



Department of Economic Development, Jobs, Transport & Resources

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Ref: Alcoa

Mr Chris Rolland
Mine Manager Anglesea Mine
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Coalmine Road / Camp Road
ANGLESEA VICTORIA 3230

Dear Mr Rolland

Review of Interim Fire Mitigation Measures

Thank you for your email of 10 July 2015 in response to my request for advice about the interim fire measures Alcoa intends to apply prior to closure on 31 August 2015. The documents you supplied with your email were:

- 'Anglesea Mine Coal Coverage Project Review Technical Review' prepared for Alcoa by Mining One (Mining One Report);
- Alcoa's Anglesea mine coal coverage project review (Alcoa Project Review)
- Alcoa's Coal Fire Risk Shutdown Assessment 10 July 2015 (Alcoa Risk Assessment)

I understand that the three documents in combination aim to provide a mine fire risk assessment and controls required ahead and after Alcoa's shut down on 31 August 2015.

I have reviewed the documents and have identified issues and gaps in the information which I require you to address prior to 21 August 2015. These are outlined below.

Mining One Report

Fire Risk Objective

The Mining One Report does not provide a clear statement of risk management objective(s) and clear options to meet that objective. Instead it comments on the effectiveness of controls proposed by Alcoa without clarifying the objective(s) of control that is expected to be achieved. The Mining One Report needs to state the fire risk objective as a basis for assessing the suitability of fire risk control measures.

Fire Risk Control Standards

The Mining One Report indicates that an appropriate fire risk management of the site for a period of 12 months will be:

- a. for the 'flat lying' coal, the Alcoa strategy of covering it is appropriate; and
- b. for the vertical faces either encapsulation with a five metre buffer or a monitoring program with appropriate fire suppression capability and action plans in place.

Flat lying coal

In regard to the 'flat lying' coal, the Mining One Report specifies:

- a. Overburden capping to a minimum depth of one metre
- b. Clay content of overburden to be at least 10%
- c. Overburden to be compacted
- d. The capping strategy is appropriate for up to 12 months
- e. The overburden capping to be monitored, particularly immediately after significant rain events.

The Mining One Report recommendations do not specify how much erosion of the cap is tolerable before remediation work is required. However it does state that the usual approach to capping is overburden to a depth of between one and five metres. This would suggest that a one metre depth is a 'bare' minimum. The tolerable level for erosion and period needs to be clarified. Finally, while Mining One state that the overburden capping must be compacted it does not provide a standard for the level of compaction that must be achieved.

Vertical coal faces

The approach to managing the fire risk of the vertical faces needs to be assessed against a fire risk control objective. Mining One suggests that covering the vertical faces with at least one metre of overburden 'will be difficult'. Consequently it could be inferred that Mining One is accepting a lesser standard (than it is requiring for the 'flat lying' coal) simply on the basis of convenience.

Alcoa Project Review

The Alcoa Project Review provides a response to the Mining One Report recommendations. I request that you revise this review to respond to any revisions that are made to the Mining One Report after consideration of my comments above.

The rehabilitation of the site is likely to take considerably longer than 12 months following site closure. The Mining One Report states that its fire risk control recommendations are appropriate for up to 12 months. Alcoa needs to state what the risk strategy and controls will be beyond 12 months, until rehabilitation of the site has been completed. Mining One state that vegetation growing on the cap could lead to root penetration and admission of oxygen to the coal. Alcoa will need to specify standards for vegetation control if the strategy is to apply beyond 12 months.

In regard to the review provided with your email, please consider the following comments.

Recommendation 2.

'Coverage of horizontally exposed coal will be completed, where possible.....' Please clarify what will be the approach where cover is not possible.

Recommendation 4.

There is no evidence in the Alcoa project or the Mining One Report to verify whether the approach to compaction outlined here is adequate.

Alcoa Risk Assessment

The risk assessment refers to covering the horizontal coal surfaces with 'approximately' one metre of overburden. This is inconsistent with the Mining One Report and the Alcoa Project Review which both specify that the overburden must be at least one metre.

The risk assessment needs to address all other risks that are not currently dealt with in the Endorsed Workplan, as well as fire. Please provide a comprehensive risk assessment for the site prior to the 21 August 2015.

Technical Specifications for implementing and monitoring Fire Risk Management

Subject to any revisions to the Mining One Report, Alcoa has not provided details on how it will give operational effect to and verify that the fire risk mitigation undertaken will comply with the standards set out in the Mining One Report. I require that you specify how the standards will be operationalised and the records to be maintained to substantiate compliance with the standard of overburden capping of the horizontal and vertical coal. Such records must show the depth of cover achieved across the site, the level of compaction and the clay content of the cover.

Implementation Plan

In order to be satisfied that the risk to public safety, the environment, land, property and infrastructure is minimised, I request that you provide an implementation plan that addresses the gaps and recommendations in the above reports, including any actions to address fire risks and any other risks that are not already incorporated in the Work Plan and demonstrates how the site will be managed and monitored after shutdown.

I require this information as soon as possible, but no later than 21 August 2015.

I would be pleased to meet with you to clarify any of the matters raised in this letter.

Yours sincerely



John Mitas

General Manager, Earth Resources Operations

27/7/2015