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**SUNSHINE SUGAR**  
**T/A MANILDRA HARWOOD SUGARS**  
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Our Ref: LE369\_COR

3<sup>rd</sup> June 2022

Environmental Protection Authority  
Locked Bag 5022  
PARRAMATTA, NSW 2124  
Email: [air.policy@epa.nsw.gov.au](mailto:air.policy@epa.nsw.gov.au)

#### To whom it may concern

#### Proposed Changes to POEO (Clean Air) Regulations 2022

Sunshine Sugar welcomes the opportunity to respond to the NSW Environmental Protection Authority's proposed amendments to the *Protection of the Environment (Clean Air) Regulation 2022* (Regulation) and the accompanying Consultation Regulatory Impact Statement (RIS).

#### Key points

- Sunshine Sugar is a major employer in the Northern Rivers (500 direct employees) and has a similar number of cane farming families or entities. It has significant follow on turnover within the Northern NSW communities.
- We are the only Australian owned sugar milling and refining operations left in Australia.
- The EPA has effectively identified that we would have to pay our own costs of upgrade or replacement with no return to our business. The cost impacts of the proposed changes will shutdown our industry. We simply cannot afford the capital costs of the upgrades or replacement, particularly after the recent catastrophic flooding from which we are trying to recover.
- The principal of the proposed change is to introduce a level playing field. It does not do that. Our competitors are overseas owned Queensland based operations. Those operations are subject to less stringent emission levels now versus our current requirements. The proposed changes are simply going to make us significantly less competitive and again would place pressure on our viability.
- Analysis provided in the RIS is subjective containing numerous assumptions, estimations, generalised adjustment factors and use of outdated foreign data sources to extrapolate emissions reduction potential and costs.

Sunshine Sugar is a partnership between Manildra Group and the grower-owned NSW Sugar Milling Co-operative. The Manildra Group is an Australian agribusiness owned and operated by the Honan family in NSW. The NSW Sugar Milling Co-operative is comprised of some 500 cane farming families. Sugar production has been a major industry in northern New South Wales for over 150 years and currently cultivates upwards of 30,000 hectares of sugarcane between the Queensland border and Grafton with sugar mills at Condong, Broadwater and Harwood. The NSW industry produces up to 270,000 tonnes of raw sugar per year as well as associated by-products molasses, bagasse, mill mud and ash. The industry employs some 500 people directly and another 1000+ people indirectly with a turnover of \$250 and contributes \$500m to local economy. Harwood Mill is the longest continuously running sugar mill in Australia and has a co-located refinery that is the only 100% Australian owned sugar refinery.



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While Sunshine Sugar is not opposed to mitigating the NSW populations exposure to toxic air pollution, the relatively small size and amount of industry in the region captured by Part 5 of the proposed Regulation would be disproportionately impacted and at a local level based on the size of the Harwood boiler the reductions of emissions are unlikely to provide any significant improvement in air quality identified by EPA as a key driver for the proposed changes. Furthermore, it is impractical to implement the regulation on small boilers. The required plant upgrades, ongoing maintenance and operational costs to achieve the proposed emissions reduction would impose unrecoverable costs and timeframes that would decimate the sugar industry in NSW.

The EPA claims the proposed change are to *"level the playing field"* yet competitors in other states aren't subject to the same requirements. As a globally traded commodity sugar has experienced prolonged depressed prices which has put the industry under enormous pressure to remain competitive and viable. Queensland has 20+ sugar mills currently operating. More than half of these have licensed particulate emission limits of 750 mg/m<sup>3</sup> or higher, an enormous difference to the 250 mg/m<sup>3</sup> limit Harwood Mill is currently subject to as a group 3 plant under the NSW Clean Air Regulations. The Regulation changes proposed by NSW EPA would impose an obligation to lower emissions even further from those in QLD and greatly disadvantage the only remaining Australian owned and operated sugar mill and refinery in the country.

The NSW sugar industry has been significantly impacted by the catastrophic flooding event right across the Northern Rivers in February and March 2022. Uninsured losses for the business and growers are in the tens of millions and will take years to recover from. To reiterate the financial burden to upgrade plant to achieve the proposed emissions reductions would decimate the industry in NSW. The RIS notion that *'not requiring emissions reductions from existing premises also disadvantages new players'*, assumes there will be new market participants. It would be unviable for any new market participants to enter the sugar industry in NSW. New players to any other industry are likely to have more of an advantage with the proposed changes with lower costs commission on a greenfield site compared to older plant that will require retrofitting.

According to the NSW government rural air quality monitoring network there have been no reported exceedances of the maximum goals or standards for any of the six key air pollutants established under the National Environmental Protection Measure (NEPM Ambient Air Quality) in the North Coast LLS which covers Harwood Mill and Refinery. The published data identifies a small number of days in the last six years where these were exceeded in some regional areas however, on those occasions, and consistent with recent NSW Annual Air Quality Statements, the primary cause of exceedances in the regions is primarily attributed to natural events, bushfires or hazard reduction burns. Sunshine Sugar advocates that the relatively small size and amount of industry on the Northern Rivers and other Non-GMR areas subjected to the proposed changes to Chapter 5 would be disproportionately impacted, unable to absorb the costs that the Regulation change would impose and are unlikely to deliver any meaningful improvement in ambient air quality. The benefit cost ratio analysis in the RIS validation this somewhat with a negative Nett Present Value for sources in NSW Non-GMR locations.

The boiler at Harwood is a NEI John Thompson bagasse and woodchip fired membrane tube boiler that was commissioned in 1981. It was designed to achieve compliance with the 250mg/m<sup>3</sup> particulates limit under the Clean Air Regulations. It produces steam for process, and electricity production that is consumed mainly on site with some excess power directed to the grid. Carbon emissions are negligible with the energy generated at Harwood derived from over 95% renewables. The boiler combustion and dry cyclone emissions control systems has been refurbished over the last few years at a cost of \$1.5million. Efficiency upgrades were also completed in 2021 with the commissioning of a flue gas economiser to preheat feedwater, resulting in an overall 6% efficiency gain at a cost of \$1.1m. These refurbishments while necessary to improve emissions and efficiency put an enormous strain on already scarce capital.





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The Harwood boiler supports both Mill and Refinery operations which except for a 2-week annual shutdown period must operate 24/7 year round to fulfil supply contracts. All work on the boiler and emission control systems needs to be completed within this window. The disruption to normal business operations retrofitting equipment of the scale and type proposed by the RIS would be enormous.

The RIS nominates a number of technically feasible control options including electrostatic precipitators (ESP) and bag filters (BF). Abatement costs are derived and adjusted from US EPA Air Pollution Cost Control Manuals published in December 1998. It is reasonable to expect that material and labour cost have increased and significant technology improvement have been undertaken in equipment construction and material technology from that time.

The solutions are questionable and will require significant surface area to provide appropriate filtration and so they are generally difficult and expensive to integrate into an existing facility. It is also well documented that the variability of solids particle size typical in biomass boilers flue gas also present performance challenges for these control methods.

Sunshine Sugar estimates that integrating nominated control measures will be around \$15-20 million and will require alternate energy sources (steam and power) to be available for up to 4 months during construction work, as the boiler is the only source of production energy on the site. Operation and maintenance costs will increase due to the limited life of baghouse consumables and higher energy costs comparative to current control methods.

Further, the RIS nominates that four sources in the current group 3 and 4 categories in NSW that emit 98% of total emission. In Table C23 p86, cost per ton of abated emissions is nominated, with an average of \$20,128. The reference table does not provide enough information to know if the source reduced emissions from Group 3 to Group 6, 3 to 5 or some other reduction combination. Consequently, derivation of CBA is difficult to comprehend and questionable.

The RIS identifies that more particle pollution is caused by wood smoke during winter in Sydney than any other source yet the EPA proposes to maintain the existing regulation i.e. no change on the basis that substantial cumulative reductions that have already been achieved will be sustained and emissions will continue fall as old heaters are replaced. This same logic should be applied to the plant in group 3 and group 4 even if only considering their relatively small contribution to overall particle pollution. There is a limit to the level and capability to refurbish boilers and emissions control equipment and they will need to be replaced due through natural attrition and lack of serviceable parts. The RIS on p34 appears to agree with this stating that *'emission controls on older sources that have not already upgraded are now 20–40 years old and approaching the end of their serviceable life'* and that *'emissions are expected to fall over time'*. Sunshine Sugar urges EPA to maintain that logic and adopt option 1 to retain Part 5 the existing Regulation.

Regards

Chris Connors  
Chief Executive Officer