

## PM2.5 and Ozone Guidance for Permit Modeling Comments

1. **Section 1: Page 5** -On the last full paragraph on 5 page, a reference to a Tribal Implementation Plan (TIP) is made. This should be a Tribal Implementation Plan.
2. **Section 2: Pages 8 & 9** -in Figures II-1 and II- 2, we have a concern with the steps stating that if your Source Emissions are not Greater than or Equal to the SER, then an analysis of ambient air quality impacts is NOT required for the particular pollutant. However, you are still required to include their emissions in calculating ozone and secondary PM2.5. This is of particular concern for PM2.5 projects that do not exceed the SER. Performing modeling to determine compliance for a pollutant that is, in essence, not significant based on established thresholds opens the door to question the purpose of these thresholds.
3. **Section 2.1: Page 10** - Footnotes 3 and 5 seem to conflict. Footnote 3 implies that PSD regulations do not establish that VOC be treated as a precursor to PM2.5, but may be demonstrated by the state or EPA. But, footnote 5 states that in the preamble to the final rule states that any state making a demonstration would be required to adopt the 40 TPY SER for VOC unless a more stringent emission rate is demonstrated. Clarification would be helpful.
4. **Section 2.2: Page 14**- Last paragraph, currently, there is no way of accounting for chemistry that could occur in that area due to transport that could impact emissions. Emissions could be falsely inflated due to the lack of chemistry within the model. A chemistry inclusive model, such as a desktop photochemical or puff model, should be developed to more adequately characterize and predict concentrations associated with the secondary formation of ozone and PM2.5. This is a common comment throughout this document.
5. **Section 2.2: Page 14**- Line 16, says..."show that the proposed source or modification would cause or contribute to a NAAQS or PSD increment violation." Instead of using the word "would", perhaps replace using the word "could."

6. **Section 2.3: Page 15-** Table II-1, for PM<sub>2.5</sub> Annual NAAQS should be 12µg/m<sup>3</sup>. Why is 15µg/m<sup>3</sup> listed?
7. **Section 2.4: Page 18-** Clarification is needed for the sentence starting “Instead, for major modifications”. In particular, we suggest adding additional language to also include permitted emissions be added. For example, units can choose to model emissions at the new expected actual emission rate if they are willing to establish a permit limit for the unit.
8. **Section 3.2: Page 25-** Last paragraph, there is a need for a desktop photochemical model to adequately address the impacts of secondary pollutants and their transport on final receptor concentrations.
9. **Section 3.4: Page 27-** Before section III.4, discusses the limitation of AERMOD in measuring secondary impacts from the source under review and suggests alternative approaches to assess secondary PM<sub>2.5</sub>. A desktop photochemical model needs to be developed to appropriately estimate these impacts. Alternative demonstrations such as qualitative analyses may be difficult to demonstrate during the abbreviated permitting process.
10. **Section 3.4.1: Page 28-** First full paragraph discusses the limitation of other chemical species important in the photochemical reactions. How can this qualitative analysis be used in conjunction with a quantitative analysis?
11. **Section 3.4.2: Page 29-** First full paragraph discussing characterizing meteorological conditions. Is the purpose of this for justification? Please detail expectations of this meteorological characterization. How would this differ from the characterization used in justifying MERPs representative site?
12. **Section 3.4.2: Page 30-** First full paragraph discusses using past modeling or modeling studies. With PSD modifications occurring after these studies, it would be difficult to use these studies to appropriately represent any area with any accuracy.

13. **Section 3.4.2: Page 31-** First full paragraph discussing MERPs guidance. Additional emission thresholds and source heights are needed to be able to better represent a wider range of actual sources. This is a key recommendation we are making. While no new sites may be feasible at this time, existing sites could be expanded with these varying stack heights and emissions thresholds.
14. **Section 3.4.3: Page 35-** Would it be possible to add a feature to AERMOD to consider the MERPS value receptor by receptor as with background values?
15. **Section 3.5: Page 38-** SIL Comparison for ozone: clarification is needed on what value should be compared to the SIL. Should the high first high be used for a representative monitor or the highest design value within a given area? What is acceptable?
16. **Section 3.5.2: Page 42-** Last paragraph, should modeled concentrations be rounded or truncated and to what significant digit?
17. **Section 4.3: Page 48-** What would need to be done to account for seasonal variation of secondary pollutants for PM<sub>2.5</sub>?
18. **Section 4.3: Page 55-** Last paragraph, would the use of hour by month be an appropriate option?
19. **Section 5.1.2: Page 62-** Discusses 0.3µg/m<sup>3</sup>, as well as 0.2µg/m<sup>3</sup>. Perhaps remind the reader that the threshold varies depending on what standard (NAAQS/PSD Class II increment) is being evaluated.
20. **Appendix A: Page 7-** Information from 2013-2015 time period is outdated. Please consider updating.

21. **Appendix A: Page 15-** Line 4, says “spring (March-May) and summer (July-September).” What about June? We recommend that spring should probably be April-June.

22. **Appendix C: Page 3-** Please consider adding an example for a cumulative analysis.