



Reference : DOC17/613706
Date : 19 December 2017
Contact : Helen Smith, 02 6883 5374

Rose-Anne Hawkeswood
Senior Planning Officer
NSW Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Dear Ms Hawkeswood

Sunrise Mine Modification 4

I refer to the Environmental Assessment ("EA") and accompanying information provided to the Environment Protection Authority ("EPA") on 28 November 2017 for the Sunrise Mine (formerly the Syerston Mine) Modification 4. The EPA understands that Modification 4 proposes changes to the approved processing methods, mine layout and water infrastructure as previously approved under DA 374-11-00.

The EPA has reviewed the information in the EA and has determined that it is able to support the modified proposal, subject to the proponent addressing additional information requirements outlined below and in **Attachment A**.

Additional information is required regarding the proposed impacts upon and measures to protect surface water and groundwater from pollution. Specifically, the EA does not provide adequate information to characterise the water pollution risks and consider potential impacts to receiving waterways. Further information is required in relation to:

- Identify the location and characterise pollutants in any water discharge points;
- Assess the potential impact of discharges on receiving waters; and
- Consider measures to avoid, minimise pollution and mitigate potential impacts.

Additional information is also required regarding the underdrainage and seepage collection system of the Tailing Storage Facility ("TSF"). Further information is required in relation to:

- Clarification of the location of the interception drains being below or above the clay liner of the TSF;
- Confirm the seepage into the interception drains will not interfere with the functionality of the TSF's clay liner;
- Clarification of the depth and permeability of the proposed clay liner beneath the TSF's seepage collection sumps;
- Clarification of the number and location of the seepage collection sumps; and
- Clarification of where seepage collected in the sumps is being pumped to including accounting for water movement in the modified water supply schematic.

The EPA also notes that any seepage from the TSF's underdrainage and seepage collection system is proposed to be pumped to the TSF decant pond or the evaporation pond. The applicant should consider the appropriateness of pumping any seepage to these structures as these would also need to be lined.

The EPA notes that Modification 4 assesses noise impacts under F stability category meteorological conditions. The EPA can support the modification based on the predicted levels for noise and blasting, with the incorporation of mitigation measures, as described in the noise and blasting assessment.

The EPA recommends that the proponent be required to provide additional information specified above and in Attachment A and that the EPA is provided with a further opportunity to review this information before the project proceeds to the determination stage.

PO Box 2111 Dubbo NSW 2830
Level 1, 52 Wingewarra Street, Dubbo NSW 2830
Tel: (02) 6883 5330 Fax: (02) 6884 8675
ABN 43 692 285 758
www.epa.nsw.gov.au
central.west@epa.nsw.gov.au



The EPA also notes that the proponent proposes to prepare an Air Quality Management Plan to include management measures to manage dust and prevent off-site impacts. This should be incorporated as a condition of consent.

The EPA notes that the proposal will require an Environmental Protection Licence pursuant to the *Protection of the Environment Operations Act 1997* to operate. The proponent will need to make a separate application to the EPA to obtain this licence once development project approval is granted.

If you have any questions, or wish to discuss this matter further please contact Helen Smith at the EPA's Central West – Dubbo office by telephoning 02 6883 5374 or by email at central.west@epa.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Brad Tanswell', written over a horizontal line.

BRAD TANSWELL
Unit Head Central West – Dubbo
Environment Protection Authority

Attachment A – Assessment and Justification

ATTACHMENT A

Assessment of the proposal and request for additional information

WATER

Impact assessment

The EA does not characterise discharges, so it is unclear what pollution could occur due to the development. The EA does not provide any estimates of pollutant concentrations and loads and is therefore inadequate for predicting impacts associated with discharges that are likely to contain pollutants at non-trivial levels.

A key issue for any site discharge will be the potential for metals, process chemicals and/or rare earth elements, such as scandium, to be present in site discharges from the water storage dam or sediment basins. The potential impact of rare earth elements and other metals that do not have water quality guidelines may require additional assessment if there is potential for these analytes to be present in discharges.

Water Storage Dam

The EA identifies that overflow from the water storage dam spillway is predicted during extreme rainfall events. It is noted that no overflow is modelled to occur during dry or average conditions. Modelled overflow volumes have been provided as a total at the end of 20-year simulation, where it is predicted that 895 ML will be discharged from the water storage dam in Scenario 3 (based on the wettest sequential 20 years).

Sediment Basins

The EA states that water collected from the disturbed footprint (e.g. internal haul roads and waste rock emplacements) would be 'temporarily contained' in sediment basins. Where opportunities arise, water would be recycled for dust suppression or use in the processing facility, or otherwise discharged in accordance with the requirements of an Environment Protection Licence (EPL).

EPL discharge criteria, if appropriate, can only be derived following characterisation of the pollution, assessment of the potential impacts of that pollution on the receiving environment, and consideration of the practical measures that could be taken to prevent, control, abate or mitigate that pollution with the aim of restoring or maintaining the environmental values of receiving waters.

The proponent must:

- 1. identify the location of all proposed discharge points*
- 2. characterise the quality of all water leaving the premises in terms of the expected concentrations of all pollutants present that pose a risk of non-trivial harm to human health and the environment. This should be informed by a risk profile of the pollutants potentially mobilised from activities on the premises.*
- 3. clarify the frequency and volume of any discharges from contaminated water storages*
- 4. quantify the loads of pollutants expected to be discharged and consider the potential impacts on receiving waters.*
- 5. assess the potential impact of discharges on the environmental values of the receiving waters with reference to the relevant ANZECC (2000) trigger values or site-specific trigger values derived consistent with the methodology outlined in ANZECC (2000).*
- 6. consider the practical measures that could be taken to restore or maintain the environmental values of the receiving waters.*

