

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

iwilliam@jkw.com.au

Re: Dust Monitoring September 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 August 2023 to the 29th of September 2023.

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/m²/month.
- Maximum monthly increase in deposited dust level is 2g/m²/month



Table 1 shows that the highest recorded dust concentration was observed at DDG4, having a total solids concentration of 8.8g/m² that included 5.5g/m² of insoluble solids. The insoluble solids contained 0.4g/m² of combustible solids, and 5.2g/m² of non-combustible solids (mineral dust). Refer to **Attachment 1** – NATA Certified Results.

Table 1 – September Dust Deposition Analysis (g/m²/month)

Gauge	Insoluble	Combustible	Non-Combustible	Soluble	Total
DDG1	2	0.1	1.9	0.7	2.6
DDG2	1.3	0.1	1.2	2.3	3.6
DDG3	4.3	0.2	4.1	1.5	5.7
DDG4	5.5	0.4	5.2	3.3	8.8
DDG5	1.4	0.1	1.3	1.1	2.5
DDG6	4.7	0.1	4.6	1	5.7

Table 2 indicates that DDG3, DDG4, & DDG6 exceeded the monthly change criteria of 2g/m² for insoluble solids and non-combustible solids, with a maximum exceedance of 4.4g/m²/month at DDG4.

Rolling averages for both insoluble solids and non-combustible solids remains compliant with the annual average criteria of 4g/m²/month.

Table 2 – Monthly Changes and Rolling Averages (g/m²/month)

Gauge	Total Dust (AS3580.10.1-2016)		Non-Combustible Solids	
	Monthly Δ	Rolling Avg	Monthly Δ	Rolling Avg
DDG1	0.9	1.6	1.1	1.4
DDG2	0.3	1.2	0.4	1
DDG3	3.3	2.7	3.2	2.5
DDG4	4.4	3.3	4.2	2.1
DDG5	0.6	1.1	0.7	1
DDG6	4.4	2.5	4.4	2.4
Criteria	2	4	--	--

The prevailing wind for this month was from the west north-west as shown on **Figure 2**. The average wind speed for the month was 2.1km/hr with a maximum of 29km/h occurring from the south-east.

The prevailing winds suggests that the associated exceedances within DDG3 & DDG4 are potentially attributed by to offsite dust generative activities. In saying this, the observed exceedances within DDG6 are suggested to be due to onsite dust generative activities.

Based on the available data, dust levels for the month of October are considered compliant for The Westlink development, Kemps Creek, though the increases at DDG3, DD4 and DDG6 will require some investigation, and should be addressed in the report for November.

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

Regards,

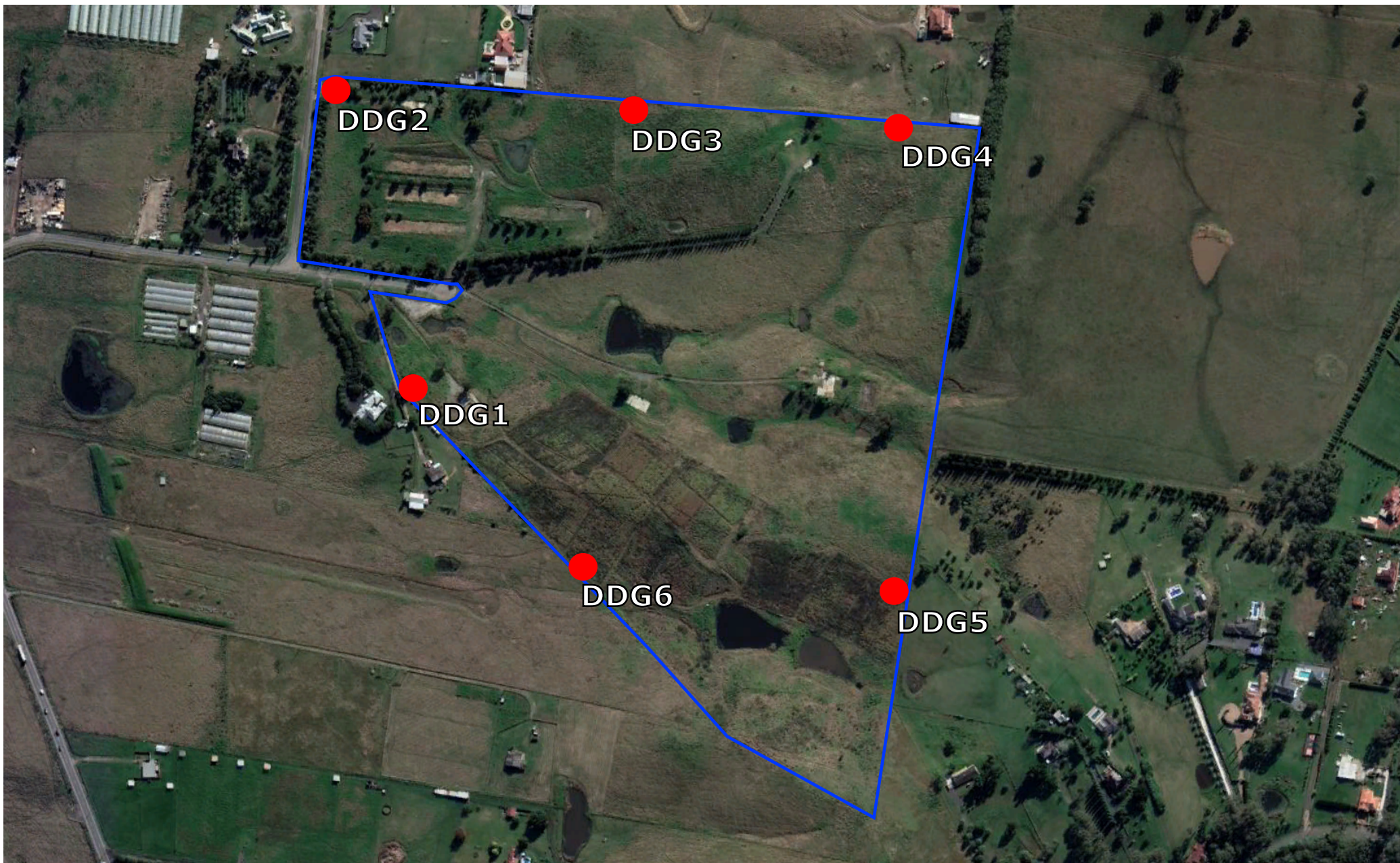
Cody Vincent

Environmental Consultant


Compliance Health & Environmental Consulting Pty Ltd



Figure 1 – Site Layout



 Dust Deposition Gauge Location

 Site Area

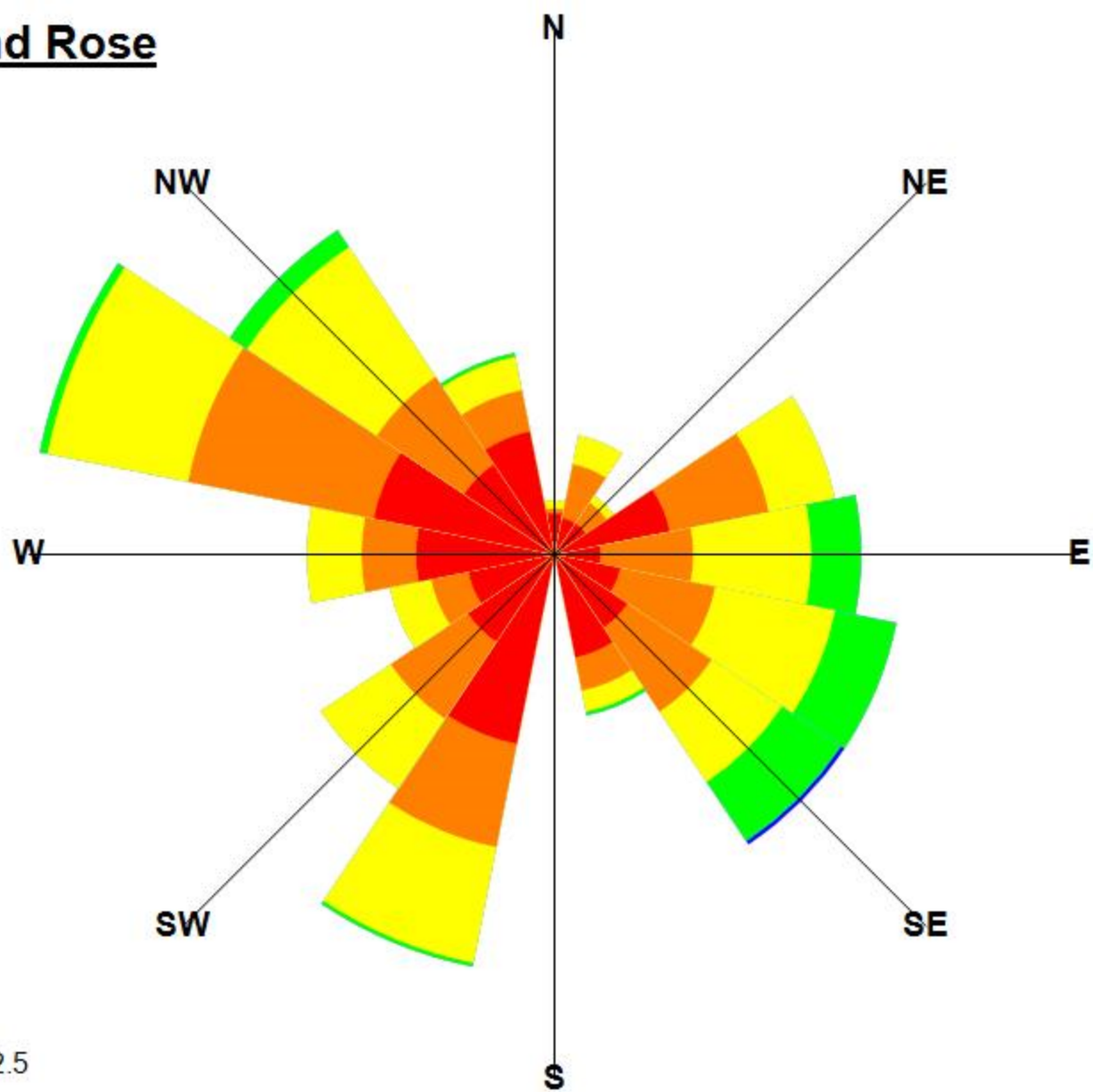


Title				Dust Deposition Gauge Locations			
Site Address		Project No.		Figure No.		Date	
63 Abbotts Road, Kemps Creek		CH1475		1		23/08/2023	
Client		Scale		Compiled		Revision	
JK Williams Pty Ltd		NTS		CV		Rev. 1	



Figure 2 – Wind Rose Diagram

September Wind Rose





Attachment 1 – NATA Certified Laboratory Results

Company	Address	Contact Name	Phone No	Special Directions	Purchase Order	Quote ID No	Client Sample ID	Sampled Date/Time dd/mm/yyyy hh:mm	Matrix Solid (S) Water (W)	Project No	Project Name	Project Manager	Sampler(s)	Containers					Required Turnaround Time (TAT) Default will be 5 days if not ticked.					
														500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial		500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4984, WA Guidelines)	Overnight (reporting by 9am)	Same day
CMFC										1475	JKW DUST	CU	CU											
1							DDG1	comment w	w															
2							DDG2																	
3							DDG3																	
4							DDG4																	
5							DDG5																	
6							DDG6																	
7																								
8																								
9																								
10																								
											Total Counts					6								
Method of Shipment <input type="checkbox"/> Courier (#) <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Postal <input type="checkbox"/>														Name	Signature	Date	Date	Date	Time	Time	Time	Report No		
Eurofins mgt Laboratory Use Only														C Vincent	<i>[Signature]</i>	CU	03/10/20	21/10/20	03/10/20	03/10/20	21/10/20	333		

Where metals are requested, please specify 'Total' or 'Filtered'.
SUTE code must be used to attract SUTE pricing.

Dust Deposition

comment w

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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 1031239-A
Project name JKW DUST
Project ID 1475
Received Date Oct 03, 2023

Client Sample ID			DDG1	DDG2	DDG3	DDG4
Sample Matrix			Dust Deposition	Dust Deposition	Dust Deposition	Dust Deposition
Eurofins Sample No.			S23- Oc0004738	S23- Oc0004739	S23- Oc0004740	S23- Oc0004741
Date Sampled			Sep 29, 2023	Sep 29, 2023	Sep 29, 2023	Sep 29, 2023
Test/Reference	LOR	Unit				
Dust Deposition						
Combustible Solids	0.1	g/m2/mth	0.1	0.1	0.2	0.4
Soluble Solids	0.1	g/m2/mth	0.7	2.3	1.5	3.3
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	2.6	3.6	5.7	8.8
Volume (total)*	0.1	mL	1300	1200	1100	1100
Ash*	0.1	g/m2/mth	1.9	1.2	4.1	5.2
Insoluble Solids	0.1	g/m2/mth	2.0	1.3	4.3	5.5

Client Sample ID			DDG5	DDG6
Sample Matrix			Dust Deposition	Dust Deposition
Eurofins Sample No.			S23- Oc0004742	S23- Oc0004743
Date Sampled			Sep 29, 2023	Sep 29, 2023
Test/Reference	LOR	Unit		
Dust Deposition				
Combustible Solids	0.1	g/m2/mth	0.1	0.1
Soluble Solids	0.1	g/m2/mth	1.1	1.0
Total Solids Dried at 103 °C to 105 °C	0.1	g/m2/mth	2.5	5.7
Volume (total)*	0.1	mL	1400	1500
Ash*	0.1	g/m2/mth	1.3	4.6
Insoluble Solids	0.1	g/m2/mth	1.4	4.7

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

Dust Deposition

Testing Site

Sydney

Extracted

Oct 04, 2023

Holding Time

5 Days

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

Melbourne 6 Monterey Road Dandenong South VIC 3175 Tel: +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 Tel: +61 3 8564 5000 NATA# 1261 Site# 25403	Sydney 179 Magowar Road Girraween NSW 2145 Tel: +61 2 9900 8400 NATA# 1261 Site# 18217	Canberra Unit 1,2 Dacre Street Mitchell ACT 2911 Tel: +61 2 6113 8091 NATA# 1261 Site# 25466	Brisbane 1/21 Smallwood Place Murarrie QLD 4172 Tel: +61 7 3902 4600 NATA# 1261 Site# 20794	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 Tel: +61 2 4968 8448 NATA# 1261 Site# 25079 & 25289
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Perth 46-48 Banksia Road Welshpool WA 6106 Tel: +61 8 6253 4444 NATA# 2377 Site# 2370
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Auckland 35 O'Rorke Road Penrose, Auckland 1061 Tel: +64 9 526 4551 IANZ# 1327	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 Tel: +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road, Gate Pa, Tauranga 3112 Tel: +64 9 525 0568 IANZ# 1402
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Company Name:	Compliance Health & Environmental Consulting P/L	Order No.:		Received:	Oct 3, 2023 2:21 PM
Address:	PO Box 275 Gosford NSW 2250	Report #:	1031239	Due:	Oct 10, 2023
Project Name:	JKW DUST	Phone:	02 4304 0091	Priority:	5 Day
Project ID:	1475	Fax:		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	Sep 29, 2023		Dust Deposition	S23-Oc0004738	X
2	DDG2	Sep 29, 2023		Dust Deposition	S23-Oc0004739	X
3	DDG3	Sep 29, 2023		Dust Deposition	S23-Oc0004740	X
4	DDG4	Sep 29, 2023		Dust Deposition	S23-Oc0004741	X
5	DDG5	Sep 29, 2023		Dust Deposition	S23-Oc0004742	X
6	DDG6	Sep 29, 2023		Dust Deposition	S23-Oc0004743	X
Test Counts						6

Internal Quality Control Review and Glossary

General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- 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.

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
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 a moisture has been determined on a solid sample the result is expressed on a dry 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 is representative of 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 (<i>bis</i> -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 in excess of 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

- 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.
- 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.
- 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.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
- For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- 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:

Adam Bateup Analytical Services Manager
Dilani Samarakoon 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](#).

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