

Schedule 5 -Notification Form

To be completed in the event of breach of Permit as required by Condition 4.3.1.

1. Complete section (a), (b) or (c) as relevant;
2. Sign and date the form
3. Scan and email or fax the form using the contact details below
4. Put signed copy in post and give copy to Environment Coordinator

Part A

Permit Number	EPR/ BL3986ID
Name of operator	Tarmac Cement & Lime Limited
Location of Regulated Facility	Aberthaw Works, East Aberthaw, Barry, CF62 3ZR
Time and date of the detection	03.06.2020 @ 12:00

(a) Notification for any malfunction, breakdown or failure of equipment, accident, or fugitive emission that could or is causing significant pollution

To be notified within 24 hours of detection

Date and time of the event	-
Reference or description of the location of the event	-
Description of where any release into the environment took place	-
Substances(s) potentially released	-
Best estimate of the quantity or rate of release of substances	-
Measures taken, or intended to be taken, to stop any emission	-
Description of the failure or accident.	-

(b) Notification requirements for the breach of a limit

To be notified within 24 hours of detection unless otherwise specified below

Emission point reference/ source	Emission from main stack (A1 Kiln Stack)
Parameter(s)	Breach of SO2 daily average emission limit. No impact on any other emissions or permit limits.
Limit	Daily average Permit ELV limit for SO2 is 400mg/Nm3
Measured value and uncertainty	SO2 emission reading of 518 mg/Nm3 (-20% confidence interval 414 mg/Nm3) at end of daily average for period - 12:00 on 2.6.2020 to 12:00 3.6.2020
Date and time of monitoring	12:00 on 2.6.2020 to 12:00 3.6.2020
Measures taken, or intended to be taken, to stop the emission	Failure of abatement system lime dosing pipe resulting in temporary loss of lime injection to the kiln exit gas leading to an increase in SO2 emissions during half hourly continuous monitoring periods from 5am

	– 9:39am after which pipe was replaced and SO2 levels returned to below limit. Failed pipework was detected at 4am on the 3.6.2020 – a call was put through from the Control Room to the shift supervisor and the pipework was replaced as quickly as possible – spares were present on site, shift supervisor had completed repairs within 3 hours approx. of failure. In the meantime the control team optimised performance on raw mill to extend scrub effect and the kiln feed was cut back to 80% to reduce input of sulphur material into process. Stopping the kiln was not considered to be an option as this would have potentially caused alternative emission issues unrelated to this one and it would be unlikely to have resolved the issue in hand. Root cause is input of higher SO3 limestone raw material from quarry leading to an increased SO2 on the kiln which required lime abatement to be implemented - which subsequently failed. A root cause analysis will be undertaken following the breach to identify ways of avoiding a reoccurrence of the failure and submitted in Part B of this report.
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Time periods for notification following detection of a breach of a limit

Parameter	Notification period
24 hour - continuous monitoring (half hourly recording) showed breach after daily average. Informed NRW Officer Tony Leakey at 10:30am prior to end of 12:00-12:00 period for 3.6.2020.	Immediately following end of 24 average period

(c) Notification requirements for the detection of any significant adverse environmental effect

To be notified within 24 hours of detection

Description of where the effect on the environment was detected	-
Substances(s) detected	-
Concentrations of substances detected	-
Date of monitoring/sampling	-

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	A blockage in the pipework caused high back pressure to build, which then caused the pipe to blow off the blower feeder outlet, which caused the system to trip ceasing the dosing process. This pipework feeds the lime to the kiln exit gas which meant SO₂ levels in the stack increased. The pipe, which is approx. 50m in length – 30m of which is positioned horizontally and 20m vertically connected a curved coupling. Following the incident, the full length of the pipework was removed (in is constituent 30m and 20m sections) and investigations were undertaken by the Kiln and Fuels Manager. He discovered a blockage in the horizontal section at the blower end of the pipe. This was the reason for the restriction in air flow and feed along the pipe which then lead to the build-up of pressure and subsequent blow out. The working theory is that the cause of the blockage may have been due to a small intake of atmospheric air at the blower end, with its associated moisture, which may have caused a reaction with the lime material passing through the pipe causing it to agglomerate inside the pipe, plugging the line creating a build-up of pressure which lead to it coming away from its connector (which is clamped in place at the blower outlet using a heavy duty jubilee clip). The pipe had been disconnected briefly from the blower the previous day as a pre-emptive measure as we were aware high sulphur rock feed was due to be entering the process presently. As such, the team knew they would be increasing lime dosing so wanted to be sure the dosing line was clear. It is possible that, following the line check, the pipe was reattached but the clip may not have been tightened sufficiently allowing air intake – this is an assumption however as the locality of the blockage near the blower connector. This type of line failure is unprecedented.
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	Following this investigating, guidance has been issued to shift teams to make them aware of the suspected cause of the blockage and advice in 'troubleshooting; to assist them to identify air flow trend issues and the use of more robust couplings and associated tools to ensure air intake is prevented in the future.
The dates of any unauthorised emissions from the regulated facility in the preceding 24 months	Breach of SO₂ on 10.04.2019, Breach of NH₃ on 11.12.08.2018

Name	Georgina Taubman
Date	17.6.2020
Post	Health, Safety & Environmental Business Partner
Signatory authorised to sign on behalf of Tarmac Cement and Lime Ltd.	

Incident notification: 0800 807060 (Freephone, 24 hour service)

Send completed form to:

Natural Resources Wales
Rivers House
St. Mellons Business Park
Cardiff
CF30EY

Fax Number: 029 20362095

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