



Date: 29.03.2018

Subject: Hope works Environment permit - EPR/BP3731VJ - Progress report for permit improvement condition IP 16

Dear Leonie

Further to our meeting on 27th March, at which we presented more detailed information relating to our approach to SO₂ compliance, the following is intended as a summary output to satisfy the specific requirements of improvement program condition IP16. In relation to our current performance against the current BAT-AEL, our cement kiln SO₂ daily averages are as follows:

SO₂ daily average emissions 2017/18			
Kiln One	% <1760 mg/m³	% <850 mg/m³	% <400 mg/m³
January 2017	100	100	44
February 2017	100	100	60
March 2017	100	100	0
April 2017	100	100	30
May 2017	100	93	0
June 2017	100	100	53
July 2017	100	100	35
August 2017	100	100	48
September 2017	100	100	30
October 2017	100	100	39
November 2017	100	100	37
December 2017	100	100	65
January 2018	100	100	83
February 2018	100	100	71
March 2018 MTD	100	100	100



SO₂ daily average emissions 2017/18			
Kiln Two	%<1760 mg/m³	% <850 mg/m³	% <400 mg/m³
January 2017	Shutdown	Shutdown	Shutdown
February 2017	100	100	44
March 2017	100	100	3
April 2017	100	100	40
May 2017	100	100	10
June 2017	100	100	50
July 2017	100	100	52
August 2017	100	100	70
September 2017	100	100	72
October 2017	100	100	48
November 2017	100	100	53
December 2017	100	100	86
January 2018	100	100	88
February 2018	100	100	85
March 2018 MTD	100	100	100

Update 08/06/2018 - In terms of our progress towards achieving planning permission and installing the necessary infrastructure for increasing shale substitution, we have:

1. Completed our evaluation of multiple technologies, and at this time it is highly unlikely that there will be a need for the off-site drying of raw materials however, this option could still be relevant in light of recent changes to our business structure.
2. Conducted a concept study of equipment and rail feasibility for the importation of shale substitute including cost estimation.
3. Completed a detailed material study on conditioned PFA including dust extinguishment content and dust lift off, as a function of moisture content.
4. Identified areas on site for the installation of new equipment and commenced pre-planning application activities, with the application scheduled for 01/09/2018. It is expected that the application will take circa 12 months for determination.
5. Commissioned an extended Phase 1 habitat survey for the identified areas, which has commenced.
6. Identified the requirement for an EPR variation due to the predicted timeline for planning and subsequent installation and commissioning. This variation will be submitted before 31/08/2018.



% PFA Addition to raw mix 2017/18	
Month	%
January 2017	8.7
February 2017	5.3
March 2017	0.4
April 2017	2.8
May 2017	3.3
June 2017	3.9
July 2017	5.7
August 2017	4.8
September 2017	4.0
October 2017	4.6
November 2017	5.8
December 2017	7.1
2017 Annual Average	4.6
January 2018	3.6
February 2018	3.1

The final level of substitution of PFA in our raw mix for 2017 was 4.6%, which was less than the target of 8%. This substitution level continues to be driven by limited availability due to rapidly changing electricity generation fuel mix in the UK.

As mentioned previously, we have been using other materials to increase the level of shale substitution, such as conditioned (stockpiled) PFA. These materials also have issues in terms of availability and logistics. Without these additional materials, the level of substitution of PFA in our raw mix would only be 2.9% for 2017.

Yours sincerely

James Breen
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