## STANDARD FLY ASH CERTIFICATE



FINAL
Prior Reports: None

Certificate Number: CERT201819

Issued: 20 August 2020

Product being certified: Eraring Monthly Grab Fly Ash

Product sample date: 01-Aug-2020

Sample Identification: Sample Code: 20080141
Source Power Station: Eraring Power Station

Sample Condition: Tested as Received. Testing Commenced on 05-Aug-2020

Certifying Laboratory: Cement Australia - Darra Laboratory,

18 Station Avenue, Darra Queensland 4076 Australia.

## **Test Results**

Test	Moisture	Fineness @ 45 micron	Loss on Ignition	Sulfuric Anhydride	Available Alkali	Chloride Ion	Chemical Composition
	%	% Passed	%	%	%	%	%
Result	< 0.1	83	1.5	0.1	n/a	0.006	93.2
Test Method	AS3583.2	AS3583.1	AS3583.3	AS2350.2	AS3583.12	AS3583.13	AS2350.2
AS 3582.1	0.5 % Maximum	75% Minimum	4.0 % Maximum	3.0 % Maximum	-	0.1 % Maximum	70% Minimum

Test	Relative Density	Relative Water Requirement	Strength Index 7 Day Acc.	Reference Cement Details	
		%	%	Identification:: 20080255	
Result	2.11	97	92	Source: Goliath GP	
Test Method	AS3583.5	AS3583.6	AS3583.6	Product Type: Type GP	
AS 3582.1	-	-	75% Minimum	Sample Date: 07-Aug-20	

**Additional Testing - Oxides** 

Test	CaO by XRF %	SiO <sub>2</sub> by XRF %	Al <sub>2</sub> O <sub>3</sub> by XRF %	Fe <sub>2</sub> O <sub>3</sub> by XRF %	SO <sub>3</sub> by XRF	MgO by XRF %	Na₂O by XRF %
Result	1.5	65.2	24.0	4.0	0.1	0.5	0.38
Test Method	AS2350.2	AS2350.2	AS2350.2	AS2350.2	AS2350.2	AS2350.2	AS2350.2

Test	K₂O by XRF	SrO by XRF	TiO2 by XRF	P <sub>2</sub> O <sub>5</sub> by XRF	Mn₂O₃ by XRF	Total Alkali (NaEQ)
	%	%	%	%	%	%
Result	1.71	<0.1	1.0	0.3	< 0.1	1.51
Test Method	AS2350.2	AS2350.2	AS2350.2	AS2350.2	AS2350.2	AS2350.2

This sample grade conforms to the following requirements of AS 3582.1:2016

Special	Grade 1	Grade 2
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**Approved Signatory** 

A Prem Signatory - Cem

Signatory - Cement Australia Chemical Testing

Construction Materials Testing

Notes:

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.

Cement Australia - Darra Laboratory NATA Accredited Laboratory Numbers 187 188



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