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PROPOSAL FOR A COUNCIL DIRECTIVE RELATING TO LIMIT VALUES FOR BENZENE AND CARBON MONOXIDE IN AMBIENT AIR

COMMENTS BY THE UNICE BENZENE AIR QUALITY SHADOW GROUP

UNICE recognises, that limit values for benzene and carbon monoxide in ambient air are necessary in order to protect public health. And at the same time UNICE expects that these limit values are established by the application of the proportionality principle and a setting of measurable targets, based on sound science and transparent data that aim at cost-effective solutions.

That is why, UNICE is supportive of the Commission's proposal for a 10 mg/m³ (8 hour rolling average) limit value for carbon monoxide.

However, UNICE considers that the Commission's proposal¹ for a limit value for benzene of 5 µg/m³ as an annual time-weighted average (with a margin of tolerance of 5 µg/m³) is not appropriate and difficult to justify. Rather, it believes that a limit value for benzene of 10 µg/m³ (annual average) should be adopted, to be achieved by 2007. This should be supported by a further review of the scientific evidence in 2005, in order to establish whether a more stringent value is warranted.

UNICE 's view is supported by the fact that:

- **There is no consistency with the Internal Market** as the new limit values could serve as new barriers to trade and cause serious intra-EU market distortions because within Europe there is a North/South difference regarding the compliance costs associated with a limit value of 5 µg/m³. Even the proposed exemptions would not improve the situation, as they would not be sufficient and flexible enough. As a consequence some regions would suffer unnecessary social disruption.
- **There is no health-related need** to go beyond achieving 10 µg/m³ in ambient air (particularly in hot spots) as a first step. A concentration of 10 µg/m³ meets the accepted risk - according to the Commission's experts² - of a maximum one excess cancer case in one million persons exposed during their lifetime. As it is rather unlikely that very few, if any, persons will remain for their lifetime in hot spots, actual exposures will be significantly lower, providing an additional margin of safety.
- **There is no cost benefit basis** for a limit value of 5 µg/m³. The Commission's own economic evaluation³ shows that the costs will exceed the health benefits, when expressed in monetary terms, by a factor of between 100-10000. This corresponds to a cost of around €230million per 'case prevented'. Although it is difficult to argue with the value of health benefits, UNICE believes that especially considering the proposed time scale the Commission proposal is not proportional concerning the cost-benefit-relation.

UNICE therefore supports a stepwise approach for reducing the concentrations of benzene in ambient air, with the introduction of a limit value of 10 µg/m³ in 2007 as a first step.

References

- 1 OJ C 53, 24.2.1999, p. 8-16
- 2 Minutes of an ad hoc Expert Group held at DGXI, Brussels on 13 January 1998, page 5
- 3 Economic Evaluation of Air Quality Targets for CO and Benzene, April 1999, Report AEAT-5010, Produced for DGXI by AEA Technology. [Table 7.9]

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UNICE cites the following points in support of its view that a limit value for benzene of 10 $\mu\text{g}/\text{m}^3$ (annual average) should be adopted, to be achieved by 2007, together with a further review of the scientific evidence in 2005, in order to establish whether a more stringent value is warranted :

- 1) *There is no compelling health-related need to establish a limit value below 10 $\mu\text{g}/\text{m}^3$, including its application to hot spots.*

The Commission position paper states (chapter 2, page 29)”Taking this as a precedent, the range of unit risks given above (6×10^{-5} to 5×10^{-8}) has been converted into annual average concentrations which would, over a lifetime, equate to an excess risk of contracting leukaemia of one in a million. The resulting range of concentrations is 0.2 to 20 $\mu\text{g}/\text{m}^3$ ”. (The precedent referred to is the risk acceptance in the directive on drinking water of max. 1 excess case in a population of one million persons exposed over their lifetime.). So, the whole range of 0.2 to 20 $\mu\text{g}/\text{m}^3$ was available for the working group for determining the limit value.

- 2) *There is no cost-benefit justification for setting the limit value at 5 $\mu\text{g}/\text{m}^3$*

Even at 10 $\mu\text{g}/\text{m}^3$, the costs of controlling benzene markedly exceed the health benefits, when expressed in monetary terms. These costs are additional to the costs of legislation currently in the pipeline (Auto Oil directives, first daughter directive on Air Quality). With an limit value of 5 $\mu\text{g}/\text{m}^3$ 0-1.9 cases of leukaemia might be avoided throughout the whole EU at an additional cost of about E 230 million per case prevented. With a limit value of 2 $\mu\text{g}/\text{m}^3$ 0 - 17 cases of leukaemia might be prevented at an additional cost of about E 2 billion per case. (See tables 7.7 - 7.9 of the AEA Technology cost - benefit report*)

- 3) *Feasibility of achieving the limit value*

The characteristics of the car fleet and the meteorological conditions in the southern Member States of the EU, including France, will make it difficult in these countries to achieve ambient air concentrations of 10 $\mu\text{g}/\text{m}^3$ (annual average) in hot spots. Furthermore, it is doubtful that Member States such as the UK, the Netherlands and Germany could achieve 5 $\mu\text{g}/\text{m}^3$ (annual average) in 2010 in hot spots without the introduction of measures aimed at managing traffic in urban areas.

A further consideration is that Commission funded studies (e.g. MACBETH, EXPOLIS) continue to demonstrate that daily personal exposures to benzene are significantly higher than those encountered in outdoor air, even accounting for the periods that are spent in heavily trafficked urban areas. Daily personal benzene exposures (which typically average around 5

$\mu\text{g}/\text{m}^3$ in Northern Europe and $15 \mu\text{g}/\text{m}^3$ for Southern Europe) are predominantly determined by other sources of benzene e.g. the workplace, smoking, cooking, travelling in vehicles.

In view of above considerations, UNICE advocates a stepwise approach for reducing the concentrations of benzene in ambient air with the introduction of a limit value of 10 µg/m³ (annual average) in 2007 (including hot spots) as the first step. This should be supported by a review, in 2005, of the evidence for a threshold for the carcinogenic effect of benzene at these very low ambient concentrations and the need for any more stringent action.

* Economic Evaluation of Air Quality Targets for CO and Benzene, April 1999, Report AEAT-5010 Produced for DG XI by AEA Technology.