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solutions for your environment

9 August 2019

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Dear Claire

NCI DISCHARGE TO AIR: TECHNICAL REVIEW OF ASSESSMENT OF ENVIRONMENTAL EFFECTS

1.0 Background

NCI Packaging (NZ) Limited (NCI) has applied to Greater Wellington Regional Council (GWRC) under the application WGN190198 to renew an existing discharge to air permit that expires on 2 August 2019 (GWRC consent number WGN110219). NCI manufactures and prints aluminium and steel cans in a plant located at 62-66 Montgomery Crescent, Upper Hutt. These processes result in the discharge of volatile organic compounds (VOCs) and odour to air. GWRC has engaged Pattle Delamore Partners Limited (PDP) to undertake a technical review of the assessment of environment effects submitted as part of NCI's resource consent application.

NCI submitted the AEE[1] to GWRC on 26 February 2019. The AEE was supported by a separate dispersion modelling report[2]. PDP undertook Stage 1 of the review of these reports for the purpose of advising GWRC on the completeness of the application and if further information was required. In Stage 1 of the review PDP considered if the information provided by NCI is complete, robust and adequate to support the AEE. The following specific issues were addressed in PDP's review:

- Matters identified in pre-application consultation;
- Contaminant monitoring;
- Dispersion modelling and the assumptions/inputs used in the model;
- Odour assessment approach; and
- AEE conclusions.

Following the Stage 1 review of the AEE and modelling reports, PDP issued GWRC a memorandum[3] that detailed further information (as per section 92(1) of the Act (RMA)) required to allow PDP to complete

[1] Assessment of Environmental Effects of Air Discharges from NCI Packaging Can Manufacturing Facility, Rhys Kevern, NCI. 31 January 2019.
[2] Air Dispersion Modelling Assessment, NCI Packaging. Jacobs February 2019. Report number IZ119600-RPT-1. And NCI Packaging (NZ) Limited, Upper Hutt Air Discharge Monitoring, November/December 2018, Issue II. Source Testing New Zealand Limited. 31 January 2019.
[3] WGN190198 NCI Air Discharge S92 Request for further Information: Email Jeff Bluett (PDP) to Hugh Dixon-Paver (GWRC) 13 May 2019.

Stage 2 of the AEE review (See Section 2.0 below). In response to the RFI NCI provided a letter[4] which contained answers to the questions posed, a memorandum summary of the application, CALPUFF output files and the appendices of the air discharge monitoring report[5].

GWRC and PDP staff undertook a site visit to the NCI plant on 18 June 2019. The purpose of undertaking the site visit was to allow GWRC and PDP staff to become familiar with the location of the plant, its processes, the type and method of contaminant discharges and the sensitivity of the receiving environment.

2.0 Scope of Technical Review

GWRC defined the scope of Stage 2 – Technical review of the AEE as reviewing the technical aspects of the application, including any further information that relates to the AEE of a discharge of contaminants to air. Matters of particular relevance include potential human health effects, odour generation and effects, use of particular assessment tools, methods, techniques and assumptions (including: dispersion modelling; odour-assessment; mitigation and monitoring) and the relevant legislative requirements (including NESAQ) and guidelines.

Specially GWRC sought PDP's opinion on the following issues:

- Is the applicant's approach to the assessment of effects of the discharge, including the methods and tools used, appropriate for the activities undertaken on site?
- Have the potential effects been appropriately considered, described and mitigated? If not, what operation and management procedures or other mitigation measures could/should be undertaken?
- Confirm (or otherwise) the Applicant's conclusion on the scale/magnitude of potential adverse environmental effects of the discharge as detailed in the AEE.
- What, if any, monitoring and/or reporting should be undertaken?
- What, if any, conditions could be applied to a permit if/when granted?

This letter presents the outcomes of PDP's technical peer review of the assessment of environment effects.

3.0 Description of the Process and Emission of Contaminants

The two key manufacturing processes carried out at the plant which discharge contaminants to air, the lacquering and printing of cans, are described well in Section 3 of the AEE. The description provided in the AEE ties in well with the observations made during the site visit.

The two types of air contaminants that are discharged from the plant's manufacturing processes are VOCs (the solvents from the lacquers and inks) and odour. NCI engaged Source Testing New Zealand to undertake an extensive stack testing monitoring programme to quantify the emissions of VOCs and odour[5]. This testing provided very good quality contaminant and exhaust flow information for the products most frequently used in the plant's processes. The emissions from the less frequently used products were estimated using a mass balance approach based on chemical composition as detailed in the

[4] Further Information Response, Air Discharge Permit WGN190198. Rhys Kevern, NCI 28 June 2019.
[5] NCI Packaging (NZ) Limited, Upper Hutt. Air Discharge monitoring, November/December 2018 (Issue II). January 2019.

relevant Material Safety Data Sheets (MSDS). The emission and exhaust flow data were then used to configure the dispersion model used for the assessment.

The method of emissions of contaminants from manufacturing Line 1 (manufacturing) and Line 2 (lacquering and printing) are accurately described in Section 7.4 of the AEE.

The factory uses four 380 kW gas fired heaters for space heating during winter. The rate of contaminant emissions and exhaust flow characteristics are accurately detailed in Section 5.4 of the AEE.

In summary, the applicant has provided a comprehensive and robust description of the processes undertaken and the type and amounts of contaminants discharged into air from the site.

4.0 Description and Sensitivity of the Receiving Environment

The applicant describes the land use categories (light industrial and residential) and topography of land that surrounds the plant in Section 2.1 of the AEE and notes that the land-use to the northwest of the site along Mountbatten Grove is more sensitive being residential. The site visit confirmed the applicant's description of the receiving environment. PDP conclude that the receiving environment is of moderate (industrial area) to high (residential area) sensitivity to the discharge of contaminants discharged from the plant.

5.0 Method Used to Assess the Effects of the Discharge

The applicant used dispersion modelling to assess the ground level concentrations (GLCs) of VOCs and odour from the manufacturing processes and the combustion products from the gas fired heaters. The dispersion model chosen for the project (CALPUFF) and the applicant's configuration and running of the model matches PDPs expectations of accepted good practice. The data used to configure the model for emissions from the manufacturing processes was sourced from the stack testing programme and is considered good quality by PDP.

PDP's review confirms the applicant has compared the modelled GLCs of odour and combustion products against the correct assessment criteria sourced from New Zealand's air quality standards, guidelines and relevant good practice guidance. The assessment criteria used for the VOCs were sourced from overseas regulatory bodies. PDP concurs with this approach and the hierarchy of sources used by the applicant to identify relevant assessment criteria.

The impact of odour emissions from the site was also assessed by undertaking a detailed analysis of the odour complaints made to GWRC about NCI's operations between January 2016 and April 2019. The complaints were considered alongside the onsite wind data recorded at the time of the complaints and NCI attempted to identify the most likely cause of the odour incident and any mitigation actions that may have been taken.

6.0 Potential Effects of Discharge

The applicant's modelling files and results data for VOCs, odour and combustion products were reviewed by PDP and checks completed on the following aspects of the assessment:

- Emission rate calculations;
- Meteorological data;
- Dispersion model configuration files;
- Dispersion model results files; and
- Results analysis spreadsheets.

These checks confirmed that the model had been configured accurately to represent the site's emission sources and that the results presented in the report reflected those contained in the results files.

PDP note that the use of the odour complaints to assess the impact of odour emissions was undertaken in a way that is consistent with the recommendations provided in the Ministry for the Environment's (MfE) Good Practice Guide on Assessing and Managing Odour. PDP consider complaints analysis added significant value to the AEE and provided key information upon which the conclusions are based.

The applicant did not specifically assess cumulative impacts (site, nearby sources and background contaminants). However, given the nature of the discharges from the site, the way in which the site discharges were assessed and the activities undertaken in the surrounding area, PDP do not consider an assessment of cumulative effects would change the conclusions reached by the applicant.

In summary, PDP conclude that potential effects of the discharged of contaminants to air from the NCI site have been appropriately considered and described.

7.0 Conclusion on the Effects of the Discharge

The key conclusions of the applicant's assessment are that:

- Maximum modelled GLCs of VOC are less than 20 % of the relevant assessment criterion and therefore any adverse effects will be less than minor;
- Maximum modelled GLC's of odour exceed MfE's recommended odour-modelling guideline value for highly sensitive receptors (2 OU/m^3) in a small area of the residential houses located to the north of the site;
- On some occasions when odour complaints have been made the NCI site was upwind of the location of the complainant; and
- Maximum modelled GLCs of combustion products are well below the relevant assessment criteria and therefore any adverse effects will be less than minor.

PDP's review of the information supplied by the applicant leads us to concur with the conclusions drawn in the AEE. In summary PDP conclude that the effects of the discharge of VOCs and combustion products will be less than minor, while the discharge of odour on occasions may cause effects than are minor or more than minor.

8.0 Mitigation, Monitoring and Reporting

Prior to NCI gaining the current air discharge consent, the plant's discharge stacks were extended to a height of 25 m above ground level. The purpose of increasing the stack height was to improve the dispersion of contaminants discharged from the plant. To date, this has been the key mitigation measure adopted by NCI. The higher stacks have been demonstrated to be at least partially effective as the frequency of complaints has reduced following the stack height increase. The applicant discusses further mitigation measures in Section 11 of the AEE. The measures considered and comments made by the applicant include:

- **Production rate adjustments.** The rate at which the factory's machines produce, varnish and print cans is fixed. It is not possible to lower production rate of a particular product. However, NCI do note that as a "*last resort*" a production line can be shut down but go on to say there is a 15-20 minute lag to the halting of emissions as the cans on the production line would have to complete the process;

- **Using varnish and inks with alternative formulations or are water based.** NCI are keeping a watching brief on these developments. But the company notes that an extensive testing programme would need to undertaken before new varnishes or inks could be used;
- **Air discharge control technology.** NCI have trialled or considered the following emission reduction methods; UV-Ozone unit, after-burner and carbon filtration. NCI conclude that the discharge rate of VOC's is not particularly high and the high installation, operation and maintenance costs of emission reduction technology is unwarranted and
- **Further stack height increases.** NCI consider that a good improvement has been achieved with the current 25 m stacks and that further stack height increases could increase the risk of more distant hillside housing (e.g. Montgomery Heights) being impacted.

The PDP consider that the additional mitigation measures discussed by NCI cover the available options. PDP also consider that the conclusions drawn by NCI on each of these mitigation measures are reasonable, pragmatic and reflect the engineering challenges and costs associated with each of these options.

NCI are currently running or have on occasions undertaken the following monitoring programmes:

- **Continuous on-site monitoring of wind speed and wind direction.** NCI undertake wind monitoring to aid with the investigation into and response to any odour complaints. The NCI data can be made available to GWRC if requested;
- **Ambient odour investigations.** NCI note that two NCI staff are trained in ambient odour investigations and that these staff are used to aid with the investigation into and response to any odour complaints as well as sometimes establishing background odour levels; and
- **Stack contaminant discharge testing.** NCI have recently undertaken an extensive stack contaminant discharge and exhaust gas monitoring programme. This data has been used to quantify the amount of various VOCs and odour being discharged from the plant. The contaminant emission rates and exhaust gas characteristics have been used to configure the dispersion model used to assess the impacts of the discharged contaminants.

PDP consider that NCI's current monitoring programme covers the high priority variables which help determine when, where and to what degree odour impacts occur. The effective use of this data should flag to NCI when additional management or control measures might be required.

In summary, PDP conclude that NCI's current mitigation measures and monitoring programmes match the scale of the activity and significance of the current impacts of the plant. However, to ensure that the current mitigation measures and monitoring programmes remain effective or to flag to NCI when they might need to be updated, PDP recommend NCI be required to review and enhance their Adaptive Management Odour Plan (AMOP) and Operations and Maintenance Manual (OMM).

PDP recommend that NCI are required to implement a reporting programme to complement the monitoring they undertaken and to enable the company to transparently demonstrate compliance with the conditions of consent (See Section 9.0). PDP recommend that NCI be required by conditions of consent to report on:

- On site wind conditions (when requested by GWRC);
- Odour complaints received and action taken;
- The type and amount of varnish and inks are used on site each day, each month and each year;
- Development of, review of, and amendments to the AMOP; and

- Development of, review of, and amendments to the OMM.

9.0 Consent Conditions

A comprehensive and effective set of consent conditions was developed for NCI's operation under GWRC's discharge permit WGN110219. The applicant has proposed a set of consent conditions for the current consent application, which are based on the conditions ofWGN110219 but are significantly simplified. PDP recommend that if NCI's consent application is granted the set of conditions for the new consent be modelled closely on WGN110219. PDP consider that to ensure any potential adverse effects are adequately mitigated the following issues need to be included and addressed in the consent conditions:

- Definition of the processes that discharge contaminants to air that are allowed under the consent;
- Set manufacturing process limits - (e.g. maximum weight of varnish to be used per hour);
- Set heating fuel use limits;
- Definition of the method of discharges – (e.g. minimum stack heights);
- Operation and maintenance of the factory's ventilation system;
- No objectional or offensive odour effects beyond the boundary of the property;
- Purpose, content, approval, annual review of, and amendments to the Adaptive Management Odour Plan;
- Purpose, content, approval, annual review of, and amendments to the Operation Management Manual;
- Emission testing of volatile organic compound and odour;
- Odour Complaints: odour source identification, investigation and reporting;
- Incident and complaint reporting;
- Communications plan;
- On site monitoring of meteorology; and
- Annual reporting to GWRC.

A full set of proposed draft consent conditions are provided in Appendix A.

10.0 Summary of Review Outcomes

PDP has undertaken a technical review of NCI's assessment of effects from the discharge of contaminants to air from the manufacture and printing of aluminium and steel cans. Matters of particular relevance to the review included the methods, data and guidelines used to undertake the assessment, potential human health effects of the discharge of VOCs and potential odour impacts. The key findings of PDPs review are:

- The applicant's approach to the assessment of effects matches accepted good practice for the scale and potential adverse effects of the proposed activity;
- The potential effects of the proposed discharge of contaminants to air from the NCI site have been appropriately considered and described;
- The effects of the proposed discharge of VOCs and combustion products will be less than minor, while the discharge of odour on occasions may cause effects than are minor or more than minor;

- NCI's current mitigation measures and monitoring programmes match the scale of the activity and significance of the current impacts of the plant. However, to ensure that the current mitigation measures and monitoring programmes remain effective PDP recommend that NCI review and enhance their Adaptive Management Odour Plan (AMOP) and Operations and Maintenance Manual (OMM); and
- Conditions can be attached to the consent that should ensure any potential adverse effects are adequately mitigated and to ensure health and odour effects are minor or less than minor.

11.0 Notification

PDP have reviewed the current application by NCI. We are satisfied that the information provided by the applicant is complete and sufficiently robust to make a recommendation on notification. Having reviewed the AEE PDP concur with the applicant that health impacts from the discharge of VOCs are likely to be less than minor. However, we have concluded that the discharge of odour from the plant may have adverse effects which are more than minor (s95E RMA) on those people living or working in close proximity to the NCI plant. The strongest evidence of this impact is the analysis of the complaints record and the onsite meteorological data undertaken by NCI. This shows there has been approximately 20 complaints over the last three years and that the plant has been up wind of the complainant's location on a number of occasions. Because PDP conclude that the effects of the discharge of odour may be more than minor, PDP consider that the application should be notified. PDP consider that the extent of the potential impacts is limited in a spatial sense and limited to amenity impacts. Therefore, PDP suggest that it is appropriate to use the limited notification pathway (S95B RMA) to process the NCI application.

NCI appear to acknowledge the sensitivity of the receiving environment and potential impact of odour discharged from the site and have requested that the application be processed using the limited notification pathway. (Section 12 of the AEE). NCI requested that the limited notification include Montgomery Crescent and Mountbatten Grove.

The 2013 application was processed by the limited notification pathway. In 2013 GWRC identified the potentially affected/interested persons as being all property owners/occupiers by using a 200 metre radius of the discharge stacks. This radius included all addresses from which odour complaints regarding NCI odour had been received. GWRC considered that odour complaints were a representative measure to determine the extent of adverse effects of the discharge. PDP consider the identification of the potentially affected parties using a 200 metre radius of the discharge stacks was a pragmatic but simple approach.

To identify the potentially affected parties for the limited notification of the 2019 NCI application, PDP consider it appropriate that the following factors are considered:

- The applicant's assessment of the extent of the predicted odour plume impact; and
- The variable sensitivity of the environment surrounding the plant; and
- The limited notification remains a consistent approach previously undertaken by Council.

MfE recommend an odour assessment guideline of 2 Odour Units (OU) per cubic metre for a residential zone. PDP consider the risk of an odour complaint occurring beyond the area in which odour concentrations are below 1.5 OU/m^3 is low. The applicant's modelling assessment shows that the odour plume from the plant is generally below 1.5 OU/m^3 beyond 250 m of the plant. For the residential properties to the north and north-east of the NCI plant PDP recommend a buffer of 250 m from the plant's main stack is used to identify the potentially affected parties for limited notification. PDP notes that this area encapsulates all the properties on Mountbatten Grove and captures all the properties from which the odour complaints have been made.

Due to the lower sensitivity of the industrial neighbours and absence of complaints from these neighbours, PDP recommend that the limited notification capture the industrial properties which border the NCI site and the industrial properties adjacent to or within 100 m of the NCI plant.

If this recommendation were accepted the areas for limited notification would be as shown in Figure 1:

- Red zone – residential properties within 250 m of the NCI stack. Where the red line intersects a property the entire property (and affected persons within) shall be deemed part of the limited notification.
- Blue zones - industrial properties adjacent to NCI or within 100 m of the NCI plant.

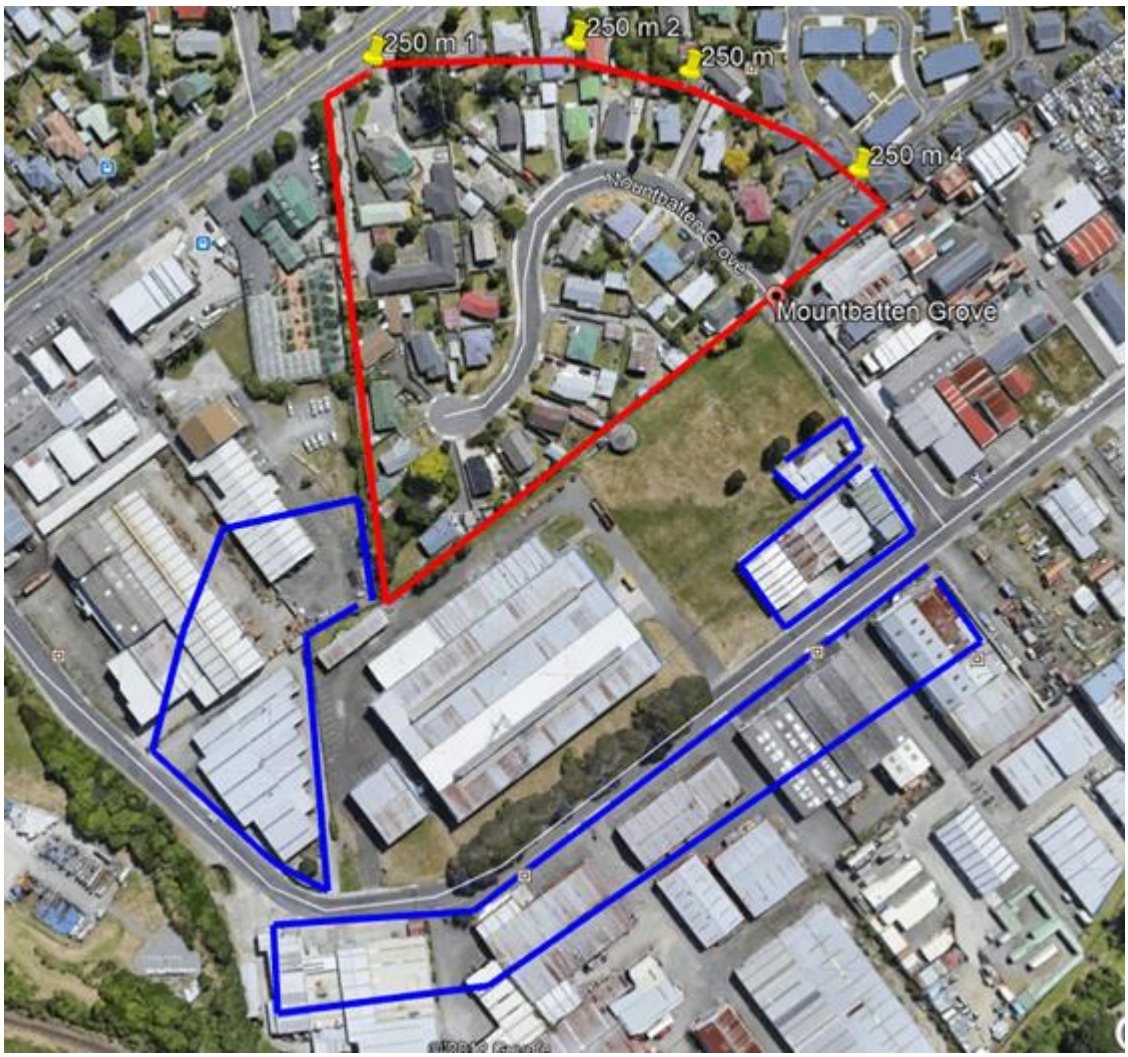

Figure 1. Recommended areas for limited notification.

12.0 Closing

Thank you for the opportunity for PDP to assist GWRC with the review of NCI's air discharge AEE. We trust the review meets GWRC's needs, expectations and will be helpful to the decision-making process. Please let us know if you have any questions or comments on the review.

13.0 Limitations

This report has been prepared by PDP on the specific instructions of Greater Wellington Regional Council for the limited purposes described in the report. PDP accepts no liability if the report is used for a different purpose or if it is used or relied on by any other person. Any such use or reliance will be solely at their own risk.

Yours sincerely

PATTLE DELAMORE PARTNERS LIMITED

Prepared by

Jeff Bluett

Technical Director – Air Quality

Reviewed and Approved by

Steve Pearce

Technical Director – Environmental Management

Appendix A: Proposed Consent Conditions.

General conditions

1. The location, design, implementation and operation of the discharge shall be in general accordance with the consent application and its associated plans and documents lodged with the Wellington Regional Council on 31 January 2011, and further information received on:

- Assessment of Environmental Effects of Air Discharges from NCI Packaging Can Manufacturing Facility, Rhys Kevern, NCI. 31 January 2019.
- Air Dispersion Modelling Assessment, NCI Packaging. Jacobs February 2019. Report number IZ119600-RPT-1. And NCI Packaging (NZ) Limited, Upper Hutt Air Discharge Monitoring, November/December 2018, Issue II. Source Testing New Zealand Limited. 31 January 2019
- Further Information Response, Air Discharge Permit WGN190198. Rhys Kevern, NCI 28 June 2019.

Where there are contradictions or inconsistencies between the application and further information provided by the consent holder, the most recent information applies. In addition, where there may be inconsistencies between information provided by the consent holder and conditions of this consent, the conditions apply.

Note: Any change from the location, design concepts and parameters, implementation and/or operation may require a new resource consent or a change of consent conditions pursuant to section 127 of the Resource Management Act 1991.

2. The consent holder shall ensure that a copy of this consent and all documents and plans referred to in this consent, are kept on site at all times and presented to any Wellington Regional Council enforcement officer on request.

3. There shall be no discharges to air that are noxious, dangerous, offensive or objectionable at or beyond the legal boundary of the site property from which the consent holder operates, as determined by an enforcement officer of the Wellington Regional Council.

Note: For the purposes of this consent, the boundary of the property from which the consent holder operates is the outer perimeter of the land bearing the legal description Lot 1 DP 30717, Lot 1 DP 28552 and Lots 11-14 &16 DP30232.

Adaptive Management Odour Plan (AMOP)

4. The consent holder shall prepare and submit an Adaptive Management Odour Plan (AMOP) to the Manager, Environmental Regulation, Wellington Regional Council, for approval.

Purpose of the AMOP

The purpose of the AMOP is to ensure the consent holder has management procedures and practices to both proactively and reactively meet condition 3 at all times. This management plan must outline what measures the consent holder will undertake to prevent and/or respond to any breaches of condition 3 and/or notifications of odour occurring beyond the site boundary.

Note: It is the specific intent of this condition that the AMOP will function in the background at all times, and when specified ”trigger conditions” occur, actions prescribed in the AMOP shall be initiated by the specified responsible person.

Without limiting the extent of the AMOP, it is expected that it will deal with the following:

a) Procedures for incident notification to GWRC (Environmental Hotline 24 hour number: 0800496734) in accordance with condition 21
b) Contact details of the person on site with the responsibility and authority to implement the provisions of the AMOP during plant operating hours
c) Procedures for investigating any odour complaints received including:
    i. Timeframes for initiating investigations
    ii. Timeframes for responding to complainants
    iii. How to review on-site meteorological data
d) Procedures for undertaking both on-site and off-site odour assessments, including training procedures for staff
e) Procedures for initiating actions that have the potential to reduce discharges to air, including proactive odour control measures
f) Procedures for the review of meteorological and production conditions during complaints to assess whether there is any correlation between these conditions and the likelihood of there being a complaint
g) On site responsibilities during odour complaints
h) Procedures for modification of the AMOP following onsite identification of odour, including submission of updated AMOP to Wellington Regional Council

Development or review of the AMOP

5. The consent holder shall engage an independent technical expert, with specific experience and expertise in industrial odour discharges; to develop, or if developed by the applicant, complete a technical review of the AMOP prior to submission to the Wellington Regional Council.

The consent holder should incorporate all changes to the AMOP recommended by the technical expert. Where these are not adopted the consent holder shall provide to the Manager, Environmental Regulation Wellington Regional Council, detailed reasons why the recommendations have not been incorporated. A copy of the independent technical review shall be provided with the AMOP.

Submission of the AMOP for approval

6. The consent holder shall submit the final, technically reviewed, AMOP to the Manager, Environmental Regulation, Wellington Regional Council for approval, by 1 February 2020.

On written application, the Manager, Environmental Regulation, Wellington Regional Council, may extend the timeframe for submission of the AMOP provided that the consent holder provides sufficient grounds to satisfy the Manager, Environmental Regulation, Wellington Regional Council that such an extension is warranted. Such application shall be provided, in writing, prior to the due date for submission of the AMOP.

Note. Nothing in this or any other condition precludes the consent holder submitting drafts of the AMOP to the Wellington Regional Council prior to the timeframes specified in this consent.

Limitations to the approval of the AMOP

The approval of the AMOP by the Manager, Environmental Regulation, Wellington Regional Council in no way implies that the measures as specified in the AMOP ensures that the consent holder will meet condition 3. The approval is a technical approval only, and in no way absolves the consent holder from their responsibilities to manage the discharges to meet condition 3 at all times.

Limitations of the approval of the AMOP & investigations of odour incidents

In no way does this this plan, or the approval of this plan, authorise any breach(es) of condition 3 of this consent, nor will compliance with this plan mean that an investigation into any confirmed breach(es) of condition 3 will not be undertaken, or that enforcement action will not be undertaken even if the actions in the AMOP were undertaken as required.

Trigger conditions and timeframes for implementation of actions specified in the AMOP

7. The consent holder shall initiate the specified actions detailed in the AMOP:
   a) Following receipt of a notification or complaint regarding odour discharged from the site (either received by GWRC or the consent holder directly); or
   b) Following formal notification by telephone, electronically or in person by a GWRC Enforcement Officer that an odour discharge from the site has been confirmed Offensive and/or Objectionable.

Source identification/investigation procedures & reporting

8. Following condition 8(a) of this consent being triggered or on written request by the Manager, Environmental Regulation, Wellington Regional Council, the consent holder shall prepare a technical report identifying the source/reason for the odour discharge. The report shall:
   a) Address the issues detailed in the request;
   b) Be submitted to Wellington Regional Council within the timeframe specified;
   c) Outline what measures were implemented and within what timeframes, and the effectiveness of the measures in mitigating the odour effects; and
   d) Specify what changes, if any, will be made to operating procedures, site practices and the AMOP to prevent/reduce the potential for similar odour events in the future.

Annual technical reviews of the AMOP

9. If the AMOP has not been otherwise reviewed during the previous 12 months as a result of a review required by conditions 5 or 9, the consent holder shall undertake a technical review of the AMOP. The review shall include but not be limited to:
   a) Frequency of incidents of Offensive and/or Objectionable odour events that have occurred (if any)
   b) Effectiveness of the AMOP in preventing, reducing and/or responding to incidents; and
   c) A technical process review/evaluation and the requirement for changes to:
      i. The plant operating procedures and practices; additional procedures and practices recommended
      ii. Changes to emission reduction/treatment equipment, including proposals for further equipment; and
      iii. Timeframes for the selection, approval, procurement, installation and commissioning of the specified equipment

Where new, or changes to existing; emission reduction or treatment equipment are proposed, the consent holder shall have the proposed changes reviewed by an independent technical expert, with specific experience and expertise in industrial odour discharges.

The technical review, when required, shall be submitted to the Manager, Environmental Regulation, Wellington Regional Council by 30 August 2020 and every year thereafter.

Amendments to the approved AMOP

10. Any proposed amendments or additions to the approved AMOP shall be submitted to the Wellington Regional Council for approval, and shall be to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council. Once approved by the Manager, Environmental Regulation, Wellington

Regional Council, the approved AMOP shall become the operative AMOP and the plant shall be operated in accordance with the approved AMOP at all times.

On-site meteorological station

11. The consent holder shall install, operate and maintain at least one meteorological station on the site, compliant with the New Zealand Standards listed below. The meteorological station(s) shall be situated in a location that is representative of site and sensitive receptor (residential) conditions. This weather station shall record the wind speed and direction in an appropriate format. The data shall be logged and available real-time via a website or other user accessible interface. Wellington Regional Council shall be given access to the real-time data upon request.
Note: There are 2 New Zealand Standards relevant to the meteorological site.

- Australian/New Zealand Standard AS NZS 3580.1.1:2016 Methods for sampling and analysis of ambient air Part 1.1: Guide to siting air monitoring equipment.
- AS/NZS 3580.14:2014 Methods for sampling and analysis of ambient air - Part 14: Meteorological monitoring for ambient air quality monitoring applications

Operations and Maintenance Manual

12. The consent holder shall prepare and submit for approval to the Manager, Environmental Regulation, Wellington Regional Council, an Operation & Maintenance Manual (OMM) by 6 February 2020, or within another timeframe to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.

The scope of the OMM shall include but not be limited to the following matters in order to minimise the discharge of contaminants:

a) A summary of the plant purpose, location, layout, and manufacturing equipment with specific reference to contaminant discharge, extraction and treatment equipment, discharge stacks and processes, including responsibilities and contact details of key personnel
b) Operation, inspection and maintenance of the manufacturing equipment, including the extraction and treatment equipment
c) Procedures adopted to ensure that the extraction equipment is fully functional before manufacturing commences
d) Procedures adopted to ensure that the plant complies with the conditions of this consent at all times
e) Contingency plans in the case of accidents and emergencies, such as spills, fires, and incidents where the discharge of excessive contaminants to air was unavoidable; and
f) Any other issues considered important, including:
    i. Details of the general operation and maintenance of all emissions control equipment (including the associated ducting for this equipment)
    ii. Staff training on the process requirements, use of emissions control equipment, and emergency response
    iii. Details of how the building envelope is maintained to minimise the potential for fugitive emissions

The consent holder shall ensure that the OMM is consistent with the conditions of this consent, and shall be updated as required, with a copy forwarded to the Manager, Environmental Regulation, Wellington Regional Council within one month of any update.

Any amendments to the OMM shall be to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.

13. The consent holder shall, at all times, operate, maintain, supervise and control all processes and equipment on site to ensure compliance with the approved OMM required by condition 13 and pursuant to condition 3 and all other conditions of this consent.

Emission Control Equipment

14. The consent holder shall ensure that no part of the aluminium can manufacturing process is operated without the associated extraction being fully operational and functioning efficiently.

15. The consent holder shall ensure that the ventilation system shall draw adequate negative pressure to ensure the effective capture of contaminants from the aluminium can manufacturing process and all other areas from which air is extracted to ensure that fugitive emissions are minimised.

16. The point of discharge from the main and lacquer stacks shall terminate at a point no less than 25 metres above ground level. he stacks shall be designed and operated to ensure the uninterrupted vertical discharge of vapour.

Emission Monitoring

19. There will be no routine emission monitoring requirement for this consent. However, on written request by the Manager, Environmental Regulation, Wellington Regional Council, the consent holder shall conduct an emissions testing programme for odour or Volatile Organic Compounds likely to be discharged from the plant, within two months of the written request. The emissions testing programme and report shall be to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.

Note: The Manager, Environmental Regulation, Wellington Regional Council, will consult with the consent holder prior to such a request for any additional emissions testing programme(s).

20. All sampling techniques employed in respect of the conditions of this consent shall be to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council. All analyses shall be performed by an International Accreditation New Zealand (IANZ) registered laboratory or otherwise as specifically approved by the Manager, Environmental Regulation, Wellington Regional Council.

Emission analysis and reporting

19. Where monitoring indicates that discharges are 25% greater than those in the application (NCI Packaging (NZ) Limited, Upper Hutt Air Discharge Monitoring, November/December 2018, Issue II. Source Testing New Zealand Limited. 31 January 2019.) the Manager, Environmental Regulation, Wellington Regional Council may require further analysis and interpretation based on the emission testing results, including computer dispersion modelling and comparison with relevant guidelines.

Within a timeframe as agreed with the Manager, Environmental Regulation, Wellington Regional Council, the consent holder shall submit a report containing the results and analysis of the emissions testing programme to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council. The report shall contain the results of the emission test, including all relevant plant operating parameters and conditions, and all calculations and assumptions. The report shall contain data analysis and interpretation by a suitably qualified and experienced person.

Note: This condition may be altered following a request under section 127 of the Act provided the effects are no more than minor and consistent with the original application.

Complaints record

20. The consent holder shall maintain a record of any complaints received alleging adverse effects from or related to the discharge the subject of this consent. This record shall include:

a) The name and address of the notifier (if provided)
b) The date and time that the notification was received
c) Details of the alleged incident
d) Weather conditions at the time of the incident
e) The most likely cause of the incident, and
f) Any measures taken to mitigate/remedy the cause of the incident and address the complaint

A copy of this record shall be sent to the Manager, Environmental Regulation, Wellington Regional Council as soon as possible, or at the latest the close of business the next working day.

This record shall be maintained for the duration of this consent and made available to the any enforcement officer of the Wellington Regional Council, on request.

Note 1: The Wellington Regional Council will notify the consent holder as soon as possible about any odour notifications received that are attributed to the consent holder.

Note 2: Incidents involving odour are reported under condition 9 of this consent. The intent of this condition is to capture any other environmental incidents that may occur.

Incident Reporting

21. Any incident that may result in adverse effects on the environment beyond the boundary of the consent holder's site shall be notified to the Manager, Environmental Regulation, Wellington Regional Council as soon as possible, or at the latest the close of business the next working day. A written report shall be submitted to the Wellington Regional Council within five working days with reasons for the incident, and measures taken to mitigate the effects of the incident and prevent a recurrence.

Note: The Wellington Regional Council may also investigate any incidents to determine if a breach of this consent or the Resource Management Act 1991 has occurred and may also undertake enforcement action depending on the circumstances.

Communications Plan

22. The consent holder shall prepare a communications plan, which sets out how it will liaise with the local community. This plan shall be submitted to the Manager, Environmental Regulation, Wellington Regional Council by 6 November 2019 and will include but not be limited to:

a) A dedicated telephone number (hotline) for neighbours to contact the consent holder during day shift hours
b) A dedicated telephone number for neighbours to contact the consent holder after 4 pm.
c) Preparation and distribution of a quarterly newsletter

The consent holder shall ensure that the communications plan is reviewed on six monthly basis to ensure the needs of the local community are being met. The consent holder shall provide a report to the Manager, Environmental Regulation, Wellington Regional Council within one month of a review being undertaken which shall include:

- How the review was undertaken
- Feedback provided by the community, and
- Any changes to the communication plan

The report shall be to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.

Reporting Conditions

23. The consent holder shall submit an Annual Report to the Manager, Environmental Regulation, Wellington Regional Council by 31 July each year for the period 1 July – 30 June inclusive. The report shall be to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council, and shall contain, but not be limited to:

- Details of significant maintenance or upgrade items where relevant to the discharge of contaminants or treatment of emissions,
- Any technical reviews undertaken relating to the AMOP,
- Complaints received and actions implemented by the consent holder to minimise effects (if any),
- Details of production information, including volumes of materials used per annum, and
- Any other information considered relevant

Review Condition

24. The Wellington Regional Council may review any or all conditions of this consent by giving notice of its intention to do so pursuant to section 128 of the Resource Management Act 1991, at any time within three months of the 30 June each year for the duration of this consent for the purpose of:

a) To review the adequacy of any report and/or monitoring requirements, and if necessary, amend these requirements outlined in this consent
b) To deal with any adverse effects on the environment that may arise from the exercise of this consent; and which are appropriate to deal with at a later stage, or
c) To enable consistency with any relevant Regional Plans or any National Environmental Standards or Regulations
d) To adopt the best practicable option to remove or reduce any adverse effect on the environment.

The review of conditions shall allow for the deletion or amendment of conditions of this consent; and the addition of such new conditions as are shown to be necessary to avoid, remedy or mitigate any significant adverse effects on the environment.

Note 1: A resource management charge, set in accordance with section 36(2) of the Resource Management Act 1991 shall be paid to the Wellington Regional Council for the carrying out of its functions in relation to the administration, monitoring, and supervision of resource consents and for the carrying out of its functions under section 35 (duty to gather information, monitor, and keep records) of the Act.

Note 2: The Wellington Regional Council shall be entitled to recover from the consent holder the costs of any review, calculated in accordance with and limited to the Wellington Regional Council's scale of charges in force and applicable at that time pursuant to section 36 of the Resource Management Act 1991.