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7 August 2025

Thomas Bertwistle  
Senior Environmental Assessment Officer  
Department of Planning, Housing and Infrastructure

Via: NSW Major Projects Planning portal

**EPA Advice on Modification Report  
Mod 30 for CO<sub>2</sub> plant to Shoalhaven Starches/Supagas – MP06\_0228-Mod-30**

Dear Thomas,

I am writing in response to your request for the NSW Environment Protection Authority (EPA) to review the Modification Report for the proposed Mod 30 for the CO<sub>2</sub> plant to Shoalhaven Starches and Supagas located at 220 Bolong Road, Bomaderry.

The EPA has reviewed the following documents:

- *Modification Report* – Allen Price – 27 March 2025
- *Noise Impact Assessment (Revision 2)* – GHD – 27 June 2025
- *Air Quality Assessment* – GHD – 20 May 2025
- *Geotechnical and contamination Assessment – Stage 2 CO<sub>2</sub> Plant (Revision 3)* – GHD – 14 May 2025

The EPA understands the proposal is for:

- Upgrade and increasing capacity of the Supagas CO<sub>2</sub> plant to 165 tonnes per day (tpd),
- Installation of two storage containers with total capacity of 400kL,
- Associated infrastructure.

The EPA notes the site is subject to environment protection licences (EPLs) under the *Protection of the Environment Operations Act 1997* (POEO Act). EPL 883 is issued to Shoalhaven Starches Pty Ltd for Agricultural processing, Chemical production and Chemical storage. EPL 21178 is issued to Supagas Pty Ltd for Chemical production and Chemical storage. The proposed modification will likely require variation of these licences.

The EPA has reviewed the Modification Report and notes there are a number of matters, identified in Item 1 below, that should be addressed prior to determination to allow us to complete our assessment.

The EPA provides the following comments and recommendations to the Department of Planning, Housing and Infrastructure (DPHI) for consideration as part of its assessment of the proposal.

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NSW Environment Protection Authority

As the environmental steward and regulator of our State we are committed to a sustainable future. Join us on our mission to protect tomorrow together.

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## 1. Matters to be addressed prior to determination

The EPA recommends that DPHI consider addressing the matters below prior to any approval of the project. Further details regarding these matters are provided in **Attachment A**.

### a. Noise impacts

The EPA recommends that the Noise Impact Assessment (NIA) be updated to address consideration and mitigation of existing noise sources in accordance with Section 6 of the Noise Policy for Industry (NPfI). Additionally, the EPA's review has identified some information gaps in the NIA that should be resolved to provide greater certainty and management of potential noise impacts.

### b. Wastewater management

The EPA recommends the Modification Report be amended to confirm the volume of any wastewater generated by the proposal, and potential impacts on the existing wastewater treatment system.

### c. Air quality

The EPA recommends the AQIA be updated to address potential emission sources (ammonia and CO<sub>2</sub>) identified in the provided documentation.

## 2. Matters for consideration

The EPA suggests DPHI consider the items below and associated comments provided in **Attachment B** as part of its assessment of the proposal.

### a. Contamination

### b. Greenhouse gas emissions

Subject to receipt of information addressing the matters identified in Item 1, the EPA asks that it be consulted further prior to any approval of the proposal as we would recommend conditions to DPHI for its consideration and inclusion in any approval, particularly relating to noise impacts.

If you have any further questions about this matter, please contact Carlos Ferguson at [environmentprotection.planning@epa.nsw.gov.au](mailto:environmentprotection.planning@epa.nsw.gov.au).

Yours sincerely,



**CHRISTIE JACKSON**  
**Unit Head – Environment Protection Planning**  
**NSW Environment Protection Authority**

## ATTACHMENT A – Additional details – Matters to be addressed prior to determination – Mod 30 for CO2 plant at Shoalhaven Starches and Supagas – MP06\_0228-Mod-30

### a. Noise impacts

#### 1. Noise impacts from existing sources

The Noise Impact Assessment (NIA) predicts the cumulative noise impacts from the proposal, existing Supagas CO2 plant and existing Shoalhaven Starches operation will significantly exceed both Project Noise Trigger Levels and current EPL limits applying to the site. For some receivers, exceedances will be up to 15dB above the noise limits in the consent and EPLs 883 and 21178 (Tables 5.5 and 5.6).

The NIA does not provide any assessment of potential noise mitigation measures to reduce existing noise levels from the site to help achieve compliance with the existing EPL noise limits. It is noted that a report in response to a Pollution Reduction Study has recently been prepared for the site. The report includes consideration of various noise mitigation measures to reduce existing noise levels from the site and Shoalhaven Starches operations.

The report includes an investigation into mitigation measures to reduce the exceedances and indicates that the exceedances can be reduced by approximately 4 dBA at the most exposed receiver based on various mitigation measures proposed as feasible in the short-term. Additional longer-term mitigation works beyond this are reported as being considered less feasible and reasonable.

The Shoalhaven Starches site is large and complex, and it appears numerous planning Modifications are adding new additional noise sources from various plant and processes in an incremental and uncoordinated manner to existing non-compliances that are difficult to mitigate. There is still a significant noise reduction required for the entire site to achieve compliance with existing noise limits, and each additional Modification introduces additional noise sources to a site that is not in compliance.

Section 6.1 of the *Noise Policy for Industry* (NPfl) states that “*In some instances noise will be required to be managed as an integral part of site upgrades*”, or in cases where premises-wide mitigation is considered outside of the development proposal, then the noise level from the new/modified components may be set at 10 dBA or more below the existing noise limits. The NPfl also states: “*This approach means that the increase in noise from the whole site is minimised and provides scope for existing components to achieve noise reductions over time.*”

The EPA advises that the proponent may choose to set the trigger level for mitigation from the proposed modification to the Supagas site at 10 dBA or more below the noise limits or implement mitigation to reduce noise generation of the whole Shoalhaven Starches site.

**Recommendation:** The NIA should be updated to address Section 6.1 of the NPfl and address issues relating to mitigation and management of noise impacts from existing industrial activities on the site, including an assessment of reasonable and feasible mitigation measures for the proposal.

#### 2. Mitigation of construction noise impacts

The NIA (Table 4.4) indicates the potential exceedances of the Noise Management Levels (NMLs) during the modelled construction scenarios. The proposal does not appear to provide sufficient specific mitigation to address the construction noise levels from the proposed modification, noting receivers are currently impacted by exceedances of noise limits from existing industrial activities. Section 6.1 describes standard management

measures for construction noise, which do not specify how the predicted construction noise levels from the modification will be managed and reduced.

**Recommendation:** The EPA recommends the NIA be updated to include an assessment of feasible and reasonable mitigation measures for proposed construction works.

### 3. Details of noise sources and impacts

**Recommendation:** The NIA should be updated to clarify the matters below.

- The NIA does not include an assessment of off-site road traffic noise impacts in accordance with the Road Noise Policy (DECCW 2011).
- Section 5.2 Noise Sources appears to contain inconsistent information that should be confirmed, including:
  - Truck loading/unloading and truck movements (including reversing alarms) are said to occur but are not included in Tables 5.1 and 5.2.
  - Table 5.1 states the cooling tower fan sound power level is 101 dBA, but Table 5.2 includes a sound power level of 99 dBA.
  - Site layout plans included with the proposed Mod show other potential noise sources that are not included in Table 5.1, for example a dryer, blower, catox unit and vaporisers.
  - Table 5.2 shows the number of items of plant as being 2 cooling tower fans and 2 cooling tower water pumps, plus 4 side walls and 4 louvres. It's not clear if the overall sound power level is the noise level of one item or multiple items, i.e. the noise level for one cooling tower fan or for two cooling tower fans.
- Section 5.4.2.1 states that third octave results have been analysed for tonal and low frequency characteristics. It doesn't appear that third octave results are included in the NIA.
- It is not clear how the background noise levels to derive the NMLs for construction were calculated without the influence from the existing site (Shoalhaven Starches and Supagas).
- The meteorological station details in Appendix A should be checked or justified, as it states that the BoM met station at Wagga Wagga was used for the met data.

#### b. Wastewater management

The Modification Report states the proposal will not increase wastewater directed to the existing wastewater treatment plan (WWTP), nor change any discharge arrangements or involve any additional wastewater management or mitigation measures.

However, the process flow diagram of the CO<sub>2</sub> plant (p25 of Modification Report) and information provided indicates potential for wastewater being generated from a number of sources, including the cold scrubber, CO<sub>2</sub> compressor, CatOx unit, CO<sub>2</sub> liquefier and ammonia receiver.

**Recommendation:** The Modification Report should confirm the expected volume of wastewater to be generated by the additional CO<sub>2</sub> plant and capacity of the existing WWTP to accommodate the additional volume. This should include details of the capacity of the existing WWTP and current and approved wastewater volumes from development on the site.

#### c. Air quality

The Preliminary Hazards Analysis (PHA – p22) indicates the storage tank will have vents for ammonia and CO<sub>2</sub>. These do not appear to be addressed as emission sources in the Air Quality Impact Assessment (AQIA).

**Recommendation:** The AQIA should address the likely emissions and potential impacts from venting of ammonia associated with the proposal. An estimate of CO<sub>2</sub> to be vented should also be provided.

**ATTACHMENT B – Additional details – Matters for consideration – Mod 30 for CO<sub>2</sub> plant at Shoalhaven Starches and Supagas – MP06\_0228-Mod-30**

## a. Contamination

The Geotechnical and Contamination Assessment (GCA) recommends a Targeted Site Investigation relating to potential fill of the subject site, and preparation of a Construction Environmental Management Plan (CEMP) to manage exposure risks during works, including an Unexpected Finds Protocol (UFP) and Work Health Safety and Environment Plan (WHSE).

The EPA suggests DPHI implements these contamination commitments as part of any approval for the project.

The GCA identifies that an Acid Sulphate Soils Management Plan (ASSMP) would be required if greater than 1,000t of soil are to be disturbed.

It is the responsibility of the Applicant to ensure that the proposed works do not exceed the thresholds detailed in the Modification Report. The EPA suggests DPHI consider as part of any project approval the need for updating the ASSMP required by the consent to address the proposed works, including any monitoring or unexpected find protocols.

## b. Greenhouse gas emissions (GHG)

The EPA notes a greenhouse gas (GHG) assessment report or specific GHG emissions estimates were not provided with the modification application. However, whilst the scope 1 and 2 emissions (CO<sub>2</sub>-e) were not reported, the applicant indicated that the facility operates within a closed-loop system with minimal additional emissions expected.

The EPA has undertaken high-level estimates of likely emissions based on the available information in the Air Quality Assessment. These calculations suggest that it is unlikely that the proposed modification would trigger the scope 1 and 2 emissions threshold outlined in the NSW EPA Guide for Large Emitters (Large Emitters Guide).

The EPA considers that the requirements of the large emitters guide do not strictly apply to this modification.

For future applications or modifications for which GHG emissions are predicted to be above the 25,000 tpa CO<sub>2</sub>-e threshold, the Applicant should ensure consistency with the principles in the large emitters guideline. If the Applicant considers that certain requirements of the large emitters' guideline are not applicable, this can be specified but must be justified with supporting evidence.

All input data and assumptions should also be justified by supporting evidence to reduce the risk of delays or the need to request additional information during the assessment stages.