

DEPARTMENT REVIEW COMMENTS AND RESPONSES

Project: State Route 55 Expansion (EA No. 0J3400)
 Report/Document: Particulate Matter Hot Spot Analysis

Reviewer: Mike Brady, Caltrans HQ
 Date: 8/28/2012

No.	Comments	Response/Actions
1.	Karina's comments are pretty standard: make sure the need for analysis, and what type, is clearly stated (btw, the "new" Final Rule mentioned in the PDF file at page 7 (report page 4) is what? The *rules* for PM analysis have been in place since 2004 so are certainly not "new" -- EPA's guidance for doing detailed analysis changed in 2010, which might be what they refer to (??) but even that's not really "new" -- be a little more precise in references), make sure the alternative that is consistent with the RTP and TIP is clearly identified (the PDF file does not do that), make sure the study area is clearly identified (and no, you can't use the entire region as the hot spot study area).	The "Analysis Method" section has been updated to clarify that the Particulate Matter (PM) analysis was prepared according to the 2006 United States Environmental Protection Agency (EPA) guidance (page 7). Once a preferred alternative has been selected, a revised PM Hot-Spot analysis will be presented to the Transportation Conformity Working Group (TCWG) for their review and approval. The project applicant will ensure that this alternative is consistent with the Federal Transportation Improvement Program (FTIP) and Regional Transportation Plan (RTP).
2.	The construction paragraph on report page 6 (PDF file page 9) should be clarified a bit and CFR reference provided. Because construction will last 3 years (2017-2020), it does not meet the conformity rule's criterion for requiring inclusion of construction emissions in regional and project-level conformity analysis (40 CFR 93.123(c)(5)) -- work will last 5 years or less at any individual site.	The discussion of the construction duration has been revised as requested (page 6).
3.	In the Analysis Method introduction (starting on p.6), it should be clarified that the methodology used is the 2004 EPA Qualitative Hot Spot Guidance, which estimates the likely effect of a project on localized pollutant concentrations based on emission analysis. The method does not include dispersion analysis which would be required to directly estimate concentrations, and which is used in the 2010 EPA Quantitative Analysis Guidance. Also note that the analysis started (with the date of initial IAC) before December 20, 2012, so with IAC concurrence in the method qualitative analysis was still allowable	The "Analysis Method" section has been updated to clarify that the PM analysis was prepared according to the 2006 EPA guidance (page 7).
4.	The EMFAC footnote on p.7 doesn't quite get it right. They used EMFAC 2007, which is the correct version for conformity analysis even though EMFAC 2011 was released by ARB on 9/19/11 because EPA has not yet completed its review of EMFAC 2011 and made it available for conformity use. The fact that 2007 was used in the most recent AQMP is not relevant.	The footnote has been revised as requested (page 7).
5.	On report p. 7 (PDF p. 10), it would be helpful to state whether the monitoring station is up or downwind (based on annual prevailing wind direction) from I-5, and where it is with respect to the project as well.	The distance to the air quality monitoring station and the fact that it is located upwind of Interstate 5 (I-5) has been added to the revised analysis (page 7).

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6.	Karina's comment about describing why opening and horizon years (2020 and 2040) represent the likely highest emission years suggests that the rationale be clarified. Ordinarily, the opening year (highest emission factors) and horizon year (highest traffic volume) are the most likely to have the highest emissions. Traffic growth between those years should be described, however, and if the growth rate is substantially greater than linear in the early (probably first 10) years then another year, perhaps 5 years or so after the opening year, should also be analyzed to capture the effect of rapid early traffic growth.	<p>A justification for the use of 2020 and 2040 traffic volumes and emission rates has been added to the Analysis Method section (page 7) of the revised analysis.</p> <p>Since the current Orange County Transportation Analysis Model (OCTAM) future model reflects the Year 2035 conditions, the 2020 and 2040 forecasts were developed using a calculated annual growth rate between the existing and 2035 traffic forecasts. As this forecast is linear, additional years were not considered.</p>
7.	Should describe how the Orange Co. VMT by speed bin applies to the project -- is there reason to believe that project-specific VMT/speed bin distribution might be different from the county?	The analysis has been updated using vehicle miles traveled (VMT) data for the project area. The results of this analysis are included in Tables G through J of the updated analysis. A description of the study area is included on page 9.
8.	Check the road dust method: was the latest AP-42 (see Karina's note) used? Changes were made a couple of years ago in AP-42's paved road dust method that might reduce dust emission estimates compared to the older method. Also, was the Orange County silt loading factor (from ARB) used? It's appropriate to use ARB's local silt loading factor or one from the PM SIPs rather than a generic one assumed in AP-42, with proper attribution. It would be helpful to include an appendix page showing the road dust calculations with reference to the formula and all of its inputs.	The analysis has been updated to clarify that the January 2011 version of AP-42 was used to calculate the re-entrained dust emissions (page 6). The Orange County silt loading factors from the California Air Resources Board (ARB) were used in the analysis. The road dust calculations have been added to the Appendix.
9.	Questions related to VMT and dust calculations are aimed at refining the emission estimates. Although the increase from No Project for the various alternatives (which one is consistent with the RTP and TIP?) is small, it's non-zero, and EPA and project challengers sometimes advocate a "one more molecule" approach. The fact that none of the alternatives reduces emissions compared to No Project is worrying.	<p>The analysis has been updated using VMT data for the project area. Due to increases in ADTs along State Route 55 (SR-55), the proposed project alternatives would increase the PM_{2.5} and PM₁₀ emissions within the study area. However, due to the very small increase (less than 1 percent), it is not anticipated that the proposed project alternatives would result in an exceedance of the PM_{2.5} or PM₁₀ standards.</p> <p>The current FTIP/RTP listings do not reflect any one specific build alternative. However, once a preferred alternative has been selected, a revised PM Hot-Spot analysis will be presented to the TCWG for its review and approval. The project applicant will ensure that the selected alternative is consistent with the FTIP and RTP.</p>