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ALS Coal Division WALKER QUARRIES ANALYSIS AND TESTING REPORT

REPORT TO: Wayne Chapman

Lot 6 Great Western Highway, Wallerawang NSW 2845

REPORT ON: Groundwater Sample

Mar-23

REPORT NO: 2400-7303-01

SAMPLED BY: L. Pyne & L. Jenkins

REPORTED BY: T.MacPhee

REPORT DATE: 28/03/2023

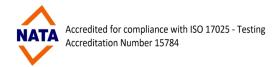
These reported results only relate to the items sampled and tested

Sampling and Analysis performed by: ACIRL Lithgow NSW NATA Accreditation No. 15784, Site No. 11436 in accordance with **AS** Standards listed on Page 4.

Adriana Hernandez

Olam Stemos

Environmental Project/Quality Officer- Lithgow NSW



right solutions. right partner.



ALS Coal Division WALKER QUARRIES ANALYSIS AND TESTING REPORT

	Units					
Date of Sample		17/03/2023				
REPORT NO:		2400-7303-01				
ALS Sydney Report No.		E\$2309242				
Site Reference		GW1	GW2	GW3		
Sampled by		L.Pyne & C.Jenkins				
General Comments/ Observations		Clear	Clear	Clear		
Standing Water Level	m	78.22	25.14	20		
Total Volume Purged	L	3.0	3.0	3.0		
рН	pH Unit	6.2	6.2	6.6		
Electrical Conductivity	μS/cm	269	273	675		
Alkalinity by PC Titrator						
Hydroxide Alkalinity as CaCO3	mg/L	<1	<1	<1		
Carbonate Alkalinity as CaCO3	mg/L	<1	<1	<1		
Bicarbonate Alkalinity as CaCO3	mg/L	108	110	303		
Total Alkalinity as CaCO3	mg/L	108	110	303		
Sulfate (Turbidimetric) as SO4						
Sulfate as SO4 - Turbidimetric	mg/L	12	12	39		
Chloride by Discrete Analyser						
Chloride	mg/L	8	8	12		
Dissolved Major Cations						
Calcium	mg/L	24	26	103		
Magnesium	mg/L	6	6	8		
Sodium	mg/L	18	19	31		
Potassium	mg/L	3	3	4		



ALS Coal Division WALKER QUARRIES ANALYSIS AND TESTING REPORT

	Units					
Date of Sample		17/03/2023				
REPORT NO:		2400-7303-01				
ALS Sydney Report No.		ES2309242				
Site Reference		GW1	GW2	GW3		
Sampled by		L.Pyne & C.Jenkins				
Dissolved Metals by ICP-MS						
Arsenic	mg/L	0.002	0.002	0.001		
Cadmium	mg/L	<0.0001	<0.0001	<0.0001		
Chromium	mg/L	<0.001	<0.001	0.01		
Copper	mg/L	0.007	0.008	0.006		
Lead	mg/L	<0.001	<0.001	<0.001		
Nickel	mg/L	0.013	0.014	0.025		
Zinc	mg/L	0.275	0.282	0.622		
Dissolved Mercury by FIMS						
Mercury	mg/L	<0.0001	<0.0001	<0.0001		
EN055: Ionic Balance						
Total Anions	meq/L	2.63	2.67	7.2		
Total Cations	meq/L	2.55	2.69	7.25		
Ionic Balance	%			0.31		



ALS Coal Division WALKER QUARRIES ANALYSIS AND TESTING REPORT

METHODS OF ANALYSIS

Tests for results issued in this report have been carried out at the following NATA accredited laboratories in accordance with the methods as detailed below:-

TEST	METHOD	ACIRL Lithgow NATA Accreditation #11436	Measure of Uncertainty
Electrical Conductivity uS/cm	CBM-E006	APHA 2510 B	2.0%
pH value	CBM-E005	APHA 4500 H	0.10 pH Units

The remaining analysis performed at ALS Environmental, 277-289 Woodpark Rd, Smithfield, NSW 2164.

Low yielding bores have been purged to dryness, otherwise bores purged to constant Electrical Conductivity

REPORT NO: 2400-7303-01 ALS Sydney Report No. ES2309242

Samples were analysed in accordance with the following Australian Standards or equivalent:

Australian Standards Description

AS/NZS 5667.1 Part 1: Guidance on the design of sampling programs, sampling

techniques and the preservation and handling of samples

ISO 5667-3 Part 3: Preservation and handling of water samples AS/NZS 5667.11 Part 11: Guidance on sampling of ground waters