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### **EPA Advice on Statement of Environmental Effects - MP06\_0228-Mod-19**

Dear Mr Williams,

Thank you for your correspondence of 2 October 2020 requesting advice from the NSW Environment Protection Authority (EPA) regarding the Statement of Environmental Effects (SEE) for the proposed Ethanol Distillery Plant Upgrade (Mod 19) (MP06\_0228-Mod-19) at Shoalhaven Starches, located at 160 Bolong Road, Bomaderry NSW.

Shoalhaven Starches holds Environment Protection Licence No. 883 for Agricultural Processing, Chemical Production, and Chemical Storage activities. In 2009, Shoalhaven Starches received approval under MP06\_0228 to expand its ethanol production from 126 ML/p.a. to 300 ML/p.a.

The EPA has reviewed the following documents:

- *Statement of Environmental Effects – Proposed Upgrade to Ethanol Distillery Plant to Increase Proportion of “Beverage” Grade Ethanol Produced and Other Works* – Cowman Stoddart Pty Ltd – 28 September 2020
- *Report for Manildra Group – Manildra Modification 19 Air Quality Assessment* – GHD – September 2020
- *Environmental Noise Impact Assessment Shoalhaven Starches Proposed Modification to Ethanol Distillery for Beverage Grade Ethanol Production and Other Works* – Harwood Acoustics Acoustical Consulting – 1 September 2020 (NIA).

The EPA understand the proposal is primarily to modify the existing Ethanol Distillery Plant, to allow the production of an additional 100ML of beverage grade ethanol, which involves the following modifications:

- Installation of additional distillation columns and associated processing equipment within the Ethanol Distillery Plant;
- 3 additional Ethanol Storage Tanks;
- 12 additional cooling towers;
- 3 additional product silos;
- Relocation of an approved but not constructed electrical substation;
- Relocation of an approved but not constructed product tanks;

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- 10 additional product tanks;
- Boundary adjustment along Bolong Road.

The EPA has reviewed the submission for the proposed modification, and in this regard provides advice in Attachment A of this correspondence.

If you have any questions about this request, please contact myself or Amanda Fletcher on (02) 6229 7002 or via email at [queanbeyan@epa.nsw.gov.au](mailto:queanbeyan@epa.nsw.gov.au).

Yours sincerely,



29/10/2020

**JANINE GOODWIN**  
**Unit Head Regulatory Operations**  
**Regional South**



## **Attachment A**

### **Noise**

#### **1. Matters to be addressed prior to determination**

##### **a. Assessment of annoying noise characteristics**

The EPA recommends that the Noise Impact Assessment (NIA) be updated to include an assessment of annoying noise characteristics.

Any annoying noise characteristics from the proposed modification need to be assessed in accordance with Fact Sheet C of the Noise Policy for Industry (NPfI). A worst-case noise assessment for the proposed modification should be presented in the NIA, including the assessment of annoying noise characteristics and the addition of any applicable corrections to the predicted noise level. The EPA advises that it has recently measured instances of low frequency noise characteristics from the premises.

Where the proposed modification results in annoying noise corrections that increase the predicted noise levels to greater than the design goal, the proponent needs to include in the NIA the consideration of feasible and reasonable mitigation.

##### **b. Assessment of noise-enhancing weather conditions**

The EPA recommends that the NIA be updated to include an assessment of noise under noise-enhancing weather conditions.

An assessment of potential worst-case noise levels needs to be done under the meteorological conditions stated in Environment Protection Licence (EPL) 883. A worst-case noise assessment for the proposed modification should be presented in the NIA, including the assessment of noise under noise-enhancing weather conditions.

The noise limits in Environment Protection Licence 883 for the premises apply under noise-enhancing meteorological conditions. The NIA needs to demonstrate that under these meteorological conditions the noise limits will not be exceeded.

##### **c. Further details of modelling inputs**

The EPA recommends that more details of the noise modelling inputs is provided in the NIA.

The NIA needs to include modelling details such as: corrections for annoying characteristics (as noted in 'a' above), meteorological conditions (as noted in 'b' above), the modelled source locations and heights, details of the assumed shielding from site structures.

The NIA also needs to provide more details of how the predicted noise levels were derived and how the model was validated to have confidence in achieving the predicted levels. The EPA has performed a simple desktop exercise and cannot reproduce the predicted noise levels.

The NIA states that the design of the plant and equipment will be verified in the final design, however the EPA notes that Mod 12 for the site included similar equipment – i.e. an ethanol distillery and cooling towers. The EPA requests the proponent clarify why validation of noise levels cannot be performed on the existing operational plant.

The sound power levels provided in the NIA are not clear. The ethanol plant in Mod 12 was stated to have sound power level of 90 dB. For Mod 19 it's 98 dB. The cooling towers have the same sound power level in Mod 19 as they did in Mod 12, however the predicted noise

levels from the cooling towers in Mod 19 at the receivers are 1-4 dB lower than Mod 12. Conversely, the predicted levels from the storage tanks and ethanol plant are significantly higher for Mod 19 than they were for Mod 12.

## **2. Matters to be addressed with conditions**

### **a. A cumulative site noise assessment is not included**

The EPA recommends that any conditions for the modification, if approved, require the proponent to conduct a compliance noise assessment post-operation of the modified plant that confirms that the cumulative noise level from the modified plant and the existing plant does not exceed the noise limits for the entire premises. If exceedances of the noise limits are identified, the compliance report should identify feasible and reasonable noise mitigation measures, together with timeframes for implementation to achieve compliance.

The proposed condition will ensure that the operation of the modification in conjunction with the existing operation, will not result in an exceedance of the premises-wide noise limits, inclusive of any applicable meteorological conditions and corrections for annoying characteristics.

The NIA does not include a cumulative noise assessment of all sources on the premises. The NIA includes a design goal for the proposed modification of the EPL noise limit less 15 dBA. The EPA notes that in previous modification assessments the NIA included a design goal of the noise limit less 10 dBA, however for this Mod 19 and henceforth, the level has been increased to 15 dBA. This accounts for the number of previous modifications and to minimise the risk of noise creep. Whilst the EPA considers this a reasonable approach, the proponent needs to demonstrate that cumulative operation of the site will not exceed the noise limits.

## **3. Minor matters**

### **a. The predicted noise levels assume the recommendations are implemented**

The EPA recommends that the proponent confirm that the additional measures in Section 6 are feasible and reasonable and will be deployed if required.

The EPA notes that the NIA outlines additional mitigation measures in Section 6 that could be applied if the modified plant does not perform as expected.

Prior to determination, the proponent should confirm that these additional measures are both feasible and reasonable (including a budget to apply the measures) and will be deployed if they are required to achieve compliance with the noise objectives for the modified plant.

### **b. LA1,1minute noise levels**

The EPA recommends that the NIA include an assessment of the LA1,1minute noise levels from the proposed modification.

EPL 883 includes LA1,1minute noise limits for the premises. Whilst the EPA notes that the premises generally exhibits a steady noise, the NIA does not include an assessment of the worst-case LA1,1minute noise levels from the proposed modification to demonstrate that the noise limits can be achieved.

Predicted LA1,1minute noise levels should be included as well as any necessary feasible and reasonable mitigation measures to ameliorate the impacts.

## **Air Quality and Odour**

### **4. Matters to be addressed with conditions**

#### **a. Floating roofs**

The EPA recommends that should development approval be granted that the following condition be included on the consent:

- The three new ethanol storage tanks associated with the ethanol plant and proposed under development modification 19 be fitted with floating roofs.

### **5. Advisory**

#### **a. Recommendations for the preparation of future assessments**

The EPA acknowledges that based on the information that has been provided in the AQIA, and that no increase in production is proposed, the proposed modifications are unlikely to result in a significant change in odour emissions. Therefore, the EPA is not requesting any additional information or assessment to be provided in support of the proposed modification.

However, the EPA recommends that future assessments must include detailed information regarding the implementation and status of the on-site odour mitigation measures, especially for the major odour sources likely to contribute to ground level concentrations beyond the boundary. Further, future assessments should provide more detail around the assumptions, and data utilised to assess potential offsite odour impacts.