



Adelaide Brighton Cement Ltd

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QUARTERLY STACK PARTICULATE REPORT FOR BIRKENHEAD WORKS

COMPLIANCE DATE: 31/12/21 – Quarter 4, 2021
EPA Licence 1126: Stack Particulate Management Plan (U-749)

Licensed site: Adelaide Brighton Cement, Birkenhead Works
62 Elder Road, Birkenhead, SA 5015

Date of Submission: 31 January 2022

Version Number: 1



Report Submitted by: Advisor Environment - C&L (SA/NSW/NT)

I certify that to the best of my knowledge and ability all the information in this report is a true and accurate reflection of the regulatory monitoring performed.

Glossary

Term	Definition
$\mu\text{g}/\text{m}^3$	micrograms per cubic metre
mg/m^3	milligrams per cubic metre
m	metre
m^3	cubic metres
m^3/s	cubic metres per second
Nm^3	Gas volume in dry cubic metres at STP dry basis
Abbreviations	Definition
Air EPP	Environment Protection (Air Quality) Policy 2016
SA EPA	South Australian Environment Protection Authority
STP dry basis	Standard Temperature and Pressure (zero degrees Celsius and 101.3 kilo Pascals absolute)
TSP	Total Suspended Particulates
SPMP	Stack Particulate Management Plan

Monitoring Objective	<p>All stack particulate emissions events for the reporting quarter, where levels have exceeded the reporting thresholds:</p> <ul style="list-style-type: none"> • 100 mg/Nm³ (1 hour averaging period) on Kiln Stack 4A • 60 mg/Nm³ (1 hour averaging period) on Pre calciner Stack 4B <p>Particulate Emissions will be reported in a table format providing the following details:</p> <ul style="list-style-type: none"> • date, time and duration • the measured particulate concentration mg/Nm³ (STP-dry) • immediate actions taken to reduce particulate emissions • cause and corrective actions taken to prevent future reoccurrence
Monitoring Plan	<p>This monitoring report has been prepared in compliance with Stack Particulate Management Plan, approved 18 June 2018, by SA EPA.</p> <p>The Plan is available on the ABC Birkenhead Community Website: https://adelaidebrightoncommunity.com.au/</p>

One Hour Stack Particulate Reporting Events

4A Stack
 1 hr >
 100mg/Nm3
 Rolling 1hr
 average

No 1-hr reporting events for this reporting period

4B Stack
 1 hr >
 60mg/Nm3
 Rolling 1hr
 average

Date	Time start	Time finish	Duration (min)	Magnitude mg/Nm3	Cause	Immediate Actions Taken	Actions Taken to Prevent a Reoccurrence
9/10/2021	16:54	17:07	13	66.8	<p>A section of refractory lining spalled off the 3B Cyclone in the Calciner preheater, tripping the Calciner combustion system.</p> <p>For safety reasons, the blockage consisting of refractory and raw meal at 600C is cleared under negative pressure, using high pressure water lances to break up the refractory.</p> <p>The process of clearing the blockage creates variations in draft and particulate emission levels which are difficult to manage</p>	Blockage cleared	<p>This is a rare event.</p> <p>Maintain existing maintenance /inspection</p>
7/11/2021	8:15	9:10	55	92.3	<p>Mechanical failure of the water supply control valve for the 4B Conditioning Tower spray system, which resulted in a loss of water flow to the sprays.</p> <p>Valve failure occurred when 4B Raw Mill was off, which is when high water flow through the sprays is required to cool and condition the process gases to maintain effective ESP performance.</p>	Unable to restart 4B Mill so Calciner turned off to control emissions and valve repaired.	<p>This failure has not occurred before.</p> <p>Valve repaired - all mechanical working parts replaced.</p>

