STANDARD FLY ASH CERTIFICATE



FINAL Prior Reports: None

Certificate Number: CERT200441 Issued: 02 March 2020 Flyash Australia Pty Ltd ABN 68 002 840 271 Head Office C/- Lindfield Corporate Centre Suite 18, 12 Tryon Road Lindfield NSW 2070 Tel : (02) 9413 8422 Fax: (02) 9413 84.32

Product being certified: Product sample date: Sample Identification: Source Power Station: Sample Condition: Certifying Laboratory: Mt Piper Monthly Grab Fly Ash 04-Feb-2020 Sample Code: 20020310 Mount Piper Power Station Tested as Received. Testing Commenced on 07-Feb-2020 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 | 82 | 1.0 | < 0.1 | n/a | 0.002 | 94.3 |
| 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:: 20020293 |
| Result | 2.12 | 97 | 93 | Source: Goliath GP |
| Test Method | AS3583.5 | AS3583.6 | AS3583.6 | Product Type: Type GP |
| AS 3582.1 | - | - | 75% Minimum | Sample Date: 10-Feb-20 |

Additional Testing - Oxides

| Test | CaO by XRF | SiO ₂ by XRF | Al ₂ O ₃ by XRF | Fe ₂ O ₃ by XRF | SO₃ by XRF | MgO by XRF | Na ₂ O by XRF |
|-------------|---------------|----------------------------|--|--|---------------|---------------|-----------------------------|
| | % | % | % | % | % | % | % |
| Result | 0.1 | 65.9 | 25.9 | 2.5 | < 0.1 | 0.2 | 0.68 |
| 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 | P₂O₅ by XRF | Mn ₂ O ₃ by XRF | Total Alkali (NaEQ) |
|-------------|---------------|---------------|----------------|----------------|--|------------------------|
| | % | % | % | % | % | % |
| Result | 2.63 | <0.1 | 0.9 | 0.2 | < 0.1 | 2.41 |
| Test Method | AS2350.2 | AS2350.2 | AS2350.2 | AS2350.2 | AS2350.2 | AS2350.2 |

 Special
 Grade 1
 Grade 2

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Approved Signatory

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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