TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 20, 2014

Air and Radiation Docket and Information Center
Mail Code: 2822T
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW.
Washington, DC 20460

Attn: Docket ID No. EPA–HQ–OAR–2008–0699

Re: Comments on the U.S. EPA Second External Review Draft Welfare Risk and Exposure Assessment for Ozone and Related Photochemical Oxidants EPA–EPA–452/P–14–003a

Dear Sir or Madam:

The Texas Commission on Environmental Quality (TCEQ) appreciates the opportunity to respond to the U.S. Environmental Protection Agency's (EPA) request for input in the notice published in the January 29, 2014 edition of the *Federal Register* entitled: "Second External Review Draft Welfare Risk and Exposure Assessment for Ozone and Related Photochemical Oxidants."

Enclosed, please find TCEQ's detailed comments to the EPA action referenced above. If you have any questions concerning the enclosed comments, please contact Michael Honeycutt, Ph.D., Toxicology Division, Office of the Executive Director, at michael.honeycutt@tceq.texas.gov.

Sincerely,

Richard A. Hyde, P.E.
Executive Director

Enclosure

Welfare Risk and Exposure Assessment Second Draft - 2014

In February of 2014, EPA released its second draft Welfare Risk and Exposure Assessment (WREA) for Ozone for public comment closing on March 24th 2014. At the same time, the second draft Policy Assessment (PA) and second draft Health Risk and Exposure Assessment (HREA) were released for public comment with the same closing date, allowing stakeholders 36 working days to review the three substantial documents and all associated appendices. This is impracticable and suggests that EPA is not interested in receiving meaningful and complete comments. If EPA genuinely wishes to receive the most useful input, advanced notice should be given to stakeholders paired with a reasonable timeframe for preparing comments. Nevertheless, in the time allowed, TCEQ has prepared the following comments on the second draft Policy Assessment.

General Comments

While the TCEQ supports efforts to advance the scientific basis of the ozone NAAQS, we would like to emphasize a number of issues with the proposed secondary standard, which is based on the W126 index. EPA has not demonstrated that the proposed secondary standard is more protective than the current level and form of the standard. Indeed, the current standard is adequate to protect against adverse welfare effects.

The proposed cumulative standard is unnecessary.

EPA states that the intent of the proposed standard is to be more biologically-relevant than current 8-hour average. However, in the Policy Assessment, EPA repeatedly states that there is no scientific support for threshold below which no vegetative effects occur. This makes selecting the level of a secondary standard both highly uncertain and arbitrary. In fact, EPA's analysis indicates that just meeting the current 75 ppb standard would generate W126 results within the range proposed by EPA (i.e., 7-15 ppm-hrs, see table 4-1 and figures 4-7, 4-9, 4-10 in WREA). Indeed, the WREA indicates that modeling attainment of the 75 ppb standard would result in larger reductions in W126 index scores than modeling attainment with alternative standards (see 15 ppm-hrs in figure 4-10, 11 ppm-hrs in figure 4-12, and 7-ppm hrs in figure 4-14).

The WREA further indicates that there is a strong positive correlation between the current standard and proposed form (see figs 4-15 and 4-16). In essence, the current standard is a surrogate for the proposed alternative form. Based on these observations, it is clear that there is no need for the proposed change to the secondary NAAQS for ozone, especially as current standard just being implemented. [1]

[1] Public comments have been submitted by several U.S. delegates and senators to CASAC in advance of the ozone review panel meeting on March 25-27, 2014, requesting that EPA consider the "no change" option

There is substantial uncertainty with cumulative ozone estimates.

The WREA describes a number of uncertainties relating to the proposed secondary standard in section 8.5.1. For example, air quality monitors tend to be more densely positioned near urban centers, and therefore ozone concentrations are modeled (extrapolated from monitored data) for large portions of U.S. including the West, Northwest, Southwest and the central Northwest. Moreover, W126 estimates are highly variable from year to year. For this reason, the selection of year for analysis leads to significant differences in exposure estimates.

In addition, there is uncertainty regarding the Concentration Response Functions (CRFs) used to develop the proposed secondary standard. Indeed, the Integrated Science Assessment (ISA) for ozone states that few of the studies reporting CRFs use the W126 index or provide the data needed to generate W126 estimates (ISA section 9.6.3). Compounding these uncertainties for exposure estimates, EPA used W126 estimates generated in air quality analyses as inputs for CRFs in its modeling presented in the WREA.

Unfortunately, CRFs are available for only for 12 tree species (table 6-27 in WREA and p5-28 and 6-49 in PA), and all available CRFs are based on seedling studies that have been shown to over- or under-estimate biomass loss in mature trees in 6 of these 12 species. No information was presented on the other 6 species (see tables 6-5 and 6-27 in WREA and p6-30 in PA).

Finally, the WREA cites two recent Free-Air Carbon Dioxide Enrichment (FACE) studies to validate using the available CRFs. However, there are also uncertainties associated with using these studies (see section 9.6.3 in ISA). For example, these studies used two exposure levels (ambient 3-4 ppm-hr and elevated 28-46 ppm-hr), both of which are outside range of the proposed secondary standard. In addition, only two species (soybean and aspen) were assessed in these new studies. However, as noted in the WREA, large variability in sensitivity to ozone between species has been reported.

Ultimately, the uncertainty associated with the available CRFs that have been used in welfare risk estimates are not resolved by WREA, leading to lingering questions regarding the necessity, and utility of the proposed secondary standards.

There are limitations with implementing proposed standard.

In the Policy Assessment, EPA states that it can consider programmatic stability in determining form of standard (PA page 4-6, 4-7, 6-11, 4-64). However, only limited discussion regarding implementation issues has been provided (p6-48 of PA). The TCEQ would like to emphasize that the existing monitoring network has been developed over decades to meet current form of the ozone standard. We have significant concerns regarding the potentially substantial challenges associated with implementing the cumulative secondary standard based on the W126 index as proposed. For example, the current monitoring network would likely require significant redesign to address a different purpose and potentially significant differences between geographic locations.

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given that the current standard is just being implemented. CASAC Ozone Review Panel Meeting - Public Comments

Such an effort could require significant federal and state resources. In effect, this could result in a reduction in resources currently used to address the current form of the standard, which as previously stated, is likely to already effectively result in levels within the range of the proposed cumulative W126 index. Similar issues are anticipated with modeling plans as well. For example, modeling the secondary ozone standard directly would require modeling three months (or more) for each of three years, which would be extremely resource intensive and time consuming. In addition, different modeling episodes may be required for different forms of the standard and result in two different modeling efforts for the same pollutant. A lack of cumulative modeling for the same pollutant could result in additional costs or concerns such as over or under control. EPA has not addressed whether the current monitoring, modeling, and reporting plans could be used to implement the new form or the instability that could be caused in implementing a new cumulative form of the standard.

Conclusion

EPA demonstrates in WREA that meeting 75 ppb will effectively result in ozone levels and welfare risks within the range of the proposed cumulative standard based on the W126 index. Taken together with the uncertainty presented in the WREA, it is clear that adopting the proposed alternative standard is unwarranted and unnecessary. TCEQ urges EPA to retain the current level and form of the secondary standard for ozone.