



Our reference: EF13/2664
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Ms Phillipa Duncan
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Department of Planning and Environment
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Dear Ms Duncan

Dargues Gold Mine Project MOD 3 (MP 10_0054) Response to Submissions

I refer to the Department of Planning and Environment (DPE) email of 1 December 2015 advising that Big Island Mining Pty Ltd (the applicant) has submitted its Response To Submissions (RTS) in relation to the Dargues Gold Project MOD 3. The RTS is Big Island Mining Pty Ltd (the "applicant") response to the submissions made by stakeholders on the Environment Assessment (EA) for the Dargues Gold Project MOD 3 which was placed on public exhibition from 15 July 2015 to 26 August 2015.

I also refer to the Environment Protection Authority (EPA) correspondence dated 26 August 2015 and submission report on the publicly exhibited EA dated 27 August 2015.

The applicant has amended the modification request and is no longer seeking approval to use cyanide for processing on the site or to change the design of the approved Tailings Storage Facility (TSF). The amended modification request involves an increase in the total ore extracted over the life of the project; construction and use of the eastern waste rock emplacement; and construction and use of a vehicle crossing over Spring Creek.

The EPA has considered the applicants modification request and reviewed the RTS and identified that it does not adequately address all of the issues that the EPA raised in its submission report. The EPA has outlined the key deficiencies below and provided further details on the deficiencies in Attachment 1.

The amended modification request seeks to increase the approved maximum ore extraction from 1.2 to 1.6 million tonnes over the life of the project. The approved TSF has been designed to store approximately 900,000 cubic meters of tailings material on the basis that 1.2 million tonnes of ore would be extracted over the life of the project. It is unclear from the RTS whether the approved size of the TSF will be sufficient to store the additional tailings generated by an increase in ore extraction.

The RTS does not adequately account for the changes in water balance as a result of the modification request including the operational procedures that the applicant will implement to ensure that best practicable measures are taken to protect the environment.

The RTS has not adopted the principles of the regulatory framework for water pollution in NSW, and the EPA considers that this places the applicant at regulatory risk. Section 3.6.2 of the RTS demonstrates a

misunderstanding of the requirements of s120 of the *Protection of the Environment Operations Act 1997* (POEO Act). It is a 'strict liability offence' for a person to pollute waters or to cause or permit any waters to be polluted under s120.

The applicant has not adopted the water quality standards that the EPA has prescribed for sediment and erosion control nor has it alternatively provided information to demonstrate that a different standard should be applied. A common theme throughout the RTS is that the proponent makes assertions without providing supporting evidence or assessment.

The EPA is unable to provide advice on recommended conditions based on the information provided by the applicant. The EPA notes that if the project is approved the EPA may need to develop Environment Protection Licence conditions to ensure that licensed activities are given an appropriate level of regulation based on the environmental risk of the activity.

The EPA has previously held discussions with the project consultant and the applicant to explain the EPA's essential information requirements and the application of the POEO Act to activities that are undertaken at the premises. The EPA considers that further discussions are required with the applicant and DPE to ensure that the EPA's requirements are adequately addressed and so that the EPA can recommend conditions to DPE.

If you have any queries or wish to discuss this matter further, please contact Matthew Rizzuto, on (02) 62297002 or queanbeyan@epa.nsw.gov.au.

Yours sincerely



16-12-15

MATTHEW RIZZUTO
Head of Operations, South East Region
Environment Protection Authority

ATTACHMENT A

Environment Protection Authority comments on Big Island Mining Pty Ltd "Response to Submissions for the Dargues Gold Mine Amended Modification Request (Modification 3 MP10_0054)"

Climate and rainfall data

Big Island Mining Pty Ltd (the "applicant") Response To Submissions (RTS) addresses some of the concerns raised by the EPA's submission by making a commitment to use the latest rainfall averages from both the Majors Creek and Braidwood weather stations during the final design of the TSF. However the RTS does not make the same commitment to using the latest rainfall averages from the Braidwood and Majors Creek stations based on whichever dataset provides the worst case scenario to design sediment basins, process water dam and other all water pollution structures.

Whole of site water management

The RTS does not provide an appropriate level of detail on whole of site water management as requested by the EPA. In order to address this issue the EPA requires the applicant to prepare an integrated water management plan that addresses the matters that the EPA raised in its submission.

Water discharge, ambient water quality assessment and design standards

The RTS does not adequately address any of the issues that the EPA raised in its submission. The data and supporting documents that underpin modelling and assumptions to derive final discharge numbers must be provided to demonstrate that the discharge number will maintain or improve the environmental values of the receiving waters.

It is clear from the RTS that the applicant has not adopted the water quality standards that the EPA has prescribed, particularly in relation to sediment and erosion control. It is an offence for a person to pollute waters or to cause or permit any waters to be polluted under Section 120 of the *Protection of the Environment Operations Act 1997*. Section 120 is a 'strict liability offence'. Section 122 permits a defence against s120 if the water pollution was regulated by an environment protection licence and the conditions of the licence were not contravened during the pollution of waters.

The RTS demonstrates that there is still some confusion for the applicant regarding the requirements of s120. The EPA considers that the RTS does not adopt the principles of the regulatory framework for water pollution in NSW and the EPA considers that this places the applicant at regulatory risk.

In order to address these issues the applicant should provide the information that the EPA requested in its submission.

Groundwater

The EA and the RTS do not provide information to demonstrate that the potential impacts of the proposal on the environmental values of groundwater and groundwater dependent ecosystems, in particular from the tailings storage facility, the process water dams, the eastern waste rock emplacement, the tailings storage facility seepage dam and the eastern waste rock emplacement leachate collection dams. In order to address these issues the applicant should provide the information that the EPA requested in its submission.

Design capacity in comparison to the approved tailings storage facility

The applicant has not provided the requested information to demonstrate that the water from the eastern waste rock emplacement sediment basin that will be pumped to the tailings storage facility has been accounted for in the modelling. In order to address this issue the applicant should provide the information that the EPA requested in its submission.

Construction time and pollution control design

The RTS does not demonstrate that the sediment and erosion control standards applied, including sediment basin sizing, standard and discharge criteria will not protect the downstream environment from sediment discharge. In order to address this issue the applicant should provide the information that the EPA requested in its submission.

Pond recovery time

The applicant has not provided adequate information to demonstrate how pond recovery time will be managed within an appropriate timeframe. The EPA requires a whole of site water balance to be able determine whether the proposed pond recovery time can be met.

Appendix 7 – SEEC surface water report

The applicants RTS does not address any of the sediment and erosion control issues that the EPA outlined in relation to the Appendix 7 of the Environmental Assessment.

Pollution controls are not designed to the standard that the EPA has previously prescribed and the applicant has not adequately demonstrated that a different criteria should be used. In order to address these issues the applicant should provide the information that the EPA requested in its submission.

Control of seepage

The RTS does not address the issues that the EPA has raised regarding the consequences of seepage from the Tailings Storage Facility. In order to address this issue the applicant should provide the information that the EPA requested in its submission.

Process water pond

The RTS does not adequately address any of the issues that the EPA raised in its submission. In order to address this issue the EPA requires the proposed sizing and design criteria of the process water pond. The EPA also requires a whole of site water balance that includes the operation and management of the process water pond.

It is unclear from the information provided in the RTS whether the applicant intends to achieve the appropriate depth of the process water pond lining. In order to address this issue the applicant should provide the information that the EPA requested in its submission.

Water balance changes arising from modification

The RTS addresses some of the concerns raised by the EPA by making a commitment to use the latest rainfall averages from both the Majors Creek and Braidwood stations during the final design of the TSF. However the document does not make the same commitment to using the latest rainfall averages from the Braidwood and Majors Creek stations based on whichever dataset provides the worst case scenario to design sediment basins and other water pollution structures.

Eastern waste rock emplacement

The RTS does not adequately address any of the issues that the EPA raised in its submission. The RTS has not provided further information on the likely composition of the waste rock to be placed in the Eastern Waste Rock Emplacement.

The proponent has not provided information to confirm that the performance criteria of a 1 in 20 year 48 hour rainfall capacity for the sediment basin associated with the Eastern Waste rock Emplacement can be achieved. In order to address these issues the applicant should provide the information that the EPA requested in its submission.

Air impacts

The EPA notes that the emission of hydrogen cyanide is no longer relevant.

The EPA does not intend to propose emissions criteria more stringent than those referenced in the *Protection of the Environment (Clean Air) Regulation 2010*, however, to date the proponent has not provided information on the specifications of plant items and associated pollution controls that will be installed (e.g. the gold furnace and scrubber) or the type and quantity of emissions that might be expected from the operation.

The EPA requires the specific information that would result from an air impact assessment prepared in accordance with the document *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (DECC, 2005) to be in a position to authorise specific EPA licence conditions, related discharge limits and monitoring requirements.

The EPA acknowledge the proponents previous commitment that

"...the Company would undertake validation tests during construction of the facility to ensure that the criteria identified in Table 7 are achieved under operational conditions. Information associated with that test work would be presented in an Air Quality Impact Assessment and provided to Office of Environment and Heritage [now EPA] prior to inclusion of the facility on the Environmental Protection Licence for the Project and prior to final commissioning of the facility." (Air Quality and GHG Management Plan, Document No. DAR-HSE-PE-QU-PLN-5904, p16, Revision 3, 02/12/2013)

In this regard, the EPA does not support modification to condition 3 (15) of MP10_0054 by removing the following words *"any pollutant limits in the EPL set after further assessment of the potential air quality impacts associated with the gold smelting process (refer to Condition 17 below)"* as: it is unclear why the proponent is proposing to remove that condition; The condition remains consistent with the proponents previous commitments; and The condition affirms the proponents obligation to undertake an air impact assessment to inform the preparation of appropriate licence conditions.

