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**Submissions by Fletcher Building Limited on the:
Climate Change (Stationary Energy and Industrial Processes) Regulations 2009,
And
Climate Change (Unique Emissions Factors) Regulations 2009**

Introduction

This submission is from Fletcher Building Limited.

Fletcher Building Limited (FBL) is a New Zealand based company which undertakes construction projects and manufactures and distributes building materials. It will be a participant in the proposed New Zealand Emissions Trading Scheme, with responsibility for the following emissions:

- Industrial process emissions from the production of clinker at Golden Bay Cement's Portland (Whangarei) plant.
- Combustion emissions from imported coal used by Golden Bay Cement.
- Non-CO₂ combustion emissions from the use of waste wood as a supplementary fuel by Golden Bay Cement.
- Industrial process emissions from the production of steel at Pacific Steel's Otahuhu (Auckland) plant.
- Industrial process emissions from the production of glass-fibre insulation at Tasman Insulation's plants at Penrose (Auckland) and Christchurch.
- Non-CO₂ combustion emissions from the use of waste wood as a fuel at The Laminex Group's particle-board plant at Taupo.

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Industrial Process Emissions from Clinker Production

Section 34 and Schedule 3 Table 2 of the Climate Change (Stationary Energy and Industrial Processes) Regulations 2009

Section 34 contains the formula

$$E = (A \times EF_1 \times B) + \sum(C \times EF_2)$$

We accept the formula; however we believe the following changes need to be made to the definitions of the factors:

- A* is the total number of tonnes of cement clinker produced by the person in the year, as recorded under Section 33(a), expressed in tonnes of calcined CaO.
- B* is the cement kiln dust correction factor ~~from Table 2 in Schedule 3.~~

The reasons for our proposed changes are:

- Golden Bay Cement is able to add Non-Carbonaceous components to the kiln feed raw material. Because this material contains CaO from non-carbonaceous sources, it does not contribute to industrial process emissions. It is important that cement manufacturers are not penalised for using such materials as this is an important and effective way of reducing the CO₂ emissions from cement manufacture. We note that getting credit, or reducing liability, for such activities that reduce emissions is the primary outcome sought from the introduction of an ETS.
- Different cement processes will result in different quantities and proportions of cement kiln dust. Any cement process can be adjusted (within limits) to increase or decrease kiln dust. The factor of 1.02 contained in Schedule 3, Table 2 would significantly over-state dust emissions from Golden Bay Cement's plant. Cement manufacturers should be required to derive their cement kiln dust factor, and maintain appropriate, auditable records of this calculation.

Fugitive Emissions from Mining Coal

Section 10 and Schedule 2, Table 3, Part A of the Climate Change (Stationary Energy and Industrial Processes) Regulations 2009

We note that Section 10 provides a method for calculating emissions from mining coal.

We are concerned about these provisions for two reasons:

- Our understanding that emission factors for fugitive gases are extremely difficult to measure. Given this difficulty, we believe that any nationally-applied factor will inevitably be arbitrary and will therefore carry the risk that emissions are over-estimated.
- The total emission factors imposed on domestic coal (fugitive and combustion) will have a significant effect on electricity prices. There has been a significant quantity of work in New Zealand in recent years to calculate an "emissions factor" for electricity. Our understanding is that this work has not considered the effects of a

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fugitive emissions factor for coal. Therefore the emissions trading scheme effects on electricity prices are likely to be higher than currently estimated.

We also note that under the provisions of the Australian Carbon Pollution Reduction Scheme, the threshold for participants is 25,000 tonnes CO_{2eq}. Given these factors, we believe that it would be appropriate to:

- Introduce a threshold before coal mine fugitive emissions resulted in an emissions liability.
- Use a factor that is demonstrably conservative, so that there is no risk of coal miners incurring a liability that may be greater than their actual emissions.

Process Emissions from Steel Manufacture

Section 28 and Schedule 3, Table 1 of the Climate Change (Stationary Energy and Industrial Processes) Regulations 2009

Section 28 contains the formula:

$$E = (\sum(A \times B)EF_1) + (C \times EF_2) + D \times EF_3)$$

We accept the formula; however we believe the following change needs to be made to the definition of one of the factors:

B is the ~~total~~ non-renewable carbon content of the relevant type of reducing agent used by the person in the year as recorded under Regulation 27(b).

The reasons for our proposed change are:

- That “total” is an inappropriate adjective, as is “average” or “nominal”. The method of determining the carbon content should be documented in guidelines accompanying the regulations.
- That carbon from renewable sources, (for example natural rubber in tyres) may be present in reducing agents. An emissions factor that fails to take this into account will result in emitters incurring a liability that may be greater than their actual emissions.

For consistency, this change will also require a change to Section 22, the method of calculating emissions from combusting used tyres or waste.

Thresholds for Participation for Combusting Waste for Industrial Heat

Fletcher Building has two New Zealand operations that combust wood waste for industrial heat. These are:

- Golden Bay Cement which uses in excess of 300,000 GJ at its cement manufacturing plant at Portland, emitting approximately 500 tonnes of CO_{2eq} of methane and nitrous oxides.

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- The Laminex Group which uses approximately 200,000 GJ at its particle-board manufacturing plant at Taupo, emitting approximately 350 tonnes of CO_{2eq} of methane and nitrous oxides

As these operations are part of Fletcher Building, and Golden Bay Cement already has participant obligations for process and imported coal emissions, there are only small additional costs associated with incurring participant obligations for these emission sources.

Our understanding is that the IPCC emission factors for methane and nitrous oxide emissions from large, high temperature processes, such as those used for our cement and particle board plants, over-estimate the actual emissions. Therefore it is likely that:

- Including small wood-fired boilers and the like will lead to disproportionate transaction costs.
- Including larger boilers and combustion processes will result in emitters incurring a liability that may be greater than their actual emissions.

For these reasons, we believe that all emissions from organic waste combustion for industrial heat should be excluded from the NZ emissions trading scheme.

Unique Emissions Factors for Industrial Processes

The Climate Change (Unique Emissions Factors) Regulations 2009 do not contain any provision for the use of unique emission factors for industrial processes.

We understand that the default emission factors have been based on formulae using fixed chemical ratios. However there are other variables that affect the quantity of industrial process emissions. There may be situations where the formulae are not able to adequately address the unique circumstances of a specific operation and its raw material inputs.

For this reason we believe that there should also be provision for participants to apply for unique emission factors for industrial processes.

We would welcome the opportunity to discuss these submissions further with officials.