



DOC21/1027113-7

Rebecka Groth
A/Senior Environmental Assessment Officer
Industry Assessments Division
Department of Planning, Industry and Environment
Locked Bag 5022
PARRAMATTA NSW 2124
Email: rebecka.groth@dpie.nsw.gov.au

**EPA Advice on Environmental Impact Statement for proposed Jalco Manufacturing Facility,
Horsley Park (SSD 21190804)**

Dear Rebecka

Thank you for the request for advice from Public Authority Consultation (PAE-32060757), requesting the review by the NSW Environment Protection Authority (EPA) of the Environmental Impact Statement (EIS) for the proposed Jalco Manufacturing Facility at Warehouse 1, Lot 201, Horsley Logistic Park, 8 Johnstone Crescent, Horsley Park.

The EPA's comments on the proposal are outlined in section 1 of this letter and detailed comments are contained within Attachment A and Attachment B.

As requested by the Department of Planning, Industry and Environment (DPIE), this letter forms EPA's consolidated response to the request for review of the EIS for the proposed Jalco Manufacturing Facility (SSD 21190804).

The EPA has reviewed the proposal, including the following documents:

- *SSD-21190804- JALCO MANUFACTURING FACILITY Environment Impact Statement – Urbis Pty Ltd - 8 November 2021*
- *Operational Noise Impact Assessment Version 1.3 – SLR Consulting Australia Pty Ltd – November 2021*
- *Air Quality Impact Assessment Version 2 - SLR Consulting Australia Pty Ltd – September 2021*

The EPA understands the proposal is for the:

- Change of use of warehouse and fit out for operation of a chemical manufacturing facility at Horsley Logistic Park that will operate 24 hours a day, with production to include liquid soap, detergent and home and personal care consumer liquid products.

Based on the information provided, the proposal will require an environment protection licence (licence) under Clause 8(2) of Schedule 1 of the *Protection of the Environment Operations Act 1997* (the POEO Act) for the production of soap and detergent products. Under Sch 1, Clause 8(2) of the POEO Act, an activity requires a licence if there is a capacity to produce more than 5,000 tonnes of soap and detergent a year.

Phone 131 555

TTY 133 677

Locked Bag 5022

4 Parramatta Square

info@epa.nsw.gov.au

Phone +61 2 9995 5555

ABN 43 692 285 758

Parramatta

12 Darcy St, Parramatta

www.epa.nsw.gov.au

(from outside NSW)

NSW 2124 Australia

NSW 2150 Australia

The EPA has reviewed the EIS and notes that the EIS does not provide sufficient information to determine if recommended conditions of approval can be provided. The EPA therefore requests that the following information be provided.

1. Matters to be addressed prior to determination

a. Noise and vibration

The EPA has reviewed the EIS and *Operational Noise Impact Assessment Version 1.3 – SLR Consulting Australia Pty Ltd – November 2021 (NIA)*. The EPA's review of the NIA has identified the need for more information to amend or clarify aspects of this report. The key matters within this report that should be addressed include:

- Ensuring assessment locations meet the requirements of the Noise Policy for Industry (NPfI)
- Providing readable and informative site layout figures
- Providing transparent information about the inputs, assumptions and methods used to calculate noise levels
- Clarification and consideration of the scrubber system and exhausts
- Including an assessment of annoying characteristics to meet the NPfI requirements
- Clarifying the location of mitigation measures

Further details are provided in Attachment A. *Comments on Operational Noise Impact Assessment Version 1.3 – SLR Consulting Australia Pty Ltd – November 2021*

b. Air Quality

The EPA has reviewed the EIS and *Air Quality Impact Assessment Version 2 - SLR Consulting Australia Pty Ltd – September 2021 (AQIA)*. The EPA's review of the AQIA has identified a number of issues that will need to be addressed which include:

- Further information regarding the proposed air quality controls including the wet scrubber, wastewater treatment plant, and negative pressure
- Consideration of the worst case emission scenario
- Analysis of the building's wake effects and impact on dispersion
- Stack design to include possibility for emissions testing
- Further consideration of mitigation measures

Further details are provided in Attachment B. *Comments on Air Quality Impact Assessment Version 2 - SLR Consulting Australia Pty Ltd – September 2021.*

2. Matters to be addressed with conditions

a. Water

The EPA has reviewed the EIS and notes that wastewater will be processed through the onsite Wastewater Treatment Plant before discharge to the sewer system via a Trade Waste agreement.

The EPA would like to remind Jalco Australia Pty Ltd that the facility should be designed so that any contaminants are contained by bunding. Storage of Dangerous Goods are to meet relevant Australian standards and recommendations made within the EIS's supporting Dangerous Goods Design report (Appendix J)

The EPA will be putting the following conditions on the licence to ensure this happens:

- Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997
- The licensee must store all chemicals, fuels and oils used on site in appropriately bunded areas in accordance with the requirements of all relevant Australian Standards

3. Minor matters

The EPA requests that Jalco Australia Pty Ltd clarify the predicted chemical liquid production outputs stated within the EIS, as per the following:

- Section 3.2.4 of the EIS states that in December 2024, 4000T of chemical liquid will be produced, however it is not clear at what rate this is produced e.g. per week, per month etc.
- Section 4.1 of the EIS states 180,000,000 litres of soap and detergent products to be produced per year.
 - o Is this expected to be the production output within the first year of operation or is a gradual increased output expected?
 - o Do the production output values within section 3.2.4 align with the expected output of 180,000,000 litres per year stated within section 4.1?

If you have any questions about this request, please contact Jordan Gavel on (02) 8275 1224 or via email at Jordan.Gavel@epa.nsw.gov.au.

Yours sincerely



10 January 2022

LARISSA BORYSKO
A/Unit Head – Regulatory Operations Metropolitan West
NSW Environment Protection Authority

Attachment A. Comments on Operational Noise Impact Assessment Version 1.3 – SLR Consulting Australia Pty Ltd – November 2021

1. Assessment locations

NIA Chapter 6.1.5 states that “noise levels have been assessed at the most-affected point at each residential property.” However, a review of NIA Figures 3 and 4 indicates that this may not be the case and it is not clear if the requirements of Chapter 2.6 of the Noise Policy for Industry have been met. For example, at NCA 2 Loc 2, the contour maps appear to show areas in the northwest of the property that may receive higher noise levels than where the assessment point was placed. The consultant must ensure that the assessment location has been placed at the worst affected location on or within the property boundary as defined within Section 2.6 of the NPfI.

EPA recommends that the receiver locations are reviewed and updated to be placed according to Section 2.6 of the Noise Policy for Industry and the assessment updated accordingly.

2. Site layout maps

The map of the site layout and noise sources in NIA Figure 2 is not clear, does not contain labels that identify the sources, is of poor image quality and is difficult to read and understand.

There are a number of noise sources listed in Section 6, however NIA Figure 2 and other figures in the NIA are not adequate such that EPA can clearly identify where noise sources are located. NIA Table 4 also lists a number of area sources used in the predictions, however EPA have not been able to identify the location and size of these area sources from any map or image in the NIA. The site layout does not clearly identify the location of openings or doors in the walls or roof.

EPA recommends a revised site layout is provided which includes labels and the source type at an appropriate resolution so that it can be read and understood. The site layout must include all noise sources modelled including point, area and line source types and a label to identify which item of plant or activity they represent. It should also include all details pertinent to an acoustic calculation, such as doors and openings (including penetrations for mechanical ventilation) in a building where noise breakouts.

3. Noise breakout calculations

The NIA provides limited information on noise generated inside the building and how it breakouts of the building. Furthermore there are no details in the assessment which explain how the internal noise breakouts from the building were calculated. The calculation method stated in NIA Section 6.1 (CONCAWE) calculates the propagation of noise outdoors, however this method does not include calculations that consider how noise within buildings breaks out.

The NIA also does not include the acoustic performance assumptions of the walls, roof and doors, the assumptions for internal reverberation and the status of doors and openings (including penetrations for mechanical ventilation) being open or closed.

For example, are the loading bay doors assumed to be open or closed and how would this affect noise emissions? Also the NIA includes a recommendation that a specific plywood lining is fitted to a section of the internal wall in Warehouse 1. However, it is not clear what the performance of the existing wall was assumed to be and what the required performance should be to make the plywood lining an effective control measure.

EPA recommends that the following information is provided:

- **Details of the method and inputs used to calculate noise breakout from the warehouse.**

- The assumptions used for the building envelope performance, including walls, roof, openings (including penetrations for mechanical ventilation) and doors and if doors and openings were open or closed in the calculations.

4. Corrections for annoying noise characteristics (NPfl Fact Sheet C)

The NIA does not appear to have included an assessment of corrections for annoying noise characteristics in accordance with NPfl Fact Sheet C as required by the NPfl.

EPA considers there may be potential for intermittent noise and/or low frequency noise issues associated with the manufacturing plant, and this has not been addressed in the NIA.

EPA recommends that the assessment includes an assessment of corrections for annoying noise characteristics in accordance with NPfl Fact Sheet C.

5. Noise mitigation measures

NIA Chapter 6.3 has included a recommendation for the following:

“Acoustic louvres to the Southern elevation of Liquid Packaging Area, specified as NAP 300 H-line, Fantech SBL1 or equivalent.”

The NIA does not provide the location of this measure, nor is it clear what this control measure is for.

EPA recommends that clarification is provided as to the location of the recommended louvres and the reason they have been recommended.

6. Scrubber System

The Architectural Plans and Air Quality Assessment submitted as part of this SSD application both mention scrubber stacks and the plans appear to show them exhausting at 4 locations in the roof. The NIA does not appear to have considered the scrubber system and exhaust stacks in the assessment.

EPA recommends that the scrubber system is clarified in the assessment and it is updated accordingly.

Attachment B. Comments on Air Quality Impact Assessment Version 2 - SLR Consulting Australia Pty Ltd – September 2021 (The AQIA).

1. Insufficient detail provided regarding controls

a. Scrubbers

The proposed facility will include a Liquid Packaging Area (LPA), Warehouse Area and Bottle Storage Area. Each of these areas will be separated internally to minimise any air exchange between the different zones.

The AQIA states that the LPA will operate under negative pressure and will comprise of automated packing operations with one High Speed Fill Line (HSFL), six Low Speed Fill Lines (LSFLs) and one Bleach Fill Line (BFL). The HSFL will be linked to an air extraction and scrubber system to treat exhaust air prior to being released via a stack. Similarly, air from the LSFLs and BFL will also pass through separate extraction and scrubber systems prior to being released via a stack. It is further proposed that any air from blending activities will be treated using a scrubber system prior to being released via stack.

The modelling has considered emission test data collected at the existing Jalco Smithfield facility. The referenced odour emission monitoring test report (SLR, 2021) describes the monitored emission control as a 'wet scrubber'. As such, the odour emission rates adopted into the assessment for the proposed Horsley Park facility are assumed to be based on the design and emission performance of the wet scrubber technology at the Smithfield facility. However, the proposed scrubber design for the Horsley Park plant is not described in the AQIA. The expected emission performance of the scrubbers has not been discussed.

The nearest sensitive receptor is less than 100 meters from the boundary of the facility. It is therefore critical that the proposed controls are appropriately sized and designed to prevent or minimise air emissions, as far as reasonably practicable.

EPA recommends the AQIA be revised to include;

- i. a description of all aspects of the air emission control system, including fugitive emission capture, treatment and discharge systems.**
- ii. plans, process flow diagrams and descriptions that clearly identify and explain all pollution control equipment should also be included.**
- iii. manufacturers guarantee or similar, to confirm the expected emission performance of the scrubber systems.**

b. Wastewater Treatment Plant

Wastewater generated during operations will be stored and treated onsite via a wastewater treatment plant (WWTP) comprising a series of storage and balance tanks along with a Dissolved Air Flotation (DAF) unit.

The WWTP is identified as a significant source of odour. However, no odour controls are proposed.

EPA recommends the AQIA be revised to include a feasibility assessment of control options for minimising odour emissions from the wastewater treatment plant be considered in a revised assessment. Where controls are not proposed, this must be adequately justified.

c. Negative pressure

In Section 2.2 of the AQIA, it is stated that the LPA (Liquid Packaging Area) will operate under negative pressure. It is noted (from Table 4, note (h)) that 1 air exchange per hour is expected. However, it is not clear if this air exchange rate is sufficient to maintain a negative pressure within the LGA.

EPA recommends further detail be provided on the proposed air extraction system, including discussion on how negative pressure conditions are expected to be achieved and maintained during normal operations.

2. Worst case emission scenarios have not been considered

The modelling predicts odour impacts below the EPA's impact assessment criterion. However, it has not been demonstrated that the modelled scenario is representative of a reasonable worse case. The AQIA has considered a single modelling scenario only. The emissions data adopted into the model is limited to a single round of test data collected at the Smithfield Plant. This single sample is unlikely to account for process variation and changes in the emission profiles at the plant. Furthermore, operations at the Smithfield plant are not directly comparable with the proposed operations.

It is noted that scaling factors have been used to account for the expected increase in operating scale between the proposed plant, when compared with the Smithfield operation. However, it is not known if these scaling factors have appropriately accounted for the achievable emission performance of the scrubber/s, given the expected increase in inlet concentrations (due to the increased number of fill lines).

The vent stacks have been modelled at an assumed velocity of 2 m/s. However, actual operational velocity is likely to be approximately 8.6 m/s. Assumed lower velocities may mean a lower flowrate has been assumed in the modelling, which may mean lower odour emission rates have been assumed in assessing impacts

Additionally, the vent stacks are based on an odour concentration of 59 OU (Table 4 of the AQIA), however odour sampling at the Smithfield premises has measured an odour concentration up to 220 OU (Appendix A of the AQIA). As such the odour emissions from the vents may not be worst case.

EPA recommends the AQIA be revised to demonstrate that the modelled scenario is representative of worst case odour emissions. Where a robust demonstration cannot be provided a sensitivity analysis should be conducted to demonstrate the effect increased odour emission rates has on predicted impacts.

3. Building wake effects not adequately described.

The heights of the scrubber stacks, as shown in the design plans (Appendix C), are just above the roof line of the building, which could impede effective pollutant dispersion due to building wake effects. Section 6.1 of the AQIA states '*It is noted that building wake affect were also included in the model.*'. No further detail is provided. EPA therefor considers the effect of building wake on the modelled dispersion of pollutants from the scrubber stacks has not been adequately detailed.

The nearest sensitive receiver is within 100m of the site boundary. Poor dispersion of odour and pollutants from the scrubber stacks may increase the likelihood of impacts occurring at nearby residential receptors.

EPA recommends the AQIA be revised to include a detailed discussion on the methods used to account for building wake effects on the dispersion of pollutants from the scrubber stacks.

4. Stack design must be considered in final plant design

It should be noted that, should the project be approved, conditions of approval may include requirements to undertake air emission testing on the outlet of the scrubbers. As such, access to an appropriate sampling plane may be required.

EPA recommends the requirements of Australian Standard (AS) 4323.1 – Stationary source emissions, selection of sampling positions, be considered in the final design of the scrubber exhaust stacks.

5. Mitigation measures

Section 9 of the AQIA discusses options for further mitigation and management measures that could be applied to the proposed operations. It is proposed to 'consider positioning emission sources as far as practicable from neighbouring receptors'. The practicability of repositioning emission sources once the facility is operational has not been discussed. It is not known if this proposed mitigation measure could reasonably be applied.

From Figure 14 of the AQIA, the proposed design of the plant has positioned the outlet of the scrubbers in close proximity to neighbouring residential receptors, with the most southern scrubber outlets being within 100m of receptor 19.

EPA considers the location and design of activities and emission points should be carefully considered in the design phase of the planning process to ensure the best environmental outcomes. It is usually more difficult and costly to address odour impacts retrospectively. Where there are opportunities to optimise the design of the facility during the design stage, this should be preferentially considered, rather than waiting until the plant is operational.

EPA recommends the design of the facility be reviewed to ensure all activities and emission sources are optimally located to minimise the potential for off-site impacts occurring.