

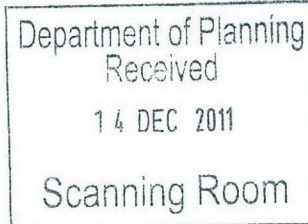


**Office of
Environment
& Heritage**



Our reference: LIC07/2213-05; DOC11/55604
Contact: Jason Price 02 6969 0700

The Environmental Planning Officer
Major Development Assessment
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001



Dear Ms Ivancevic

Re Rasp Mine Broken Hill – modification to Project Approval 07_0018

I refer to your electronic mail dated 6 December 2011 to the Environment Protection Authority seeking our comments on the application by Broken Hill Operations Pty Ltd to modify Project Approval 07_0018 for the Rasp Mine Broken Hill by relocating the ventilation shaft.

We have reviewed the information submitted and based on our assessment of this information (Attachment 'A') we have determined that we are able to support the proposed modification.

If the Department of Planning and Infrastructure (DoPI) approves the modification, the operational conditions outlined in our response to DoPI for the Preferred Project Report for the Rasp Mine dated 4 November 2010 remain unchanged.

If you have any further enquiries about the matter please contact Jason Price by telephoning 02 6969 0700.

Yours sincerely

DARREN WALLETT
Head, Griffith Unit
Environment Protection Authority

cc Ms G Wilson
Broken Hill Operations Pty Ltd
Level 4, 100 Mount Street
NORTH SYDNEY NSW 2060

Attachment 'A'

Assessment of Air Quality (AQA)

The AQA has generally been conducted in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (Approved Methods) and provides adequate information to determine acceptable approval conditions for the project.

The AQA generally satisfies the requirements outlined in the Approved Methods. The AQA has adequately assessed the air impacts caused by the relocation of, and change to, the ventilation stack. The previously recommended Conditions of Approval for the project in addition to the Revised Statement of Commitments for the Project are adequate to address air impacts associated with this change in operating scenario for the project. The Conditions of Approval include ventilation shaft emission monitoring during blasting operations for the air pollutants of concern: nitrogen dioxide (NO₂), volatile organic compounds, and total solid particles (TSP) and type 1 and type 2 substances. This monitoring will confirm the emission concentrations of these air pollutants are consistent with those used in the dispersion model, and consequently that the impact of air pollutants emitted from the stack are acceptable and consistent with dispersion model predictions.

- **Air quality impacts caused by the relocation of the ventilation shaft are minimal.**

Air dispersion modelling was undertaken to assist in the assessment of air impacts caused by the relocation of the ventilation shaft and increased fan capacity. The dispersion model parameters were consistent with those previously used in the environmental assessment and preferred project report, apart from the location and volumetric flowrate of the ventilation shaft discharge.

Nitrogen dioxide (NO₂), volatile organic compounds (VOCs), sulphur dioxide (SO₂), carbon monoxide (CO) and polycyclic aromatic hydrocarbons (PAHs) were modelled as being exclusively attributed to the ventilation stack source, as they result from fossil fuel combustion of underground plant and equipment and emissions associated with blasting. Particulate (PM₁₀, PM_{2.5} and total suspended particles) and lead emissions from the ventilation shaft make only a minor contribution to total site impacts. Consequently changes associated with lead and particulate emissions from the ventilation shaft were evaluated in isolation from other site sources.

The AQA predicts the magnitude of impact for all pollutants will be essentially the same between the original and relocated ventilation shaft scenarios. However, the location of most affected sensitive receptors is predicted to change from an area to the south-east of the site boundary to an area close to the proposed shaft location along the north-west of the site boundary.

The impacts of ventilation shaft emissions on neighbouring properties and residences are predicted to be very small and well below project criteria for all pollutants except NO₂. Ventilation shaft emissions are predicted to contribute up to 80% (max. 197 µg/m³) of the 1-hour impact assessment criterion of 246 µg/m³ at the most affected receptor. This magnitude of impact is consistent with that predicted in the original scenario.

Predicted annual average NO₂ concentrations are very low, below 3% of the assessment criterion of 62 µg/m³, and are consistent with the magnitude predicted for the original modelling scenario.

- **Emissions for construction of the ventilation shaft were not assessed however proposed control measures are adequate to prevent impacts.**

The AQA did not include an assessment of emissions created by earthworks associated with the construction of the ventilation shaft. The earthworks will take approximately four weeks and it is proposed to use a water truck continuously to ensure the potential for dust emissions from the area are adequately controlled. Consequently, although there is potential for increased fugitive particle emissions during these works, adequate mitigation measures are proposed to minimise the impacts from this temporary source.

Assessment of Construction Noise

Construction noise was not assessed for the relocation of the ventilation shaft.

The majority of works for the shaft will be conducted underground and the shaft will be constructed from the base upwards. Surface works for this proposal are limited to the installation of a pre-fabricated duct/diffuser and construction of an earth embankment around the duct.

Construction hours have been restricted to seven (7) days a week between 7.00am and 7.00pm and based on similar works assessed in the original Environmental Assessment and Preferred Project Report it is expected that construction noise limits will be met for these works.

Construction noise limits include a 40dB(A) Leq(15 min) limit during standard construction hours and a limit of 35dB(A) Leq(15 min) outside standard construction hours.

Assessment of Operational Noise

The operational noise assessment for the proposed relocated ventilation shaft was carried out generally as described in the *NSW Industrial Noise Policy* (EPA 2000) and is satisfactory. The assessment is based upon previous noise impact assessments for the Rasp Mine and impacts from this proposal are measured against the identified project specific noise criteria.

The noise source from the shaft is assessed as the primary Howden ventilation fans located in a purpose built chamber 400 metres below ground and 160 metres from the ventilation rise. Advice provided is that the noise associated with the expansion of the exhaust air at the duct exit point will be mitigated through a diffuser and the earth embankment.

The predicted operational noise impacts from the fans are assessed to be below the project specific noise limits. The project noise limits will be included within and monitored through Environment Protection Licence No 12559 attached to the Rasp Mine.

The assessment concludes that the noise impact from the relocated ventilation shaft does not materially alter results from previous assessments.