



PAN PAC

FOREST PRODUCTS LIMITED

1161 SH2 Wairoa Road, Private Bag 6203
Napier, New Zealand
Phone 64 6 831 0100
Fax Numbers:
Administration 64 6 836 6443
Forests 64 6 835 9288
Lumber 64 6 831 0104
Pulp 64 6 831 0102
Engineering/Purchasing 64 6 831 0101
Email panpac@panpac.co.nz

Pan Pac Forest Products Limited Submission on:

Proposed Amendments to the National Environmental Standards for Air Quality

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Contact for Communication:

Peter Allan
Manager – Technical and Environmental
Pulp Division

1: Introduction

- 1.1 Pan Pac Forest Products Limited welcomes the opportunity to submit on proposed amendments to the National Environmental Standards for Air Quality. Pan Pac has long held concerns about the stringency of the current standards and their potential impact on our operations.
- 1.2 We note the current New Zealand standard for PM10 emissions is among the most stringent in the world. The opportunity to reduce the principal emissions sources, that is, emissions from home heating and vehicle emissions, is limited, with the strictest requirements falling on industry. Scant regard has been given to the acknowledgement that industry in most situations is a minor component of the emissions.
- 1.3 The current review of the standards is pleasing and provides an opportunity to modify the standards to be effective in reducing air pollution without unfairly impacting on the industry sector.

2: Pan Pac Forest Products Limited

- 2.1 Pan Pac Forest Products Limited (Pan Pac) is a Forest and Forest Products based company located near Napier. The company is comprised of three operating divisions:

- 2.1.1 Forestry Division, managing 43,000 ha of land in Hawkes Bay, 35,000 of which is stocked with forest.
- 2.1.2 Lumber Division, producing sawn lumber products for international markets. The division has current capacity to produce 300,000 m³/year of sawn lumber.
- 2.1.3 Pulp Division, producing Thermo-mechanical wood pulp and wood chips for international markets, principally Japan. Current capacity for manufacture of wood pulp is 250,000 ADT/year, and in addition the company exports approximately 155,000 tonnes of wood chips.
- 2.2 Pan Pac has made a long-term commitment to forestry and wood processing operations. Forestry and wood processing is our core business, and we intend to continue our operations in these fields for the foreseeable future.
- 2.3 Pan Pac is an integral part of the Hawkes Bay economy, and directly employs approximately 330 people. According to an estimate by Berl in 2005, Pan Pac generates 1683 Full-time Equivalent (FTE) jobs, or about 2.7% of employment in the Hawkes Bay region.
- 2.4 Berl also estimated in 2005 that Pan Pac generates about 4.4% of the Hawkes Bay region's total GDP. This total included \$NZ 89 million in value added (GDP) from Pan Pac's own operations and \$NZ 110 million from other industries across the region.

3: Pan Pac's interest in the National Environmental Standards for Air Quality

- 3.1 Pan Pac's operations are subject to provisions in resource consents issued by the Hawkes Bay Regional Council, including a consent to discharge contaminants to air. The Pan Pac operations incorporate a number of discharges to air which have the potential to contain fine particulate matter. Notable among these are two thermal energy plants, combusting wood waste.
- 3.2 In the winter of 2003, prior to the introduction of the National Environmental standards for Air Quality in 2004, Pan Pac commissioned Watercare Services Ltd to undertake a study of site ambient air quality downstream of the thermal energy plants. PM10 concentration in ambient air was a component of the study. In this study the 24 hour average PM10 exceeded 50 ug/m³ twice over a three month monitoring period.

- 3.3 Pan Pac resolved to determine the source of the PM10 emissions. To achieve this a BAM continuous PM10 monitoring station was purchased and installed on site at the same location used for the Watercare study. The monitor was commissioned in July 2005 and has been in continuous service since that time.
- 3.4 Data from the monitoring confirmed that 50 ug/m³ PM10 is regularly exceeded on site, consistent with the data from the Watercare 2003 study.
- 3.5 Half hourly values for PM10 concentration from the monitoring are evaluated with reference to site meteorological data, in particular wind direction. Some of the conclusions reached from evaluation of the data include:
- 3.5.1 Operation of the thermal energy plants has no discernable influence on ambient PM10.
- 3.5.2 The main influence on PM10 from Pan Pac operations is dust generated in our logyard operations.
- 3.5.3 The majority of exceedences of the PM10 limit of 50 ug/m³ occur during the summer months, that is, dust generation from logyard activities is greatest during hot and dry conditions. Pan Pac's PM10 problem is not consistent with the usual situation in urban airsheds, where PM10 is generally seen as a winter problem.
- 3.5.4 Other influences on PM10 values include:
- Salt aerosols during rough sea conditions – Pan Pac is located near a turbulent coastal environment
 - Off site activities – influence from traffic on SH2, and dust from agricultural activities on land adjacent to our site.
 - On-site activities close to the monitoring station – use of lawnmowers, site vehicles, cutting and welding, etc.
 - Unusual events raising the ambient PM10 level, for example burning off vegetation.
- 3.6 Pan Pac has a condition in our current resource consent requiring us to monitor ambient PM10 levels and report the data to the Hawkes Bay Regional Council.
- 3.7 Pan Pac is located in the Whirinaki Airshed. This airshed was created in November 2009 in recognition of the PM10 emissions from the Pan Pac site. Pan Pac is the only industry within the confines of the airshed. The Whirinaki community is small, and aligned in a linear manner along the length of the Whirinaki beach. The community's emissions have little impact on PM10 as measured on the Pan Pac site. In effect the Whirinaki airshed is specific to Pan Pac's operations.

- 3.8 Pan Pac has measures in place to minimise particulate emissions. The main source of emissions, the logyard area, has a series of irrigation cannons installed to dampen down the area and reduce dust emissions. During hot and dry conditions this is supplemented with the use of watercarts on main access areas.
- 3.9 Despite these measures exceedences of the PM10 limit continue to occur, and an affordable solution to the problem has not yet been found. For example, it has been proposed that Pan Pac seal the logyard area and maintain a clean dry surface. To do this is estimated to cost \$3 – 4 million, with no guarantee the provisions of the National Environmental standards would be met afterwards.

4 Technical Advisory Group report

- 4.1 Pan Pac believes the initiative to form a Technical Advisory Group (TAG) to examine aspects of the National Environmental Standard for PM10 emissions has been valuable, and in the main is comfortable with the TAG's findings.
- 4.2 However we do not believe that many, if any, of the industries invited to make submissions to the TAG, face a similar situation to the Pan Pac Whirinaki operation, with the dominant PM10 component sourced from logyard dust, and background PM10 levels elevated by sea salt intrusion and rural activities adjacent to the site.
- 4.3 We note that the forestry and forest products sector, including Pulp and Paper, was represented by a number of Carter Holt Harvey operations, and the Juken Nisho Ltd Northland mill. Pan Pac would have welcomed the opportunity to put our views directly to the TAG. Our operation is substantially different from those invited to submit to the TAG.
- 4.4 Pan Pac is grateful to the Hawkes Bay Regional Council for including our situation as a case study in their submission to the TAG. Without this we believe the TAG would have been completely unaware of our circumstances.
- 4.5 Despite the foregoing, Pan Pac supports the direction of the TAG's recommendations, albeit with some reservations, which we will outline in the following sections.

5 Daily Average PM10 Standard and permitted exceedences

- 5.1 Pan Pac welcomes the proposed increase in the number of permitted exceedences, but notes that despite this, the New Zealand standard remains one of the most strict in the world, at least in comparison to data in Table 5 in the TAG report.
- 5.2 The maximum daily level of 50 ug/m³ is consistent with the majority of other countries. However no allowance or tolerance has been given for changes to the background level of PM10.
- 5.3 Pan Pac has examined monitoring data for the period July 2009 to June 2010. Data from weekends with restricted operations in the logyard area was used to determine background PM10 levels, that is PM10 virtually unaffected by plant operations. This data shows an increase in background PM10 with the wind from the direction of the sea of 11 ug/m³.
- 5.4 **Pan Pac contends that background PM10 levels should be considered in setting the permitted daily average PM10 standard, in particular in coastal areas where there is a significant impact on background levels from sea salt intrusion.**
- 5.5 Pan Pac supports increasing the number of allowable exceedences. While we would prefer the number to be increased further, to 5 for example, in line with Australia, we acknowledge the recommendation that exceptional events do not count as exceedences makes a limit of three exceedences to be a reasonable number.
- 5.6 **Pan Pac recommends the list of exceptional events is extended to include sea salt intrusion. PM10 from sea salt is beyond the control of any industry or local authority, and accordingly PM10 values above 50 ug/m³ with a significant sea salt component should not be counted as exceedences of the standard.**
- 5.7 Pan Pac supports in principle the inclusion of high wind events in the list of exceptional events. The definition of what constitutes a high wind event is critical – will this be defined by a single wind speed value, perhaps in conjunction with a time factor? Or perhaps a seasonal wind speed value to reflect extra dust generated during hot dry conditions? **A lot more detail is required around the definition of high-wind events with regards to the list of exceptional events.**
- 5.8 The issue of particulate emissions from dust and dirt is poorly addressed in the legislation. It appears that dust and dirt from unsealed roads has not been considered in evaluating emissions in rural areas. If they had been considered it is likely that there would be significant non-compliance to the standards in those areas. The treatment of dust and dirt from dusty roads is inconsistent with the requirements

faced by an operation such as Pan Pac, with the prime source of emissions contributing to non-compliance with the standard being sourced from dust and dirt.

5.9 The issue of how to deal with emissions from dust and dirt raises questions about health effects from emissions from different sources. Do all PM10 emissions have the same impact on health, or, for example, is there a greater risk from the products of combustion of diesel in comparison to finely ground dust and dirt? The TAG report (pg 44) states “With no evidence to the contrary, PM10 from natural sources of the same particle size is considered to be equally hazardous as that from man-made sources.” We also can find no evidence to the contrary, but nor can we find evidence in support.

5.10 **Pan Pac’s emissions are mainly from dust and dirt rather than products of combustion. Pan Pac’s emissions occur predominantly in the summer in contrast to emissions from home heating which occur in the winter. We pose two questions for your consideration: we do not know the answers to these but suggest they are critical to evaluating the significance of emissions from an operation such as Pan Pac’s.**

- **Do Pan Pac’s emissions pose the same risk as the dominant PM10 emissions in New Zealand sourced from combustion for home heating and emissions from vehicles?**
- **Is there a greater vulnerability to the impacts of particulate emissions during cold and damp winter weather than in a hot dry summer?**

6 PM 2.5 standards

6.1 Pan Pac supports measures to control the impact of pollutants on human health. We accept the evidence that fine particulate, PM 2.5 is mainly from anthropogenic sources and poses a greater risk to human health than PM10. But again we wonder if the effect on health is due to the smaller particle size, or other toxic affects from the chemistry of emissions from combustion of certain fuels.

6.2 We are not opposed to the introduction of a PM 2.5 standard on the understanding that it poses a greater risk to human health, but have no information on the PM 2.5 emissions from our processes. However we do urge caution – our understanding is that to monitor PM 2.5 different equipment is required, and the extra expense of changing to a PM 2.5 standard should be justified by the potential outcomes.

7 Removal of restrictions on Regional Council's ability to issue Air Consents

7.1 Pan Pac strongly supports the recommendation to remove all industry consent restrictions. Particularly with regards to renewal of existing consents, this option provides industry with a lot more certainty, and ensures industry is not unduly penalised in airsheds which do not meet the standards.

8 Extension of the deadline to meet the standards until 2018

8.1 Pan Pac also supports the extension of the deadline to meet the requirements in the standard. In Pan Pac's case there is no certainty measures to reduce exceedences by 2013 will be successful. The extension of the time gives additional time to explore options and to determine the most economic means of achieving compliance. Compliance to the standards in Pan Pac's particular situation will be difficult to achieve, with few options available to reduce emissions. Trial and error will be required to obtain a solution, and time is necessary to do this.

9 Offsets

9.1 Pan Pac does not support the concept of mandatory offsets as a mitigation measure. In an airshed such as Whirinaki, where emissions are mainly from a single industry source, and opportunities for emission reduction are difficult to identify, offsetting is simply not practicable.

10 Preferred Option

10.1 Of the air quality review options tabled in the discussion document Pan Pac has a clear preference for option 4b.

Peter Allan
Manager – Technical and Environmental
Pulp Division

9/7/10

