

## 5. PROPOSALS FOR REVISED AND NEW AMBIENT AIR QUALITY GUIDELINES

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The purpose of this report is to advise of the proposals contained in the above Ministry for the Environment document and to determine whether the Council wishes to make any submissions.

### INTRODUCTION

The Minister for the Environment has stated that the document sets out the proposed national direction for managing air quality in New Zealand. She seeks the views of those interested and these are required by the 30 March 2001.

The current document sets out proposed changes to the current (1994) Air Quality Guidelines and the changes that have been derived from a review of those on the basis of recent research on effects on health and the environment and current air pollution levels. They have also reviewed how the 1994 guidelines have been applied to air quality management since their introduction.

### BACKGROUND TO THE REVIEW

The review commenced in 1998 with the purposes of assessing the effectiveness of the Guidelines in air quality management; to bring the values up-to-date with recent research; develop new guidance on applying the values, managing hazardous air contaminants and protecting ecosystems; and to consider whether national environmental standards for air quality are needed.

The Ministry commissioned a series of reviews to assess national and international research on the effects of air pollution on health and ecosystems and the technical background reports form the basis for the proposals. These reports were reviewed between June 1999 and February 2000 by 70 invited reviewers from a range of backgrounds and subsequently amended following these reviews.

Issues such as odour, dust nuisance, degraded visibility, spray drift, and organochlorines are not covered in these guidelines but are dealt with as separate projects.

The timetable set down for the preparation of the new guidelines document is contained in the proposal document and leads to October 2001 when Cabinet and Ministerial approval will be sought to promulgate the document and any decision to set air quality standards.

### CHANGES TO THE GUIDELINES

The proposed guidelines are set out in the summary sheet attached and this also shows the current (1994) levels. Besides the new contaminants that have been added, and which did not appear in the 1994 guidelines, changes have been made in the following contaminant guidelines.

Particles PM<sub>10</sub>      The level has been reduced from 120 µg/m<sup>3</sup> to 50 µg/m<sup>3</sup> as a 24-hour average.  
The annual level of 40 µg/m<sup>3</sup> has been withdrawn.

Particles PM<sub>2.5</sub>      A level of 25 µg/m<sup>3</sup> as a 24-hour average has been suggested as an interim guideline value.

Nitrogen dioxide      The 1-hour guideline has been reduced to 200 µg/m<sup>3</sup> from 300 µg/m<sup>3</sup>

Sulphur dioxide	The 10-min guideline has been withdrawn as has the annual guideline and a reduction in the 24-hour guideline from 125 $\mu\text{g}/\text{m}^3$ to 120 $\mu\text{g}/\text{m}^3$ has occurred.
Lead	The guideline for this contaminant has been reduced to 0.2 $\mu\text{g}/\text{m}^3$ as a 3-month moving average calculated monthly. It was previously 0.5 – 1.0 $\mu\text{g}/\text{m}^3$ averaged over three months.

These are seen as the minimum requirements to be achieved for ambient air to protect people's health and wellbeing. The point has been made that the World Health Organisation, and other agencies, have been unable to identify a "no adverse effects level" for  $\text{PM}_{10}$  and a higher possibility of adverse health effects is associated with this guideline value than with some other guideline values including those for hazardous air contaminants. The  $\text{PM}_{2.5}$  value is seen as interim for assessing monitoring at this time as there is more research needed to assess the particular health effects of this contaminant. The Ministry will consider developing a formal guideline by 2004.

The Ministry has also included a number of new guidelines dealing with some priority hazardous air contaminants, in addition to the above air contaminants. These include volatile hydrocarbons such as benzene and toluene, carbonyls such as formaldehyde, polycyclic aromatic hydrocarbons such as benzo (a) pyrene, and metals such as arsenic, mercury and chromium.

The figures for each of these are included in the Ministry for the Environment summary attached.

As noted above these guidelines are generally for use in determining whether the ambient air in any locality requires action to be taken to protect people's health and wellbeing but the Ministry is also suggesting levels of certain contaminants to protect ecosystems.

## **USE OF THE GUIDELINES**

In this document the Ministry has also suggested the means by which regional air quality criteria for use in plans and policy statements. These are similar to those contained in the Environmental Performance Indicators Programme of the Ministry. It has five levels, ranging from "excellent" at less than 10% of the guideline value to "action" when the guideline value is exceeded on a regular basis. The "alert" level is where the contaminant level is between 66% and 100% of the guideline value.

These are matters that will be considered by the Canterbury Regional Council in the preparation of the Natural Resources Regional Plan dealing with air pollution. The Ministry for the Environment has examined the possibility of the introducing national standards for air contaminants as opposed to the guidelines. They point to the time that would be required to develop these, either for ambient air as well as for emissions. It will often be unclear as to who would be responsible for the failure to meet ambient air standards particularly when the cumulative effects of a number of sources exceed these. Emission standards are also not as flexible as those which may be set under guidelines when local needs can be considered in granting resource consents for individual sources.

## **CONCLUSIONS**

The review of the guidelines has been undertaken using the most up to date scientific research of effects on human health and well being and as such there is no reason to comment. The guidance given in the document for the implementation of the guidelines will no doubt be useful for the Regional Council in preparation of the soon to be released air plan.

From the information provided it is unlikely that national standards for either ambient levels or emission levels would be useful in this area where some of the guideline levels are exceeded already. There will be some time needed before even the guideline levels could be met in this area through the possible air plan of the Regional Council.

**Chairman's**

**Recommendation:** That the information be received.