



DOC21/614055-7

Ms Rose-Anne Hawkeswood
Team Leader - Energy Resource Assessment
Planning and Assessment Division
Department of Planning, Industry and Environment

Via: Major Projects Planning Portal

19 August 2021

Dear Ms Hawkeswood

**SUNRISE PROJECT – DA374-11-00-Mod-7
EPA comment on Project Execution Plan Modification**

Thank you for the request for advice from Public Authority Consultation (PAE-24563991), requesting a review by the NSW Environment Protection Authority (EPA) of the Project Execution Plan (PEP) Modification Report prepared for the proposed Sunrise Project.

The EPA has reviewed the relevant sections and appendices of the PEP Modification report, prepared by Sunrise Energy Metals Limited, and has provided a summary of comments and recommendations within the attached submission.

If you have any questions regarding this matter, please contact Mr Andrew Helms at the Regional South (Bathurst) Office of the EPA on 6333 3805 or via e-mail at EPA.Southopsregional@epa.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read 'SL', is positioned above the name of the sender.

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NSW Environment Protection Authority (EPA) Submission on Project Execution Plan Modification Report for Sunrise Project (DA374-11-00-Mod-7)

Public Authority Consultation (PAE-24563991)
17 August 2021

Air Quality:

The EPA has reviewed the following documents:

- *Sunrise Project – Project Execution Plan Modification Report*, prepared by Sunrise Energy Metals Limited (undated, 2021).
- *Sunrise Project – Project Execution Plan Modification Air Quality Assessment (AQIA)*, prepared by Jacobs Group (Australia) Pty Limited dated 30 June 2021.

The EPA notes that the proposed modification does not seek a change in hours of operation, the mining method, approved blasting activities or operational capacities (including the quantity of products). Modification 7 does include a proposed reduction in the stack height of the sulphuric acid plant from 80 m to 40 m and proposes an additional diesel-powered backup generator. As such, the EPA has limited its comments on the assessment of impacts associated with these proposed changes.

1. Matters to be addressed prior to determination

a. Application of the impact assessment criteria for sulfuric acid

Section 6.3 of the AQIA advises that the predicted ground level concentrations for sulfuric acid do not exceed the EPA's impact assessment criteria contained in the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (the Approved Methods) at the nearest sensitive receptors.

Sulfuric acid is an individual toxic air pollutant as per the Approved Methods. Impact assessment criteria for individual toxic air pollutants apply at and beyond the boundary of the facility. Figure E3 of the AQIA provides a contour plot of potential impacts for sulfuric acid. The contour plot indicates there is potential for the impact assessment criteria for sulfuric acid to be exceeded beyond the site boundary.

Recommendation: The AQIA must be revised to demonstrate that compliance with the impact assessment criteria for sulfuric acid can be achieved. Consideration should be given to the assessment of potential impacts based on plant specific emission performance of sulfuric acid emissions.

b. Assessment of impacts against recently revised Ambient Air NEPM standards not included

Section 6.3 of the AQIA provides an assessment of the potential impacts of emissions from the processing facility, and proposed modifications. The AQIA compares the predicted ground level concentrations against the impact assessment criteria contained in the Approved Methods.

In April 2021, the National Environment Protection Council (NEPC) agreed to vary the Ambient Air Quality NEPM. The amendment included variations to the national standards for SO₂ and

NO₂. The AQIA does not include an assessment of potential impacts against the amended national standards for SO₂ and NO₂.

Recommendation: To ensure transparent and robust assessment, the EPA recommends that the AQIA be revised to include an assessment of impacts for the processing facility (including the proposed diesel generators) against the recently amended Ambient Air Quality NEPM Standards.

c. Assessment methodology for speciated Volatile Organic Compounds not described

Section 6.3 of the AQIA provides an assessment of the potential impacts of select Volatile Organic Compounds (VOCs), specifically benzene and 1,3-butadiene. Table 5.3 of the AQIA provides the emission rates for assessed air pollutants for the processing facility. However, Table 5.3 only includes total Volatile Organic Compounds and not the emission rates derived for speciated Volatile Organic Compounds. Further, the AQIA does not describe the methodology for estimating and assessing impacts of speciated VOCs. As such, the AQIA has not transparently demonstrated that an assessment of reasonable worst-case impacts of speciated VOCs has been undertaken.

Recommendation: The AQIA be revised to:

- Provide further detail on the methodology for assessing speciated VOCs, including any data sources referenced for estimating VOCs emissions.
- Demonstrate that the assessment methodology for volatile organic compounds is representative of reasonable worst-case emissions and potential impacts.

The EPA will be in a position to offer the Department of Planning Industry and Environment (DPIE) any recommended conditions of project approval, pertaining to air quality, following the receipt and review of the additional information requirements summarised above.

Noise:

The EPA has reviewed the following documents with respect to potential noise impacts associated with the project:

- *Sunrise Project – Project Execution Plan Modification Report*, prepared by Sunrise Energy Metals Limited (undated, 2021).
- *Sunrise Project – Project Execution Plan Modification Noise Assessment*, prepared by Renzo Tonin and Associates dated 30 June 2021. (NIA)

The EPA has also taken into consideration previous project modifications and existing conditions of consent for DA 374-11-00, specifically:

- Project Approval for Modification 4, file number S98/01078 (Mod 4 Approval).
- Syerston Project – Modification 4, Noise and Blasting Assessment, dated 8 November 2017, Renzo Tonin and Associates, reference: TJ345-01F02 Report (r7).docx (Mod 4 NIA).

The EPA understands that the following modifications are to be made to the PEP and which may have an influence on the noise environment:

- Increased construction period from 2 to 3 years.
- Increased mining rate during the early years of operation.
- Changes to the waste rock emplacement schedule.
- Revised layout of the processing area.
- Revised tailing storage facility cell construction sequence.
- Increased number of diesel backup generators.

- The addition of exploration activities within the approved development area.
- Rail siding relocation 500m south and addition of new storage facility at siding.
- Changes to light and heavy vehicle movements during both construction and operation.
- Two additional access roads on Wilmatha Road and extension of Scotson Lane road upgrade.
- Increased number of construction personnel from 1000 to 1900.

The EPA understands from the NIA that the blasting schedule has not been altered and therefore has not considered blasting any further in these comments.

1. Matters to be addressed prior to determination

a. Existing statutory noise limits

In the NIA, Table 4.1 and Table 9.6 have not referenced the current Environment Protection Licence Number 21146 construction noise limits.

Recommendation: The NIA should compare the current and applicable noise limits with the predicted noise levels and justify any exceedances.

b. Clarification on modifying factor calculations

The NIA should provide further information on the assessment of modifying factors according to Fact Sheet C of the Noise Policy for Industry (EPA, 2017) (NPfI), particularly for low frequency noise. It is also not clear from the NIA if the noise emissions at the source or receiver were assessed for modifying factors. The NPfI requires the potential for modifying factors to be assessed using the total predicted noise level at the receiver.

An example method is available in the Acoustics Australia forum article “An example approach to consider low frequency noise in the context of the NSW noise policy for industry” (Acoustics Australia (2020) 48:149-180, <https://doi.org/10.1007/s40857-020-00199-x>).

Recommendation: Calculations and information to support the assessment of modifying factors in accordance with NPfI Fact Sheet C should be presented in the NIA.

c. Discrepancies in sound power levels between modifications

Chapter 9.2 of the NIA states that the sound power levels have been determined based on manufacturers specifications and the consultant’s internal database. The EPA has compared the sound power levels used in Mod 7 NIA with those used in Mod 4 NIA and found that there are differences in the sound power levels used for the same item of equipment. The EX1200 excavator, 992K Front End Loader, 777D Haul truck, M6290 Drill, 16M Grader and 825H Roller all have lower sound power levels in Mod 7 than Mod 4. No justification has been provided for these differences.

Furthermore, some other items of equipment appear to be lower than expected without specific mitigation measures mentioned, for example the D10 Dozer. In the event that the proponent is seeking to increase noise limits, all reasonable and feasible mitigation measures must be implemented.

Recommendation: With respect to equipment sound power levels, the proponent should:

- Clarify and justify the differences in sound power levels used in Mod 7 compared with that used in previous modifications.
- Provide the data source reference for each item of plant.
- Clarifies the mitigation packages and their expected effectiveness applied to each item of plant.

d. Change in predicted noise levels at receivers compared to previous modifications

The EPA has compared the predicted noise levels at receivers with the existing statutory noise limits, the proposed Project Noise Trigger Levels (PNTLs), and previous predictions for the premises presented in earlier modifications, most notably Mod 4 NIA. It appears that noise from this modification is predicted to exceed existing statutory noise limits during the day, evening and night at Currajong Park and during the evening and night at Brooklyn, Slapdown and Rosehill and during the night at Glenburn. This represents an increase compared to previous predictions in Mod 4 NIA. The NIA does not provide sufficient information for the EPA to understand the causes and areas which have significantly influenced the change and increase in noise levels compared to previous assessments.

Recommendation: The proponent should provide an explanation of the change in noise levels caused by Mod 7 and include what the significant aspects contributing to the change are.

e. Change in assessed mine years compared to previous modifications

The noise assessment scenarios in the Mod 4 NIA were mining years 6, 11 and 21, and in the Mod 7 NIA they are years 1, 10 and 17. No explanation or justification has been provided in the Mod 7 NIA for the change of assessment years and how these years represent the impacts across the life of the mine.

Recommendation: The proponent should provide a justification for the changes in the assessed years and clarify the difference in impacts for the scenarios assessed in previous modifications.

f. Clarification and analysis of reasonable and feasible mitigation measures

It is not clear if investigation of at-source mitigation has taken place for this modification. The EPA was unable to identify in the Mod 7 NIA any discussion of the potential to reduce noise at the source through use of alternative equipment or applying mitigation to plant. In the event that the proponent seeks to increase noise limits, mitigation measures must be investigated and implemented where reasonable and feasible.

Recommendation: The proponent should clarify the at source mitigation considered, rejected and implemented for the modification and justify that all reasonable and feasible mitigation has been included in the assessment.

2. Matters to be addressed with conditions

a. Voluntary Land Acquisition Mitigation Policy (VLAMP)

Chapter 9.4 of the NIA discusses the effect of mine schedule modifications and their potential to reduce noise levels at receivers which are predicted to exceed the PNTLs and may also trigger actions under the VLAMP. Whilst there is discussion of the potential effects of negotiated agreements or mine buy-outs of land, it appears that at the time of application, these mechanisms are not in place.

Recommendation: If approved, conditions should be imposed on the project that reflect the current status of negotiated agreements and land ownership.

Please note that the EPA will be in a position to offer DPIE additional recommended conditions of project approval, pertaining to noise limits and associated conditions, following the receipt and review of the additional information requirements summarised above.

Surface Water and Groundwater:

The EPA has reviewed the PEP Modification report and has no specific comments with respect to potential impacts of the modified project on surface water and groundwater. Existing conditions of project approval (DA 374-11-00) and conditions on the Environment Protection Licence (No. 21146) for the premises are still appropriate considering the project changes included in Mod 7 are not predicted to have any measurable impact on surface water or groundwater.