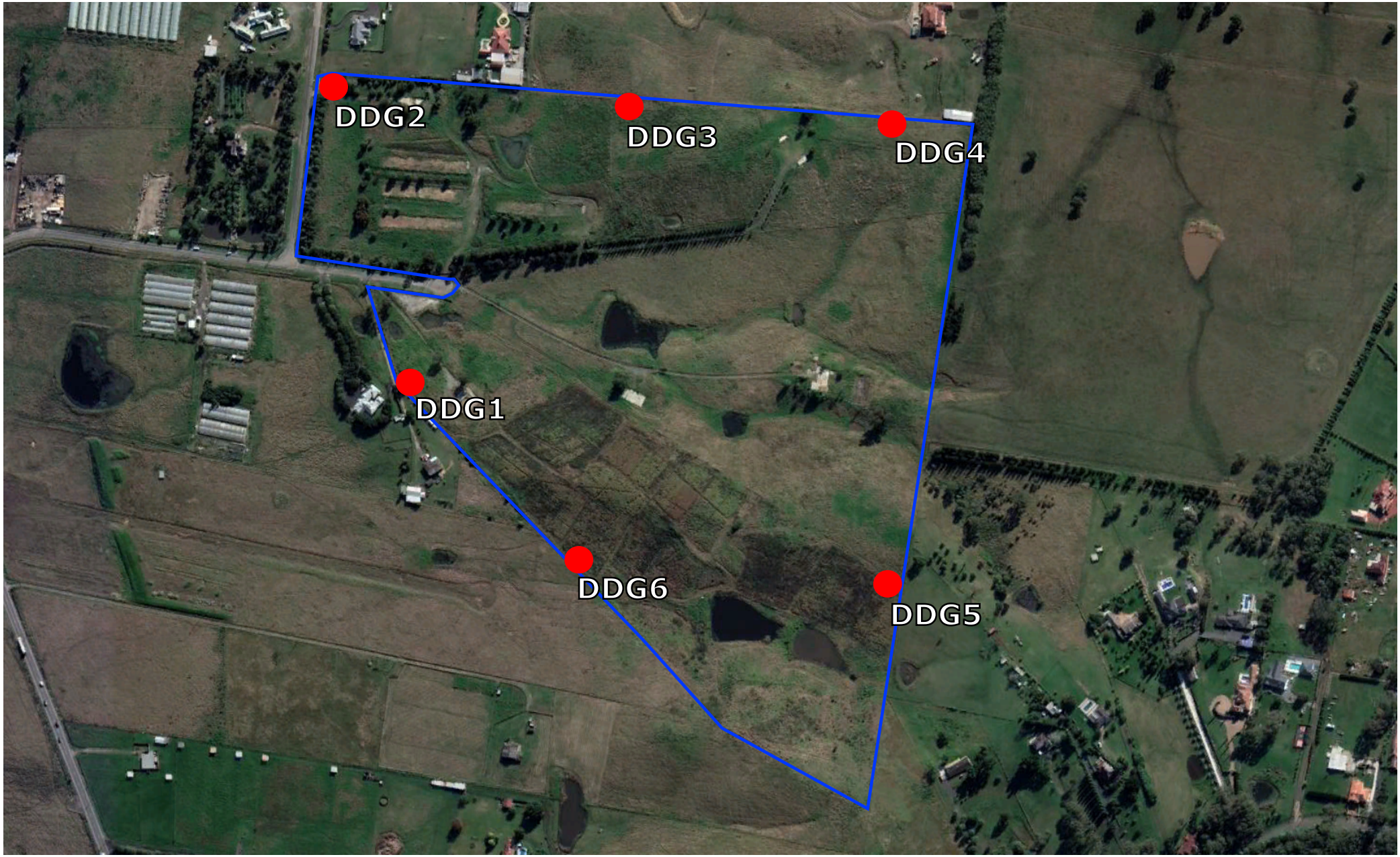
Based on the available data, dust levels for the month of October are not considered compliant for The Westlink development, Kemps Creek. The monthly increases at DDG2 DDG3, DDG4 and DDG6 will require some investigation, and should be addressed in the report for November. Following such, we anticipate the exceeding rolling averages at DDG3, DDG4 & DDG5

If any further information is required regarding this matter, please feel free to contact the undersigned during business hours.

Regards,

Cody Vincent
Environmental Consultant
Compliance Health & Environmental Consulting Pty Ltd

Figure 1 – Site Layout



Dust Deposition Gauge Location

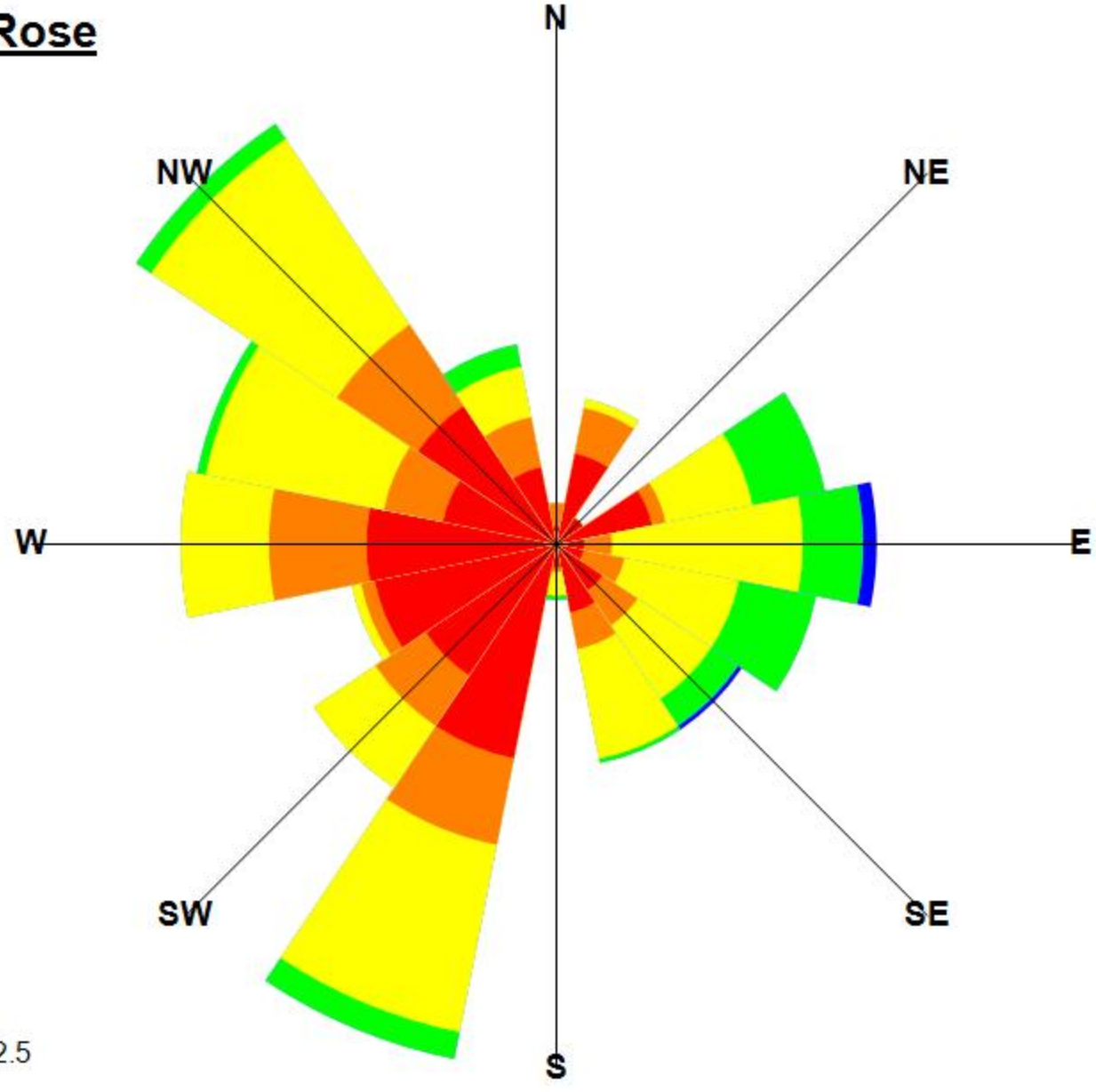
Site Area

CHEC
Compliance Health & Environmental Consulting

Title: Dust Deposition Gauge Locations			
Site Address: 63 Abbotts Road, Kemps Creek	Project No.: CH1475	Figure No.: 1	Date: 23/08/2023
Client: JK Williams Pty Ltd	Scale: NTS	Compiled: CV	Revision: Rev. 1

Figure 2 – Wind Rose Diagram

October Wind Rose



Wind Speed (km/hr)

- 38+
- 28-38
- 19-28
- 11-19
- 5-11
- 0-5

Average value: 1.8
Maximum value: 32.2
Prevailing direction: 202.5

Attachment 1 – NATA Certified Laboratory Results

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1 21 Smaliwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

Company	CHEC	Project №	1475	Project Manager	CV
Address		Project Name	JKW Kemps	EDD Format (ESdat, EQuIS etc)	
Contact Name					
Phone №					
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	CV	
Handed over by	CV	
Email for Invoice		
Email for Results		

Analyses — Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.

Dust Deposition

Containers — Change container type & size if necessary.

Required Turnaround Time (TAT) — Default will be 5 days if not ticked.

♦Surcharge will apply

☐ Overnight (reporting by 9am)♦
☐ Same day ♦ ☐ 1 day ♦
☐ 2 days ♦ ☐ 3
☑ 5 days (Standard)
☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	Dust Deposition	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	DDG1	31/10	W	X									IN 29/9
2	DDG2	↓	↓	↓									OUT 31/10
3	DDG3												
4	DDG4												
5	DDG5												
6	DDG6												
7													
8													
9													
10													
	Total Counts			6									

Method of Shipment: ☐ Courier (#) ☐ Hand Delivered ☐ Postal

	Name	CV	Signature	CV	Date	31/10	Time	2:45pm
Eurofins | mgt Laboratory Use Only	Received By	[illegible]	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	[signature]	Date	31/10	Time 3:03 PM	Temperature	N/A
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		Time	Report №	

10 39947

Compliance Health & Environmental Consulting P/L
PO Box 275
Gosford
NSW 2250

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **RESULTS - ALL SRAS HERE ONLY - NO INVOICES**

Report **1039947-A**
Project name JKW KEMPS
Project ID 1475
Received Date Oct 31, 2023

Client Sample ID			**DDG1**	**DDG2**	**DDG3**	**DDG4**
Sample Matrix			**Dust Deposition**	**Dust Deposition**	**Dust Deposition**	**Dust Deposition**
Eurofins Sample No.			**S23-No0000023**	**S23-No0000024**	**S23-No0000025**	**S23-No0000026**
Date Sampled			**Oct 31, 2023**	**Oct 31, 2023**	**Oct 31, 2023**	**Oct 31, 2023**
Test/Reference	LOR	Unit				
Dust Deposition						
Combustible Solids	0.1	g/m2/mth	0.2	0.3	0.5	1.3
Soluble Solids	0.1	g/m2/mth	1.9	2.5	2.9	0.5
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	4.2	7.4	14	19
Volume (total)*	0.1	mL	420	390	410	370
Ash*	0.1	g/m2/mth	2.0	4.6	11	17
Insoluble Solids	0.1	g/m2/mth	2.2	5.0	11	18

Client Sample ID			**DDG5**	**DDG6**
Sample Matrix			**Dust Deposition**	**Dust Deposition**
Eurofins Sample No.			**S23-No0000027**	**S23-No0000028**
Date Sampled			**Oct 31, 2023**	**Oct 31, 2023**
Test/Reference	LOR	Unit		
Dust Deposition				
Combustible Solids	0.1	g/m2/mth	0.2	0.5
Soluble Solids	0.1	g/m2/mth	2.2	2.3
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	3.8	15
Volume (total)*	0.1	mL	420	540
Ash*	0.1	g/m2/mth	1.5	12
Insoluble Solids	0.1	g/m2/mth	1.6	13

Sample History

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

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
Dust Deposition	Sydney	Nov 01, 2023	5 Days

- Method: LTM-INO-4160 Determination of Dust Deposition of Ambient Air

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West NSW 2304
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	Tel: +61 2 4968 8448
Tel: +61 3 8564 5000	Tel: +61 3 8564 5000	Tel: +61 2 9900 8400	Tel: +61 2 6113 8091	Tel: +61 7 3902 4600	NATA# 1261
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	Site# 25079 & 25289
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377
Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Christchurch	Tauranga
35 O'Rorke Road	43 Detroit Drive	1277 Cameron Road,
Penrose,	Rolleston,	Gate Pa,
Auckland 1061	Christchurch 7675	Tauranga 3112
Tel: +64 9 526 4551	Tel: +64 3 343 5201	Tel: +64 9 525 0568
IANZ# 1327	IANZ# 1290	IANZ# 1402

Company Name: Compliance Health & Environmental Consulting P/L
Address: PO Box 275
Gosford
NSW 2250

Project Name: JKW KEMPS
Project ID: 1475

Order No.:
Report #: 1039947
Phone: 02 4304 0091
Fax:

Received: Oct 31, 2023 3:03 PM
Due: Nov 7, 2023
Priority: 5 Day
Contact Name: RESULTS - ALL SRAS HERE

Eurofins Analytical Services Manager : Bonnie Pu

Sample Detail						Dust Deposition
Sydney Laboratory - NATA # 1261 Site # 18217						X
External Laboratory						
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**	
1	DDG1	Oct 31, 2023		Dust Deposition	S23-No0000023	X
2	DDG2	Oct 31, 2023		Dust Deposition	S23-No0000024	X
3	DDG3	Oct 31, 2023		Dust Deposition	S23-No0000025	X
4	DDG4	Oct 31, 2023		Dust Deposition	S23-No0000026	X
5	DDG5	Oct 31, 2023		Dust Deposition	S23-No0000027	X
6	DDG6	Oct 31, 2023		Dust Deposition	S23-No0000028	X
Test Counts						6

eurofins | Environment Testing

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry weight basis unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion unless otherwise stated.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with blue colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

Holding times apply from the date of sampling; therefore, compliance with 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, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony forming unit

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - 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.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

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%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%

PFAS field samples that contain surrogate recoveries above the QC limit designated in QSM 5.4, 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 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 are not data from your samples.
3. 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.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	N/A
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:

Bonnie Pu	Analytical Services Manager
Ryan Phillips	Senior Analyst-Inorganic

Glenn Jackson
Managing Director

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.