



**Adelaide Brighton Cement Ltd**

an **ADBRI** company

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## QUARTERLY STACK PARTICULATE REPORT FOR BIRKENHEAD WORKS

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**COMPLIANCE DATE: 31/07/21 – Quarter 2, 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 July 2021**

**Version Number: 1**



Report Submitted by: Environmental Engineer

*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

<b>Term</b>	<b>Definition</b>
$\mu\text{g}/\text{m}^3$	micrograms per cubic metre
$\text{mg}/\text{m}^3$	milligrams per cubic metre
m	metre
$\text{m}^3$	cubic metres
$\text{m}^3/\text{s}$	cubic metres per second
$\text{Nm}^3$	Gas volume in dry cubic metres at STP dry basis
<b>Abbreviations</b>	<b>Definition</b>
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

<p><b>Monitoring Objective</b></p>	<p>All stack particulate emissions events for the reporting quarter, where levels have exceeded the reporting thresholds:</p> <ul style="list-style-type: none"> <li>• 100 mg/Nm<sup>3</sup> (1 hour averaging period) on Kiln Stack 4A</li> <li>• 60 mg/Nm<sup>3</sup> (1 hour averaging period) on Precalciner Stack 4B</li> </ul> <p>Particulate Emissions will be reported in a table format providing the following details:</p> <ul style="list-style-type: none"> <li>• date, time and duration</li> <li>• the measured particulate concentration mg/Nm<sup>3</sup> (STP-dry)</li> <li>• immediate actions taken to reduce particulate emissions</li> <li>• cause and corrective actions taken to prevent future reoccurrence</li> </ul>
<p><b>Monitoring Plan</b></p>	<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:  <a href="https://adelaidebrightoncommunity.com.au/">https://adelaidebrightoncommunity.com.au/</a></p>

## One Hour Stack Particulate Reporting Events

**4A Stack**  
**1 hr >**  
**100mg/Nm<sup>3</sup>**  
**Rolling 1hr**  
**average**

Date	Time start	Time finish	Duration (min)	Magnitude mg/Nm <sup>3</sup>	Cause	Immediate Actions Taken	Actions Taken to Prevent a Reoccurrence
31/05/2021	21:16	21:26	10	100.1	Automatic safety trip on the kiln, in response to a failure of the inlet temperature sensor on the Bypass ESP.	Replaced temperature sensor and restarted kiln	Maintain existing maintenance and inspection program
23/06/2021	11:16	14:16	180	232	Blockage in bypass system occurred during 4A Mill shutdown resulting in reduced flow, temperature and performance in the Bypass ESP.	Cleared Bypass system blockage	This was a rare event. Maintain existing cleaning program

**4B Stack**  
**1 hr >**  
**60mg/Nm<sup>3</sup>**  
**Rolling 1hr**  
**average**

Date	Time start	Time finish	Duration (min)	Magnitude mg/Nm <sup>3</sup>	Cause	Immediate Actions Taken	Actions Taken to Prevent a Reoccurrence
01/06/2021	6:18	6:35	17	65.1	Short term electrical instability in 4B ESP fields on start-up of the calciner following a kiln trip.	ESP field stabilised	Cause of Instability unknown
06/06/2021	12:16	13:01	45	73.2	4B Mill tripped (unforeseen sudden stop), upsetting 4B draft, resulting in a Calciner trip.	Trip required purge and restart of the Calciner.	Operate to Process Control Standards