



DOC21/871991-7

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

Via: Major Projects Planning Portal

21 October 2021

Dear Ms Hawkeswood

**SUNRISE PROJECT - DA374-11-00-Mod-7
EPA Advice on Submissions Report**

Thank you for the request for advice from Public Authority Consultation (PAE-29468144), requesting a review by the NSW Environment Protection Authority (EPA) of the Response to Submissions (RTS) Report prepared by Sunrise Energy Metals Limited (Sunrise Energy) for the Sunrise Project Mod 7.

The EPA has reviewed the RTS and supporting documentation. The RTS generally addresses the information requirements contained within the EPA's submission on this project (our reference DOC21/614055-7, dated 19 August 2021). The EPA has identified one outstanding issue associated with the Air Quality Impact Assessment which requires further clarification.

A summary of the EPA's comments and recommended conditions of project approval is provided in **Attachment A**.

If you have any questions regarding this matter, please contact Andrew Helms on 6333 3805 or via info@epa.nsw.gov.au.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Carlie Armstrong', is written over a light blue circular stamp.

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

ATTACHMENT A

The EPA has reviewed the following documents as part of the Sunrise Project (DA374-11-00-Mod-7) response to submissions.

- Project Execution Plan Modification Submissions Report, undated, Sunrise Energy Metals, reference: 01098801-002.docx (RTS).
- Letter to Sunrise Energy Metals (Attachment 2 to RTS), Subject: Sunrise Project - Project Execution Plan Modification - Supplementary Advice - Air Quality, dated 29 September 2021, Jacobs Group (Australia) Pty Limited (The Air Letter).
- Letter to Sunrise Energy Metals, Subject: Sunrise Project - Project Execution Plan Modification - Response to Noise-related Matters in the EPA Submission, dated 29 September 2021, Renzo Toning and Associates, reference: TJ345-14F02 EPA RTS (r5).docx (The Noise Letter)

Air Quality:

The EPA considers that the RTS does not adequately demonstrate that assessment of Volatile Organic Compounds (VOCs) is representative of reasonable worst-case emissions and potential impacts. The EPA requires further clarification on the assessment of VOCs as outlined below.

The RTS identifies that:

- A. The speciation of VOCs is based on speciation profiles published by the US EPA. Benzene was assessed as 7.7% of total VOCs, whilst 1,3 butadiene was assessed as 7% of total VOCs,
- B. The assessment of VOCs is considered representative of 'maximum case' emissions. Estimated concentrations were modelled at the in-stack concentration limits for schedule premises under the *Protection of the Environment Operations (Clean Air) Regulation 2021* (the Clean Air Regulation). Emissions were conservatively modelled to be released continuously from all sources 24 hours per day, every day of the year.

The assessment of speciated VOC's is limited to Benzene and 1,3 Butadiene. Sunrise Energy have not provided robust justification for omitting other speciated VOC's. The EPA requires a demonstration that the speciated VOC's assessed have the highest potential for ground level impacts.

The modelling assumes a total VOC discharge concentration of 40 mg/m³ for the proposed diesel generators. As per Schedule 4 of the Clean Air Regulation the prescribed concentration of VOC's for any Group 6 stationary reciprocating internal combustion engine using a liquid fuel is 1140 mg/m³. As such, the assessment of air quality impacts may potentially underestimate VOC emissions and potential impacts.

Additionally, the RTS indicates that the diesel generators are proposed as backup generators. The air quality impact assessment is based on emissions from the continuous operation of the diesel generators. As such, it is not clear if the diesel generators will be used for emergency use or other operational purposes (i.e. plant start-up or shutdown).

The EPA recommends that Sunrise Energy:

- 1) Clarify the proposed use of the diesel generators, including but not limited to:

- i. Emergency use vs operational use (start-up or shutdown of the processing facilities)
 - ii. Anticipated hours that the diesel generators will be used for, whether it be for emergency purposes or for plant start-up/shutdown periods.
- 2) Demonstrate that the speciated VOCs assessed have the greatest potential for ground level impacts. The EPA recommends additional analysis comparing the magnitude of speciated VOCs with relevant impact assessment criteria to demonstrate the speciated VOCs assessed are representative of worst-case emissions and potential impacts.
- 3) Revise the Air Quality Impact Assessment to ensure that emissions and potential impacts are based on reasonable worst-case emissions. This includes:
- i. an assessment of the potential impacts of additional VOCs identified through the additional analysis described above.
 - ii. consideration of plant specific emission performances.

Noise:

The items raised in the EPA's submission have generally been addressed in the RTS. Notwithstanding this, the following matters may affect the ability of Sunrise Energy to meet its performance requirements. The EPA recommends that DPIE take this into consideration

1. Justification for not adopting noise bunds

Sunrise Energy have identified that a noise bund to shield Currajong Park from potential noise emissions from the premises is not considered necessary. Sunrise Energy allege that the noise sources would be located too far away from the bund to create a significant reduction in noise. Sunrise Energy also consider that a noise bund would result in limited noise mitigation when inversion conditions are present at the premises.

The EPA notes that no quantitative evidence has been provided to support these conclusions. The EPA does not consider inversion conditions to be adequate justification as they typically occur during night time and only for a limited part of the year. Furthermore, the response discounts the potential benefits a noise bund would provide when inversions are not present, which is likely to be most of the time operations occur.

In that regard, the EPA does not consider that appropriate justification has been provided for not constructing a noise bund. The EPA reiterates that a noise bund may be a reasonable and feasible noise mitigation measure for the project.

EPA recommends that DPIE notes the assessment of noise bunds and satisfies itself that all reasonable and feasible mitigation measures have been adopted to manage noise impacts. The EPA recommends that DPIE considers appropriate consent conditions if the application is approved.

2. Sound Power Levels

The EPA understands that the proposed project is predicted to increase noise levels at some receivers. In some cases lower mobile equipment sound power levels have been used compared with previous modifications.

The RTS identifies that the lower sound power levels have been used because they represent "best practice". However, Sunrise Energy have not specified what (if any) mitigation has been assumed or applied to meet these sound power levels. It is the EPA's experience that in the mining industry "best practice" routinely includes the use of Original Equipment Manufacturer or third party

noise mitigation kits. Sunrise Energy also appear to have relied heavily on third-party data to inform their sound power levels with their provenance being unclear.

The EPA recommends that DPIE condition any approval to require the proponent to validate the sound power levels stated in the application.

3. Additional recommendations:

The EPA recommends that DPIE consider the following recommended variations to the existing conditions of project approval.

- i. Where the predicted noise levels in Mod 7 meet the existing noise limits, they should remain unchanged. Where predicted noise levels are above the existing noise limits, they should be set at the predicted level. Under the transitional arrangements put in place when the Noise Policy for Industry (EPA, 2017) replaced the Industrial Noise Policy (EPA, 2000), when considering changing noise limits based on the application of the new policy, the ability to meet existing limits is a consideration when setting conditions.
- ii. The noise limits should apply under standard meteorological conditions during the day and noise-enhancing conditions during the evening and night as defined by Table D-1 in the Noise Policy for Industry. When meteorological conditions outside of these conditions are present, the limits + 5 dB should apply. This brings the conditions in to line with the approach taken under the Noise Policy for Industry.
- iii. Consent conditions in the Mod 4 consolidated approval, Schedule 3 Conditions 3-5, 6, 8, 9 and Appendix 4 should be reviewed to ensure that they reflect the updated impacts from the premises and reflect the use of the Noise Policy for Industry in the Mod 7 application.