

From: Jackson, Mark
To: auditorium@calepa.ca.gov; aircleaners@listserv.arb.ca.gov
Subject: Comments on Indoor Air Cleaner Regulation
Date: Wednesday, July 08, 2009 4:35:19 PM

Greetings CAEPA,

I applaud your review of the Indoor Air Cleaner Regulation to address testing concerns and expand your regulation to in-duct systems.

The addition of limits on VOCs and PM to the testing method [limits in ASTM 6670-01; TVOC's < 10 ug/m³; any individual species <2.0 ug/m³; particles < 100 particles/m³ of 0.5 um particles] is a valuable addition.

You may want to include aldehydes specifically in this specification – typically measured by HPLC and not a GC/MS. The reason is that aldehydes react with ozone and can thus reduce ozone emissions.

For in-duct air cleaners that either intentionally or un-intentionally create ozone (i.e. EAC's – especially DIRTY EAC's) mandating an emission RATE (ug/min) may make more sense than a concentration (ppb or ug/m³).

One method for arriving at a reasonable emission rate is using a model, such as that developed by Richard Corsi, Ph.D. (UT- Austin) and published on the CPSC website:

<http://www.cpsc.gov/library/foia/foia07/pubcom/Ozone.pdf> , pp 21-75.

This model includes interactions with surfaces, aldehydes, and ventilation.

While this approach is somewhat complex, it provides a means of predicting actual ozone concentrations inside an occupied space.

A simpler, and more conservative, alternative, would be to require all in-duct air cleaners (whether they “intentionally”, or “unintentionally” emit ozone) to emit ozone at a RATE no greater than that allowed in portable air cleaners.

As you are well aware, recent studies (as summarized in the Corsi document above) show that deleterious effects (increased mortality, asthma, cardiovascular events, etc.) of ozone occur at levels FAR below the current FDA level of 50 ppb. Since 50 ppb levels can be achieved simply through ventilation of contaminated outdoor air in highly populated areas in the summer, additional ozone from indoor appliances can add to the health burden of the residents of CA .

Cheerfully,

Mark

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Cheerfully,

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