Division of Air Pollution Control

Response to Comments
$PM_{2.5}$ redesignation request for the 1997 $PM_{2.5}$ Annual Standard for the Cincinnati-Hamilton Area

Agency Contact for this Package

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Ohio EPA held a public hearing in Cincinnati, OH on November 29, 2010, regarding the Redesignation Request and Maintenance Plan for the Cincinnati-Hamilton $PM_{2.5}$ Nonattainment Area. This document summarizes the comments and questions received at the public hearing and during the associated comment period, which ended on November 30, 2010. Ohio EPA reviewed and considered all comments received during the public comment period.

By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. The name of the commenter follows the comment in parentheses.

General/Overall Concerns

Comment 1: **The final submission should include electronic copies of the RunSpec files, the user-supplied input database(s), and the output databases(s) produced for the analysis. The inclusion of post-processing scripts in Section 4.6 and 5 is very helpful (Patricia Morris, U.S. EPA - Region 5).**

Response 1: The RunSpec files, input and output databases, SQL post-processing scripts, and the revised documentation have been saved to CDs and 2 copies will be provided to U.S. EPA.

Comment 2: **Table 3 in the unnumbered section at the beginning of the document includes a summary of the RunSpec parameters used in this analysis. The Appendix, which starts on numbered page 11, includes a more detailed description of the RunSpec parameters and user inputs. There are some discrepancies between Table 3 and the Attachment text**

which are listed in order below (Patricia Morris, U.S. EPA – Region 5).

Response 2: The text discrepancies between Table 3 and Appendix C have been corrected as indicated.

Comment 3: **The default database version listed in Table 3 ("MOVES default database 2010615111524") does not exist. The documentation needs to accurately refer to the version of the database used (Patricia Morris, U.S. EPA – Region 5).**

Response 3: We have correctly identified the version in the final document.

Comment 4: **For calculating annual $PM_{2.5}$ emissions, OKI used a single daily temperature profile that was based on annual average temperatures (Table 3 and Section 1.3). PM emissions in MOVES are sensitive to temperature, and the use of a single day temperature profile to represent the entire year may not accurately reflect the impact of seasonal temperature changes on PM emissions form motor vehicles. For a PM inventory that is going to be used for air quality modeling in an attainment demonstration, seasonal, monthly, or even daily temperatures may be needed, depending on the detailed circumstances of the analysis. Given that this analysis is not being used for an attainment demonstration, the use of an average annual temperature profile is acceptable, but approval of this approach should be taken as a general approval of the use of a single daily temperature profile for all uses (Patricia Morris, U.S. EPA - Region 5).**

Response 4: It is our understanding that the use of one set of annual averages is acceptable for developing a motor vehicle emissions budget and for transportation conformity. This methodology is similar to what OKI used for MOBILE. We agree that MOVES assumptions used for different state implementation purposes may need to vary. OKI will be experimenting with a four season approach to annual emissions. When MOVES is used for attainment demonstrations purposes we will discuss further the appropriate assumptions to use with all parties involved.

Comment 5: **Section 1.3 of the Appendix says, "Ozone season daily analysis is done using July temperatures." What is the purpose of this analysis in the context of this submission?**

There doesn't seem to be any other reference to this in the document (Patricia Morris, U.S. EPA - Region 5).

Response 5: OKI's MOVES runs generated additional information (i.e. July emission rates) that was not required for this PM2.5 SIP. Document references to an ozone season analysis and July temperatures have been deleted.

Comment 6: **Table 3 says that all roads types including off-network were included. Section 1.6 says, "There are five types of road types available in MOVES, since OKI travel demand model could not predict the VMT in parking lots (off network) only four road types is used to assign activity for vehicles starts and for evap emissions while vehicles are parked. It does not apply to VMT parking lots. Given that start emissions were calculated, the entry in Table 3 seems to be the correct one, but the document should be clarified (Patricia Morris, U.S. EPA - Region 5).**

Response 6: We have included the appropriate clarification in the final document.

Comment 7: **Table 3 says that all PM2.5 categories were selected in the Pollutants and Processes panel, but Section 1.7 says that "total PM2.5 emissions are selected in addition of (sic) sulfur dioxide." If that is accurate, the inventory would not include brake-wear and tire-wear emissions which are calculated separately from "Total PM2.5" which only includes exhaust emissions. Given that the inventories include brake and tire wear, Table 3 seems to have the correct information, but the documentation should be clarified (Patricia Morris, U.S. EPA - Region 5).**

Response 7: We have included the appropriate clarification in the final document.

Comment 8: **Table 3 and Section 2.2 indicate that for the Ohio counties, local populations were used for all source types except 41, 61, and 62. However, in the Kentucky counties, default data were also used for the light truck categories (31 - passenger trucks and 32- light commercial trucks). We are concerned about the use of default data for the light truck categories. Our technical guidance is very clear on the importance of**

local information for source type population. While it may be reasonable to use national defaults for some of the heavy duty categories as was done in the Ohio counties, OKI should be able to develop local data for the light duty categories. If Kentucky has local data for passenger cars, they should also have local data for light trucks (Patricia Morris, U.S. EPA - Region 5).

Response 8: The Kentucky Transportation Cabinet (KYTC) decoded VINs and provided the results by HPMS source type to OKI. Inconsistencies were found in the results and could not be corrected in time for OKI's analysis. It was decided that a combination of the KYTC VIN data and MOVES default data would provide the most accurate results. KYTC continues to try to correct the VIN decoding errors.

End of comments