

## STAKEHOLDER CONSULTATION 2019 on WORKPLACE EXPOSURE STANDARDS (WES) and BIOLOGICAL EXPOSURE INDEX (BEI)

Submissions to WorkSafe NZ closed on 7 August 2019

Are you unsure what the proposed changes to the WES and BEI could mean for you? Do you know which of the substances on the list are relevant to our industry?

Your Executive team has undertaken some research to identify the substances that may be relevant to F&T operations and to understand the possible outcomes. The results of our research are interesting, and we are sharing them with you here so that you can get a feel for what may or may not happen if the WorkSafe New Zealand (WSNZ) proposals are passed into law. We have also included below some actual test results from two members' plants, which show likely failures to meet the proposed new standards.

The WSNZ list showed in total some **34** individual chemicals of concern to them. The list below identifies only those chemicals that we think could **possibly** affect frame & truss operations, with where they are likely to be found highlighted in **RED**.

- **Wood dust:** Occurs when **sawing, cutting, routing, turning, sanding, dry sweeping of dust, bagging dust from dust extraction systems.**
- **Silica-crystalline:** Associated with workers who use handheld masonry saws to cut materials such as concrete and brick. Can include cleansers, cosmetics, **yard dust**, art clays and glazes and many others.
- **Acetaldehyde:** Building materials, laminates, linoleum, wooden varnished floors, cork/pine flooring. It is also found in water-based paints, **particle board, plywood, pine wood**, chipboard furniture, **fuel combustion emissions from stationary internal combustion engines** and others pertaining to running kilns, lumber and wood mills, paper mills and so on. It is also present in **automobile and diesel exhaust fumes, tobacco smoking and alcohol.**

In our opinion the ones that are worth investigating further are Wood dust (definitely) and Acetaldehyde (possibly). Silica dust is a remote possibility in some yards and driveways.

**The proposed changes are summarised as follows: "All of the exposure standards for wood dust, silica dust and acetaldehyde are going down. Most notably for F&T fabricators, the allowable softwood dust in mg/m3 is going to be reduced by 75 per cent."**

Individually, the proposed changes are:

**Wood dust:** WSNZ considers its current WES-TWA of 1 mg/m<sup>3</sup> for hardwood dust and 2 mg/m<sup>3</sup> for softwood dust to be inadequate to protect workers exposed in the workplace, based on current knowledge. They propose to:

1. adopt one WES-TWA for **all** wood dusts of 0.5 mg/m<sup>3</sup> inhalable fraction; and
2. adopt a 'sen' [sensitiser] notation for all wood dusts.

**Silica dust:** WSNZ considers its current WES-TWA of 0.1 mg/m<sup>3</sup> for silica-crystalline (respirable dust) to be inadequate to protect workers exposed in the workplace, based on current knowledge. They propose to:

1. adopt a WES-TWA for silica-crystalline of 0.5 mg/m<sup>3</sup> (respirable fraction).

**Acetaldehyde:** WSNZ considers its current WES-TWA of 20 ppm with a WES-STEL of 50 ppm for acetaldehyde to be inadequate to protect workers exposed in the workplace, based on current knowledge. They propose to:

1. adopt a WES-Ceiling for acetaldehyde at 20 ppm; and
2. remove the WES-TWA for acetaldehyde at 20 ppm.

## MEMBER TESTING RESULTS

One member (Member A) reported that dust monitoring in their factory last year recorded results ranging from 0.29 mg/m<sup>3</sup> to 0.60 mg/m<sup>3</sup>, well below the current requirement but a FAIL under the proposed new requirement.

Another member (Member B) reported some of their testing results as follows:

**RAZER SAW:** Fully enclosed and extracted linear saw, for last year > 0.052 mg/m<sup>3</sup>  
[Proposed to be 0.5 mg/m<sup>3</sup>]

**STUD/NOG NAILER:** Extracted hood saw in use > 0.087 mg/m<sup>3</sup>  
[Proposed to be 0.5 mg/m<sup>3</sup>]

**RIP SAW:** Extraction retro fitted > 0.842 mg/m<sup>3</sup>  
[Proposed to be 0.5 mg/m<sup>3</sup>]

They acknowledge they would have an issue in the Rip Saw area.

Member (B) adds the comments: "A non-extracted pull saw will fail this new test, and existing open rip saws, even if extracted, will potentially also fail."

**The question for all to consider and be prepared for is: Will the average FTMA member be able to achieve results that meet the proposed mg/m<sup>3</sup> levels?**

You will note that these changes would mean significant reductions to the allowable levels of exposure for your workers. Please be reminded of the potentially severe ramifications if these proposals are duly passed into law. Random visits from WSNZ representatives are likely to become the norm, and an Enforceable Standard will almost certainly be introduced, compliance with which will be of critical importance.

In case useful, below are the contact details for two different Health & Safety companies that members have used for testing and assistance:

- **Paragon Health & Safety Consultants** in Auckland – Ph 09 820 5062
- **Ford Monitoring Ltd**, Occupational Health Testing in Hamilton – Ph 07 843 3987

For those who wish to read more, below are some excerpts from a Respirable Dust Survey undertaken in March 2018 that may prove helpful.

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**EXCERPTS from a Respirable Dust Survey undertaken in March 2018**

**1**—Co ABC was engaged to carry out Respiratory Dust monitoring to determine compliance with “NZ Workplace Exposure Standard--8 hour”.

**2**—Static monitors were placed in three strategic locations inside the factory.

**3**—Comment: “Dust may be created as a result of sawing, planing and nailing timber.”

**4**—Monitoring and Assessment Methods:

**4.1**—Airborne concentrations of dust are collected by drawing a measured volume of air through a filter, mounted in a sampler, by means of a battery powered sampling pump. The mass of dust collected is determined by taking the weight difference before and after sampling. To separate the respirable dust fraction, a cyclone sampling head is used and the dust concentration expressed as milligrams per cubic metre, calculated from the dust mass collected on the filter and the measured volume of air sampled.

**4.2**—The pumps ran for around 5.5 hours at a constant flow, to run at 2.0 litres per minute.

**4.3**—The “Workplace Exposure Standards 2002” describes the types of dust thus: **Inspirable dust** is the portion of airborne dust that is taken in through the mouth and nose during breathing, while **Respirable dust** corresponds to the fraction of total inspirable dust that is able to penetrate and deposit in the lower bronchioles and alveolar regions.

**5**—General:

**5.1**—It should be noted that testing and monitoring exercises can sometimes produce dust levels that will vary from day to day.

**ENDS**