

20 July 2026

Rasmus Altenkamp
Planning Officer
Department of Planning, Housing and Infrastructure

Via: NSW Major Projects Planning portal

**EPA Advice on Environmental Impacts Statement
Air Liquide CO₂ Processing Plant – SSD-80824235**

Dear Rasmus

I am writing in response to your request for advice from the NSW Environment Protection Authority (EPA) on the Environmental Impact Statement (EIS) for the proposed Air Liquide CO₂ Processing Plant at Bolong Road, Bomaderry.

The EPA has reviewed the following exhibited documents:

- *Environmental Impact Statement* – Allen Price – 30 April 2026
- *Noise Impact Assessment* (Revision D) – Day Design – 23 April 2026
- *Air Quality Impact Assessment* (Version 4) – Northstar – 2 April 2026
- *Detailed Site Investigation* (Revision 4) – ENRS – 21 April 2026

The EPA understands the proposal is for construction and operation of a CO₂ processing plant, involving:

- Processing up to 100,000tpa of process gas from the Shoalhaven Starches premises, producing liquid CO₂ for food and beverage industries,
- 1.3km pipeline (0.9m corridor) to transport gas from Starches premises to proposed plant,
- Construction of 80m pipeline to transport wastewater to Starches wastewater treatment plant,
- Addition of knock-out pots and booster blower to Starches premises to facility gas transfer,
- 24/7 operation of CO₂ plant and transport of CO₂ product.

Based on our review, the proposal will require an environment protection licence (EPL) issued under the Protection of the *Environment Operations (POEO) Act 1997* for Chemical production and Chemical storage. It is noted the proposal is also partially located on land regulated by the EPA under EPL 883 issued under the POEO Act to Shoalhaven Starches Pty Ltd for Agricultural processing, Chemical production and Chemical storage.

The EPA considers that the EIS does not fully provide the information required to allow us to complete our assessment. The EPA has the following advice:

Matters to be addressed prior to determination

The EPA recommends the Department of Planning, Housing and Infrastructure (DPHI) request that the matters listed below and detailed in **Attachment A** be addressed prior to determination.

1. Noise impacts

The EPA notes the proposal is associated with the Shoalhaven Starches operation subject to EPL 883. A draft Pollution Reduction Program (PRP) has been prepared for the Starches premises in response to identified exceedances of noise limits of up to 15dB in the development consent and EPL. The outcomes from the PRP, including Stage 1, have not been confirmed. The Noise Impact Assessment (NIA) notes that Stage 1 is anticipated to achieve a reduction of 1-3dB.

The EPA has previously advised that any proposal associated with the Starches premises should ensure it does not contribute to overall site noise levels or undermine the benefits of any PRP noise reduction initiatives.

The EPA recommends that DPHI request that the Noise Impact Assessment (NIA) be amended to address the matters in Attachment A. These include:

- consideration of appropriate Project Noise Trigger Levels,
- providing assessments of construction and road noise,
- addressing gaps in assessment of low frequency and noise enhancing meteorological conditions.

This information is needed ensure the NIA clearly represents potential impacts in accordance with the Noise Policy for Industry (NPfI) and considers appropriate mitigation measures, to ensure the proposal does not risk contributing to existing noise exceedances from the Starches premises.

2. Air Quality

The EPA recommends the Air Quality Impact Assessment (AQIA) provides additional clarification regarding the combination of emission points (point 149 and point 224) and proposed air quality monitoring to ensure consistency with the *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW* (Approved Methods).

Matters for consideration

1. Greenhouse Gas Emissions

The EPA notes the comments in **Attachment A** regarding the information provided for the proposal regarding estimated greenhouse gas (GHG) emissions. These comments should be considered as part of any future proposals associated with the CO₂ processing plant to ensure consistency with the *NSW Guide for Large Emitters*.

The EPA asks that it be consulted further on this proposal, subject to receipt of additional information addressing the matters identified above, as it would likely recommend conditions relating to air quality and noise impacts.

If you have any further questions about this issue, please contact Carlos Ferguson at environmentprotection.planning@epa.nsw.gov.au.

Yours sincerely



CHRISTIE JACKSON
Unit Head – Industry Assessments
NSW Environment Protection Authority

Attachment A – NSW Environment Protection Authority (EPA) detailed comments on Environmental Impact Statement (EIS) for proposed Air Liquide CO2 Processing Plant (SSD-80824235)

The EPA has the following advice:

Matters to be addressed prior to determination

1. Noise impacts

It is noted a Noise Pollution Reduction Program (PRP) is in draft stage for the Shoalhaven Starches premises regulated by EPL 883. This is in response to identified exceedances of noise limits by up to 15dB at sensitive receivers. The EPA advises that any proposal associated with the Starches premises should avoid contributing to overall site noise or undermining the effectiveness of any noise reductions implemented as part of the PRP.

The EPA recommends that the Noise Impact Assessment (NIA) be updated to address the matters and additional information identified below prior to determination to ensure clear representation of potential noise impacts from the proposal in accordance with the Noise Policy for Industry (NPfI) and consideration and implementation of all feasible and reasonable mitigation measures, to reduce risk of contributing to overall site noise or undermining noise reduction initiatives at the Starches premises.

a. Consideration of appropriate Project Noise Trigger Levels

The NIA assesses the predicted noise impacts from the proposal and combined noise with the Starches premises against project amenity noise levels prepared in accordance with Section 2.4.2 of the NPfI and noise limits from the Starches consent and EPL 883.

The NIA predicts noise levels will comply with the project amenity noise level and not increase the existing noise impacts from the Starches premises.

However, the NIA does not appear to consider any noise reductions as part of PRP initiatives. Based on the information provided, the proposal has predicted noise levels that have the potential to contribute to overall industrial noise levels and undermine the impact of any noise reductions from PRP initiatives at the Starches premises.

Given the proposal is associated with the Starches premises, it is considered reasonable that more stringent project noise trigger levels (PNTL's) be considered. It is noted recent modifications to the Starches premises have considered PNTLs of 10dB below the Starches EPL noise limits in Section 6.1 of the NPfI.

Where the proposal exceeds the more stringent PNTL's, a feasible and reasonable assessment of available mitigation measures should be provided. Table 3.1 of the NPfI provides guidance on undertaking a feasible and reasonable assessment.

Consideration of these more stringent noise trigger levels would reduce the potential for the effectiveness of the Starches PRP to be undermined when considering overall industrial noise. In conjunction with the matters listed below, this will ensure the proposal implements all feasible and reasonable mitigation to reduce risk of contributing to existing industrial noise from the Starches premises or undermining benefits from noise reduction initiatives implemented as part of EPL 883.

Recommendation: The EPA recommends DPHI consider whether the PNTLs used to assess the proposal are appropriate given the existing performance of the Starches premises, guidance within Section 6.1 of the NPfI, the potential effectiveness of the Starches PRP, in addition to the inclusion of a feasible and reasonable assessment of mitigation as appropriate.

b. Contribution of low frequency noise

The mitigated levels in Appendix G show that the lower frequencies are much more pronounced with the mitigation, which has effectively mitigated the mid to high frequencies but not the low frequencies. There is a risk that the mitigation, if not properly designed to mitigate low frequency noise, will make lower frequencies much more pronounced without the masking of the mid to high frequencies. The EPA notes existing issues with low frequency noise from the Shoalhaven Starches site since construction of the cogeneration plant.

The EPA also notes the low frequency noise assessment does not go down to 10Hz, as is required by the Noise Policy for Industry, instead a statement in Section 7.2 *"It is our opinion that noise emission between 10Hz and 20Hz as a result of the proposal, are likely to be well below the LF threshold at any receptor location."*

The EPA considers that the assessment should be consistent with the requirements of Fact Sheet C of the NPfI. Further guidance on assessment of low frequency noise is provided in *Acoustics Australia Vol. 48, No. 2, August 2020* available from the EPA's website.

Recommendation: The EPA recommends DPHI request the NIA to include an assessment of low frequency in accordance with Fact Sheet C of the NPfI and where appropriate, consider investigation of further mitigation that is more effective at reducing the lower frequencies from the proposed development.

c. Selected meteorological conditions

The NIA includes an assessment of the significance of noise enhancing meteorological conditions in Section 7.3. It is noted the NIA has used 1 year of historical data from the on-site met station on the Starches premises to determine the significance. It is noted recent noise assessments for the site (such as GHD report for Mod 31 dated August 2025) included 4 years of BoM data. The NIA states that noise enhancing met conditions are not significant. This is contrary to the GHD report which stated that they are significant and that noise levels should be predicted under noise-enhancing (or 'adverse') met conditions.

It is also noted the graphs provided in Appendix G indicate the likelihood of tonality or low frequency noise, however no graphs are provided for the CO₂ processing plant under adverse meteorological conditions.

Recommendation: The EPA recommends DPHI request the NIA includes further assessment of noise-enhancing meteorological conditions and justify any differences to previous assessments.

d. Assessment of construction noise

The NIA does not appear to include an assessment of construction noise impacts nor provides information regarding any proposed mitigation measures to reduce impacts on sensitive receivers.

Given the nature of existing industrial impacts on sensitive receivers, it is considered reasonable that an assessment of construction noise impacts against the Interim Construction Noise Guideline (ICNG) be included as part of the proposal. This should include consideration of any appropriate mitigation measures to reduce the risk of unnecessary and cumulative noise impacts on sensitive receivers during construction.

Recommendation: The EPA recommends DPHI consider the need for the NIA to include an assessment of construction noise in accordance with the ICNG.

e. Assessment of road traffic noise impacts

The NIA does not appear to include a detailed assessment of noise impacts from road traffic. It is noted the proposal will involve traffic movements on a 24/7 basis.

Given the issues with existing industrial noise impacts on sensitive receivers, the EPA recommends DPHI consider the need for the NIA to include assessment of road traffic noise.

2. Air Quality

a. Clarification regarding combination of emission points

Table 2 of the AQIA provides an outline of the three emission points (130, 149, 224) assessed as part of the proposal. Section 5.2 of the AQIA states that upon conducting the initial modelling, elevated concentrations of certain pollutants were predicted at and beyond the site boundary (including sensitive receptor locations) due to low dispersion of emissions from point 224.

The AQIA stated that subsequent modelling combined the emissions from point 149 and point 224 to negate the effects of low volumetric flow and stack exit velocities from these emission points. However, it is not explicitly stated that the two emission points will be combined as part of the proposal, or if the combination of the sources was done as part of a modelling exercise only. The EPA advises that additional information should be included to confirm that point 224 and point 149 will be combined as part of the proposal.

Recommendation: The EPA recommends DPHI request the proposal provide additional information to confirm that point 224 and 149 will be combined as a single emission point.

b. Clarification regarding emissions monitoring verification

Under section 7.2 of the AQIA, an emissions monitoring campaign is recommended to confirm the assumptions adopted within the assessment. However, it is unclear how emissions monitoring would be conducted at the proposed emission points, and if such monitoring would be conducted in accordance with the *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW* (Approved Methods).

The EPA notes that the pressures adopted for emission points 149 and 224 are significantly above atmospheric pressure (18.2 bar), whilst the temperature at point 149 is predicted to be -30°C and the temperature at point 224 is predicted at 150°C. Given that the combined emission point diameter of points 149 and 224 is only 25 mm, it remains unclear how the Applicant proposes to perform verification testing of the resultant emissions.

The EPA advises that the proposal should clarify the proposed testing scope and testing methodology to demonstrate compliance with requirements of the *Protection of the Environment Operations (Clean Air) Regulation 2022* (POEO Clean Air Regulation) and to confirm the assumptions adopted in the AQIA which support compliance with the impact assessment criteria outlined in the Approved Methods.

Recommendation: The EPA recommends DPHI request the AQIA be revised to include the following:

An outline of the emissions monitoring campaign proposed to support the assumptions made in the AQIA, demonstrating that the Proposal will meet the following:

- All relevant POEO Clean Air Regulation limits
- The impact assessment criteria outlined in the Approved Methods, and

An outline of the methodology proposed to perform the emissions monitoring campaign and if the proposed methodology meets the requirements outlined in the Approved Methods.

Matters for consideration

1. Estimation of Greenhouse Gas Emissions

The EPA acknowledges that the project will process CO₂ captured from the adjacent Shoalhaven Starches manufacturing facility. However, it should be clarified that the associated emissions reductions from existing sources and activities will occur outside the assessment boundary of the proposed carbon dioxide processing plant. Thus, any reduction in greenhouse gas (GHG) emissions would likely be reflected in the emissions reported by Shoalhaven Starches, rather than by the proposed carbon dioxide processing plant.

The information provided in the EIS and associated documents does not include detailed estimates of Scope 1 emissions from greenhouse gases vented to the atmosphere and diesel combustion, or Scope 2 emissions associated with electricity consumption.

However, given the scale of the operation, it is unlikely that requesting detailed emissions estimates would demonstrate that the facility will generate emissions above the 25,000 tonnes of CO₂-e per annum in any operational year. Accordingly, it is considered unlikely that the proposed carbon dioxide processing plant would trigger the assessment requirements of the *NSW EPA Guide for Large Emitters* (the Guide).

However, the EPA advises that future applications or modifications should ensure consistency with the requirements in the *NSW EPA Guide for Large Emitters*. If the Applicant considers that certain assessment requirements are not applicable, this must be specified, and supporting evidence, estimates and justification must be provided.