

CLIENT DETAILS

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Project **Adelong -Challenger Mine Dust Monitoring**
 Order Number (Not specified)
 Samples 5

LABORATORY DETAILS

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SGS Reference **SE201168 R0**
 Date Received 13 Dec 2019
 Date Reported 02 Jan 2020

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

Results may be overstated due to insects in the samples (especially for sample #1 and #5).

SIGNATORIES



Dong LIANG
 Metals/Inorganics Team Leader

	Sample Number	SE201168.001	SE201168.002	SE201168.003	SE201168.004
	Sample Matrix	Water	Water	Water	Water
	Sample Date	13 Nov 2019	13 Nov 2019	13 Nov 2019	13 Nov 2019
	Sample Name	EPL #11 Dust	EPL #12 Dust	EPL #13 Dust	EPL #14 Dust
Parameter	Units	LOR			

Dust in Air (Deposited Matter) Method: AN502(Sydney) /AN503 Tested: 27/12/2019

Sampling Period in Days	days	-	30	30	30	30
Total Insoluble Solids	mg	1	770	50	32	33
Total Insoluble Solids Per Sampling Period	g/m ² /30 days	0.1	44	2.8	1.8	1.9

Sample Number SE201168.005
 Sample Matrix Water
 Sample Date 13 Nov 2019
 Sample Name EPL #15 Dust

Parameter	Units	LOR
Dust in Air (Deposited Matter) Method: AN502(Sydney) /AN503 Tested: 27/12/2019		
Sampling Period in Days	days	- 30
Total Insoluble Solids	mg	1 110
Total Insoluble Solids Per Sampling Period	g/m ² /30 days	0.1 6.4

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

Dust in Air (Deposited Matter) Method: ME-(AU)-[ENV]AN502(Sydney) /AN503

Parameter	QC Reference	Units	LOR	MB
Sampling Period in Days	LB190798	days	-	30
Total Insoluble Solids	LB190798	mg	1	<1
Total Insoluble Solids Per Sampling Period	LB190798	g/m ³ /30 days	0.1	<0.1

METHOD

METHODOLOGY SUMMARY

AN502(Sydney) /AN503

Dust 1mm Sieve Observations Abbreviations:

Ins=small insects (unidentified), Be=Beetles, Sp=spiders, Wm=worms, Frg=Frog, OM=unidentified organic matter
Tw=twig, sm=small amount, vs=very small amount, m-medium amount

AN503/AN502 (Sydney)

The contents of the dust deposition bottle/container may be analysed gravimetrically for insoluble solids, ash, soluble solids, total solids and/or combustible matter, dependent on client requests. The mass deposition rate of deposited matter is then calculated from the mass of solids obtained, the funnel cross-section area (for Standard Deposition Gauges) and the collection area defined by the slot dimensions (for Directional Dust Gauges) and the exposure period. Referenced to AS NZS 3580.10.1.

FOOTNOTES

IS	Insufficient sample for analysis.	LOR	Limit of Reporting
LNR	Sample listed, but not received.	↑↓	Raised or Lowered Limit of Reporting
*	NATA accreditation does not cover the performance of this service.	QFH	QC result is above the upper tolerance
**	Indicative data, theoretical holding time exceeded.	QFL	QC result is below the lower tolerance
		-	The sample was not analysed for this analyte
		NVL	Not Validated

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received. Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- a. 1 Bq is equivalent to 27 pCi
- b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/pv.sgsvr/en-gb/environment.

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