BULGA
OPEN CUT

GLENCORE

19th May 2021

Tegan Cole
NSW Department of Planning, Industry and Environment

RFI-16207477

Dear Tegan,

Please find our response below explaining why alternative methods to the sigma theta method under the Section D1.1 of the *Noise Policy for Industry 2017 (NPFI)* are not feasible.

1) *direct measurement of temperature lapse rate over a height interval range of 50 metres.*

This method is not feasible as the cost to purchase and install a 50m tower is approximately $200K. We do not currently have a meteorological station onsite capable of measuring temperature lapse rate over a height of 50m.

We also minimise the visual impact from our operation on the surrounding community. Installing a 50m tower out of pit would likely be visually intrusive for a number of properties.

2) *Pasquill-Gifford stability classification scheme and Turner scheme*

This method is not feasible as our onsite weather stations are not capable of measuring cloud cover and it is difficult to estimate cloud cover through individual observations at night during attended compliance monitoring. Estimating cloud cover through individual observations is also subjective and more prone to measurement error.

It is noted in Section D1.1 of the *Noise Policy for Industry 2017 (NPFI)* that *'If representative cloud data is not available from a nearby station, it is advisable to use the sigma theta method outlined below instead to determine stability categories. This is because the numerous individual observations needed to measure cloud cover for the Pasquill-Gifford method are often not feasible.'*

The sigma theta method was used to predict noise impacts in the Noise Impact Assessment for SSD4960 Modification 3 for Bulga Open Cut and DA 376-8-2003 Modification 7 for Bulga Underground Operations. Using this method to assess compliance with Development Consent noise criteria provides consistency.

Kind regards,

Scott

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