



Adelaide Brighton Cement Ltd

an **ADBRI** company

adelaidebrighton.com.au

Adelaide Brighton Cement Ltd
ABN 96 007 870 199
PO Box 77
Port Adelaide SA 5015
+61 8 8300 0300

QUARTERLY STACK PARTICULATE REPORT FOR BIRKENHEAD WORKS

COMPLIANCE DATE: 30/04/22 – Quarter 1, 2022
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 2022

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
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

Date	Time start	Time finish	Duration (min)	Magnitude mg/Nm3	Cause	Immediate Actions Taken	Actions Taken to Prevent a Reoccurrence
25/02/2022	13:04	13:49	45	103.5	Electrical trip on 4A ESP field 6 due to a loose wire reducing effectiveness of ESP.	Field 6 trip investigated and reset to reduce emissions	Maintain existing ESP maintenance program
2/03/2022	23:36	0:33	57	109	4A ESP field 6 faulty - loose wire, reducing ESP performance	Kiln shutdown to inspect and repair 4A ESP field 6	Maintain existing ESP maintenance program
5/03/2022	22:49	23:28	39	109.1	4A ESP F extractor screw jammed - hopper above the screw full and re entrainment of dust in process gas to 4A stack	Industrial Vacuum truck used to clean collected dust from hopper, to enable the jammed extractor screw to be repaired.	Extractor screw repaired.
6/03/2022	8:19	9:27	68	160.4	Vacuum truck operators cleaning the 4A ESP F extractor screw hopper to enable repair of the jammed screw left the access port open after cleaning introducing a flow disturbance affecting 4A ESP performance.	Access port closed and vacuum truck operators advised.	Extractor screw repaired.
10/03/2022	9:59	10:53	54	132	Loss of compressed air to the 4A Conditioning Tower sprays due to shutdown of water-cooled air compressors. Compressor shutdown, was due to a failure in the plant cooling water system due to a loose connection in the systems PLC.	Kiln was shutdown at 9:52 am to enable the electrical failure to be identified and rectified	Rare electrical fault and unlikely to reoccur

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
1/01/2022	10:25	10:39	14	70.1	Calciner tripped at 8.05 am due to a high positive draft on 4B Mill arising from dust fall back into 4B mill creating a blockage.	Clearing the blockage and purging the combustion system resulted in two 1 hr reporting events at 10:25 am and 11:58 am. The Calciner combustion system was restarted at 2.33pm	This is a rare event.
1/01/2022	11:58	12:50	52	74.6	Calciner tripped at 8.05 am due to a high positive draft on 4B Mill arising from dust fall back into 4B mill creating a blockage.	Clearing the blockage and purging the combustion system resulted in two 1 hr reporting events at 10:25 am and 11:58 am. The Calciner combustion system was restarted at 2.33pm	This is a rare event.
12/02/2022	11:49	13:49	100	118.2	Calciner start up after a false indication of high methane (natural gas) resulted in a safety trip of the Calciner and 4B electrostatic precipitator	Clearing the blockage and purging the combustion system resulted in 1 hr reporting event	This is a rare event.