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## Summary Document – VOC Levels of Paint

### Technical Clarification:

Projects claiming the point for paint under IEQ-13 are required to comply with the VOC limits currently set out in the Technical Manual or by using paints certified by the Environmental Choice.

### Summary:

The Green Star NZ Technical Manual currently states that:

“VOC limits for all (water or solvent-based) coatings will be set to those requirements following, until the update of Environmental Choice NZ (ECNZ) specification for paints (EC-07-01) is published. The new VOC limits for Green Star NZ will then be set to those required by the new ECNZ specification. “

Environmental Choice has now completed its review process of the EC-07-01 paint standard and published EC-07-08. This process took longer than anticipated due to a two round review process being undertaken.

As stated in the Technical Manual, the EC-07-08 standard now meets the credit criteria for IEQ-13. Paints complying with Environmental Choice VOC levels are required to provide a Environmental Choice licence certificate to demonstrate compliance. Paints complying with the current Technical Manual VOC levels are required to demonstrate compliance through a certifier such as Greenbuild.

### Background:

The Green Star NZ rating tool rewards environmentally preferable building design and construction with the aim of encouraging the wider industry to follow suit. The materials category of the rating tool is a small but important section of the rating system.

Understanding the environmental impact of the use of materials in buildings is a complex and dynamic issue. There are now, within New Zealand and internationally, a number of organizations which focus specifically on assessing materials. Some of these focus exclusively on one material or product only, and some will provide certification of materials or products e.g. Environmental Choice.

Wherever possible the NZGBC seeks to rely on organizations such as this which provide “third party verification”. It is not the NZGBC’s objective to assess and rate materials, but rather to focus on the broader environmental impact of whole buildings. Therefore we accept and adopt agreed upon industry standards in relation to materials.

Environmental Choice NZ (ECNZ) is a GEN-aligned certifier referenced throughout the Green Star NZ Technical Manual with standards recognised by industry, government and the public.

ECNZ does a life cycle type assessment on products and recognises those which are environmentally preferable.

The ECNZ assessment of paint looks at several factors including but not limited to; chemical composition, disposal VOC content, paint take back schemes and toxicology e.g. carcinogens.

Generally a VOC is defined as a compound with a boiling point below a certain level. The boiling point is a measure of the compound's volatility. Not all VOC's encompassed in such a definition are undesirable. Some product certification systems create exclusion lists to allow for this. The end effect is that no two certification systems are necessarily the same and comparisons between systems cannot easily be made.

Over the last two years Environmental Choice has spent significant time researching and consulting with industry regarding VOC levels. The EC-07-08 VOC levels are significantly lower than the older EC-07-01 levels. Overall, the EC-07-08 VOC levels are in line with standards used worldwide.

Overall within the paint industry there is a general trend to try and produce low or zero VOC paints which the NZGBC recognises as being beneficial and desirable. However low or zero VOC paints can have lower life expectancy and therefore require more frequent re-painting and these issues need to be balanced against improvements in indoor air quality.

The NZGBC continually aims to keep its standards up to date with current industry best practice. The NZGBC acknowledges that industry will require time to adjust to changes brought about by standards set in the Green Star NZ rating tool.

The NZGBC has now issued a Technical Clarification which confirms that to achieve a point for paint under the IEQ-13 credit of Green Star NZ Office Design v1, 95% of the paint must be either ECNZ certified or meet the VOC levels set out in the Technical Manual. A single standard for VOC's may be adopted for version 2 of the tool for which stakeholder input will be sought.