

Before the Hearings Panel of the Greater Wellington Regional Council

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of a submission by Regional Public Health, Hutt Valley District Health Board

ON an application by NCI Packaging (NZ) Limited **(WGN190198)** Wellington Regional Council to discharge contaminants to air associated with the operation of a steel and aluminium can manufacturing plant, which includes coating processes

COPY OF ORAL SUBMISSION OF DR JILL MCKENZIE

ON BEHALF OF: Regional Public Health, Hutt Valley District Health Board

Date: 04 August 2021

Qualifications and Experience

1. My name is Jill McKenzie. I am employed by Regional Public Health (Hutt Valley District Health Board) and designated as a Medical Officer of Health for all Health Districts, including the Hutt Valley Health District. I have worked as a Medical Officer of Health since 2007.
2. I am a Fellow of the New Zealand College of Public Health Medicine which qualifies me as a Specialist Physician, currently vocationally registered in Public Health Medicine in New Zealand.

Introduction

3. Regional Public Health (RPH) is part of Hutt Valley District Health Board and is responsible for delivering a wide range of public health services across the greater Wellington region. The Ministry of Health requires RPH to reduce potential public health risks by various means, which includes making submissions on resource consent applications in the Greater Wellington region where there could be a risk to public health. In this case RPH neither supports nor opposes the application but wishes to ensure that the public health risks associated with the application are adequately considered.

Specific Matters with a focus on the Discharge of VOCs

Odour

4. RPH support the additional work undertaken by NCI to assess odour impacts, i.e. the field odour survey undertaken between 10 August 2020 to 8 September 2020, which meets the MfE Good Practice Guide for Assessing and Managing Odour. Odour dispersion modelling is less appropriate for assessing the impact for an existing consent and for the short duration of odours experienced in the surrounding area. The field odour survey has shown that NCI are a contributor to the odour nuisance experienced by nearby residents, with 3/4 'odour hours' likely attributed to NCI, due to wind direction or closest proximity on a calm day.
5. We note that the biofilter trial was undertaken from late June 2020 for a period of 11 weeks on the Internal Lacquer Assembly Stack and was considered to be indicative of the ability to reduce odour at the discharge outlet. Following the trial, review of the main VOC emissions has demonstrated that they are predominated by certain VOCs from the base coat application and oven emissions. These processes are discharged via the Line 2 Stack. So during the odour assessment the main discharge of VOCs was not subject to the biofilter treatment.
6. We acknowledge that NCI Packaging are not the only contributors of VOC emissions in the area, but that as a business that discharges VOCs, there is a need for additional mitigation to be undertaken.

Health Effects

7. The applicant has modelled maximum ground level concentrations for the identified VOC stack emissions and compared these against relevant health guidelines for both short term (1 hour average) and long-term (annual average) exposures. When there is no relevant New Zealand standard or guideline, preference has been given to use of the OEHHA (Californian Office of Environmental Health Hazard Assessment) health level guidance, and when necessary the ESL (expected sensitivity levels) of the TCEQ (Texas Commission on Environmental Quality) guidance – this was the approach agreed at the previous resource consent hearing and is in line with the MfE Good Practice Guide for Assessing Discharges to Air from Industry.
8. The predicted concentrations of specific individual VOCs are below the health guidelines for short term acute (1 hour average) and long term chronic (annual average) for non-carcinogenic health impacts. We note that the NZAAQ Guidelines (2002) include an annual average precautionary guideline value for benzene as a carcinogen, but we are unable to see this modelled in the AEE. However, for the previous consent application, annual average benzene levels were predicted by dispersion modelling to be a maximum 4% of the benzene guideline level (3.6 ug/m³ annual average). As such, we have made an assumption that as the level of production remains constant since the previous consent AEE, then the maximum level of benzene remains well below the NZAAQ guidelines value.
9. RPH note that the discharges contain a number of different VOC emissions and that for some of these chemicals, the knowledge around their health effects and interactions is more limited than for others. Therefore it is appropriate that the level of VOCs emitted are minimised as a precautionary approach to protect health. Furthermore, we know that the applicant is not the only emitter of similar VOCs in this area and the background concentration of VOCs is not quantified.
10. We support the use of biofilters as a method of not only reducing odour impacts, but also to reduce the concentration of discharged VOCs. Reduction of the level of VOC discharged is better practice than mitigation that solely relies on dilution, such as with increased stack heights.

11. A precautionary approach will also involve use of robust controls such as ongoing regular maintenance of the filters and contingency plans for malfunction of the filters, e.g. systems to alert of blockages.
12. In addition, controls to minimise potential fugitive emissions will also be important to meet a precautionary approach.
13. We note that the modelling for the increase in stack height has only been presented for impacts on odour. It is likely that the VOC concentration levels would remain the same as or less than the level currently predicted for a lower stack height. However, modelling of the discharge concentrations for any proposed increase in stack height could be used to inform any future work to estimate background ambient VOC levels and the cumulative impact with other similar discharges. This modelling could also determine if the increased stack height has any potential to change VOC exposure for other areas, such as for the Kingsley Heights area.

Conclusion and Review of Consent Conditions

14. VOC discharges to air from paint and packaging plants are wide ranging, odorous and at certain levels toxic to health. In the absence of any quantified, comprehensive cumulative assessment, or any consideration of potentially synergistic effects, RPH recommend advocating for a precautionary approach with consent conditions including:
 - best practicable option abatement equipment, which we agree in this situation is the installation of the biofiltration treatment;
 - contingency measures to identify when equipment has failed, for example an alarm if the biofilter stops working;
 - ongoing careful monitoring and maintenance of all plant and abatement equipment to minimise discharges to air;
 - effective management of potential fugitive emissions.
15. RPH support the comment contained on page 8 of the Report from Jeff Bluett (Appendix 1 Officer's Report) – "this situation highlights the importance of odour mitigation at the NCI Plant and the importance of identifying and mitigating other significant odour sources in the area". RPH note it is also important to identify and mitigate the concentrations of VOCs discharged from all significant sources in the area, as part of a precautionary approach.

16. We support or recommend changes to the proposed consent conditions as per the Officer's S42A report; and with reference to the Statement of Evidence of Jennifer Simpson, Air Quality, 26 July 2021; and the Statement of Evidence of Rhys Kevern, 26 July 2021, as follows:

- Condition 4 – we support the Officer's recommendations for the preparation, submission and implementation of the AMOP within 3 months. We note that this plan must include the design and maintenance parameters of the biofilter, which addresses, in part, our recommended precautionary approach.
- Condition 8 – we support the Officer's recommendations for the Operations and Maintenance Manual. This manual will contain the necessary maintenance and warnings of any failure, of emissions treatment systems.
- Condition 14 – we support installation of the biofilter within 4 months. It is noted that indicative timeframes for installation provided to the applicant are a minimum of 4 months. We note the applicant has suggested an alternative measure of effectiveness as the biofilter is not the only means for meeting Condition 3. Overall the aim is to manage the impacts of the VOC discharges effectively, and if the initial biofilter implementation cannot meet this requirement, then the next phase in the AMOP needs to be implemented.
- Condition 16 – we support the closure of external factory doors to manage the risk of fugitive emissions that potentially are not captured by the extraction system. This combines the officer's and the applicant's suggested changes.
- Condition 18 – we support the requirement for an independent field odour observation survey to be undertaken after 6 months but less than 9 months.
- Condition 21 – we support the review of the current odour control adequacy within 10 months. RPH recommend that if additional odour control is necessary that the utilisation of expanded biofiltration (or equivalent treatment) of additional process air flows is prioritised over only implementing an increased stack height. The reason for this is that treatment to reduce emissions is preferred over the use of dilution, as a precautionary approach. This also fits with Appendix 1 of the Officer's Report (Report of Jeff Bluett), Section 9 page 10, regarding an odour mitigation 'Stage 1B' to increase the capacity of the biofilter.
- Conditions 27 and 28 – We support regular ongoing communication with the affected community in a format that is guided by the community. RPH see the

communications plan as an important agreement between NCI Packaging and the local community.

17. Thank you for the opportunity to talk to our written submission and the further documentation provided for the hearing. I am happy to take any questions from the panel.