



Adelaide Brighton Cement Ltd

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QUARTERLY STACK PARTICULATE REPORT FOR BIRKENHEAD WORKS

COMPLIANCE DATE: 30/04/23 – Quarter 1, 2023
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: 30 April 2023

Version Number: 1



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

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
ESP	Electrostatic Precipitator
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>Monitoring Objective</p>	<p>All stack particulate emissions events for the reporting quarter, where levels have exceeded the reporting thresholds:</p> <p>In line with the EPA licence issued on the 1/11/2022, the 1-hr reporting thresholds for stack particulate emission events was reduced as follows:</p> <ul style="list-style-type: none"> • from 100 to 80 mg/Nm³ (1 hour averaging period) on Kiln Stack 4A • from 60 to 50 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
<p>Monitoring Plan</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: https://adelaidebrightoncommunity.com.au/</p>

One Hour Stack Particulate Reporting Events

4A Stack
1 hr > 80 mg/Nm³
Rolling 1hr average

Date	Time start	Time finish	Duration (min)	Magnitude mg/Nm3	Cause	Immediate Actions Taken	Actions Taken to Prevent a Reoccurrence
25/03/2023	9:08	9:34	26	88.8	4A conditioning tower sprays did not effectively cool exhaust gases to set point when 4A Mill was turned off, reducing ESP efficiency.	4A Mill restarted to reduce particulate emissions	Maintenance rectified issue with conditioning sprays.

4B Stack
1 hr > 50mg/Nm³
Rolling 1hr average

Date	Time start	Time finish	Duration (min)	Magnitude mg/Nm3	Cause	Immediate Actions Taken	Actions Taken to Prevent a Reoccurrence
20/03/2023	7:12	7:22	10	54.8	4B conditioning sprays not started by operator when the Kiln tripped due to main drive motor cooling fan failure. Resulting in 4B ESP inlet temperature increase reducing efficiency of the ESP fields.	Sprays started in response to increase in particulates	Investigate automation of sprays to reduce potential for operator error