

deciding it was not appropriate to move forward with a seasonal secondary, and state that these same uncertainties have not been materially reduced in the current review.

These commenters also asserted that EPA's analysis of the impact of the nation's O₃ control program for the 8-hour standard on W126 exposures is not scientifically sound due to the use of low estimates of PRB and an arbitrary rollback method that is uninformed by atmospheric chemistry from photochemical models. They argue that EPA must first realistically evaluate the total O₃ reductions that would occur by using a state-of-the-art photochemical model and perform an analysis of the exposure-response data to determine if effects are observed for exposures which do not exceed the 8-hour standard.

These commenters also stated that without producing C-R functions for the 8-hour form of the standard, EPA has failed to show that the current 8-hour standard would provide less than requisite protection. These commenters asserted that substantial uncertainties remain in this review, and that the benefits of changing to a W126 form are too uncertain to warrant revising the form of the standard at this time.

This group of commenters also addressed limitations associated with selection of the W126 cumulative form. Commenters asserted that: (1) the W126 form lacks a biological basis, since it is merely a mathematical expression of exposure that has been fit to specific responses in OTC studies, such that its relevance for real world biological responses is unclear; (2) a flux-based model would be a better choice than a cumulative metric because it is an improvement over the many limitations and simplifications associated with the cumulative form; however, there is insufficient data to apply such a model at present; (3) the European experience with cumulative O₃ metrics has been disappointing and now Europeans are working on their second level approach, which will

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Deleted: EPA disagrees that the methods used are not scientifically sound and has provided a more detailed discussion under section IV B.2. and in the Response to Comments document. Regarding the remaining uncertainties in the exposure and risk assessments, and the reduction in uncertainties since the last review, these comments have already been addressed above in section IV B.2 and are further discussed in the Response to Comments document. ¶

Deleted: In response, EPA emphasizes that the Criteria Document has reviewed hundreds of studies that demonstrate that cumulative metrics, such as W126, are the most biologically relevant concentration-based metrics for vegetation available at this time (EPA 2006). EPA has found no evidence that, from the perspective of biological impact of O₃ exposure, the 8-hour standard form is an appropriate metric to protect vegetation. EPA further notes that these commenters provided no evidence that the 8-hr standard form has any basis for effects on vegetation or any scientific reasoning why the 8-hour standard is a superior standard form over the cumulative W126 metric. Therefore, EPA disagrees that it is inappropriate at this time to select a form that is more directly relevant to vegetation response and would, together with appropriate averaging times and level, be better suited to provide the appropriate degree of protection. EPA also notes that examples of crop concentration-response functions with the 8-hour form were provided (Staff Paper, Figure 7E-1 of Appendix 7E).

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