DOC19/411951-2

Ms Sally Munk
Principal Planning Officer
Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Dear Ms Munk

DA 401-11-2002-i MOD 11 - Use of Non-Standard Fuels – HiCal50 - Carbon Anode Material
Environment Protection Licence 1698 – Boral Cement Berrima

I am writing in response to your email and attached Statement of Environmental Effects (SEE) dated 16 May 2019 to the Environment Protection Authority (EPA) seeking comment on the above development modification. This modification relates to the use of carbon anode material (HiCal50) in the Number 6 Cement Kiln at Boral Cement Limited's (Boral) Berrima plant.

The EPA has undertaken a review of the SEE and advises that additional information is required to describe the proposal, assess implications on potential changes to air emissions, and to advise if additional detailed assessment is warranted. The EPA provides comments in the attachment to this letter **(Attachment A)** to assist the Department of Planning and Environment (DPE) in the assessment of the proposal. These comments relate to:

1. A detailed process description, including temperature profiles and processing rates production process details and potential air emissions impacts
2. Composition and variability of HiCal50
3. Continuous monitoring data during start-up/shutdown periods
4. Additional analysis/discussion on potential changes to air emissions.

The EPA is available to meet with Boral and their air quality consultant to discuss the additional information requirements listed above, if required.

If you have questions regarding the above, please phone the contact officer on (02) 4224 4100.

Yours sincerely

06/06/19

PETER BLOEM
Manager Regional Operations Illawarra
Environment Protection Authority

Attachment: Attachment A
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ATTACHMENT A

EPA REQUEST FOR ADDITIONAL INFORMATION

1. A detailed process description, including temperature profiles and processing rates

A detailed process description has not been provided. A process description is required to better understand potential changes in air emissions associated with the proposal given potential changes in temperature, flow and fuel load profiles through plant and equipment during start-up/shutdown conditions.

EPA also notes that there is inconsistent information on the proposed processing rate of HiCal50, for example:

- The SEE advises: "*The Hical50 product is proposed to be consumed in Kiln 6 at a rate of 1 tph, and less than 10,000 t per year, and blended with coal at a ratio of 96% coal and 4% Hical50*"
- The air assessment advises that coal feed to the kiln during Kiln 6 stops less than 12 hours in duration is maintained at a rate of ~2-3 tonnes per hour. On the basis that 4 per cent of this feed is HiCal50 then a consumption rate of 80-120 kg/hr is estimated, which is substantially less than the 1 tph stated in the SEE. Additionally, the air assessment advises that up to 4 tonnes per hour of coal/Hical50 blend could be utilised during start-up/shutdown.

EPA request the proponent provide:

- A detailed process description of the plant and equipment, from the point of fuel preparation and blending to air emission discharge point(s)
- A description of the pre-heater/pre-heater strings where lower temperatures could exist under start-up/shut down conditions (including the configuration and operation of the preheater, origin of the pre-heater air, potential contaminants and reactions in the pre-heater air and discharge of the pre-heater air)
- Temperature profiles through the processing kiln and pre-heater/pre-heater strings during start-up/shutdown conditions and comparison against temperature profiles during normal operation
- Proposed processing rate of Coal/HiCal50 blend, and proposed processing rate of HiCal50. As a minimum, hourly processing rates for startup, shutdown and normal operation should be provided and
- Evaluation of process and engineering constraints preventing isolation of HiCal50 fuel feed to the Kiln.

2. Composition and variability of HiCal50

The assessment information provides a comparison of coal fuel composition and the proposed Coal-HiCal50 Blend (96 per cent coal, 4 per cent HiCal50). However, the composition of HiCal50 has not been provided, including any variability in composition of HiCal50. Additionally, the compositional information provided does not cover other potential constituents such as sulfur, and precursors to dioxin and furan formation (chlorine and fluorine). EPA request the proponent provide proposed composition of HiCal50 (including but not limited to, sulfur, speciated metals, chlorine and fluorine) and any potential variability in HiCal50 fuel composition.

3. Continuous monitoring data during start-up/shutdown periods

The assessment information provides a comparison of Kiln 6 emission monitoring data for coal, and coal/HiCal50 blend, however it is only provided for normal operations. Continuous monitoring should be available for start-up/shutdown conditions and could aid in the assessment and interpretation of the proposal. An analysis of data from Kiln 6 continuous monitoring should be undertaken, specifically for periods for start-up/shutdown. Additionally, the continuous monitoring requirements under the Environment Protection Licence as a result of the solid waste derived fuel project could be useful in understanding potential changes in air emissions during start-up/shutdown, when it is analysed in conjunction with fuel composition at the time of monitoring, and the proposed fuel composition.

EPA request the proponent provide:

- Analysis and discussion on available continuous monitoring data during start-up/shutdown conditions, including but not limited to
  a. Available pollutant concentrations, specifically VOCs and particulates
  b. Discharge parameters, specifically temperature and flowrate.

4. Additional analysis/discussion on potential changes to air emissions

EPA considers that the proponent should provide additional discussion/analysis on the potential for changes in air emissions with consideration of the above requested additional information.