PARTICULATE MATTER EMISSION FACTORS USING MOVES REGIONAL SCALE OF ANALYSIS

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Table 1 shows the RunSpec generic parameters used for MOVES regional scale analysis

TABLE 1 MOVES RunSpec Parameters

Data Item	**Description**
Geographic location	Cook County, IL
Scenario Year	2029
Time Period	All 12 months
Pollutant	PM2.5
Emission Process	Running exhaust, crankcase running exhaust, break wear and tire wear
Vehicle- Fuel Combination	Diesel powered all MOVES vehicle types
Road Types	Both restricted and unrestricted road types
Scale of analysis	County

Table 2 shows the local specific input data used for MOVES regional scale analysis.

TABLE 2 MOVES Local Specific Input Parameters

Data item	**Description**	**Source**
Vehicle Type VMT	Annual vehicle miles traveled by HPMS vehicle class for the year and geographic area being modeled	In this case, vehicle type VMT for Cook County was obtained from the travel statistics from Highway Performance Monitoring System (HPMS) for calendar year 2009. VMT distribution for calendar year 2029 was obtained using the growth factors from 2009 to 2029. The same percentage was applied to all vehicle types as individual growth factors by vehicle types were not available.
Source Type Population	The number of vehicles in the geographic area being modeled for each vehicle type such as passenger cars, passenger trucks etc	EPA converters to convert data from MOBILE format into MOVES compatible format were utilized for generating source type population based on vehicle type VMT.

Average Speed Distribution	The average speed data specific to vehicle type and road type and time of day/ type of data for geographic area being modeled	VMT distribution by speed bin for Freeways and Arterials by hour for the Chicago area for year 2007 was obtained from IL EPA for PM Hot-Spot Transportation Conformity Project. The same data was utilized for calendar year 2029 assuming there will a little significant change in future fractions. Due to lack of data, same speed-VMT fractions are used for urban and rural types. EPA converters were utilized to convert this data in MOBILE format into MOVES compatible format.
Road Type Distribution	The fraction of VMT by road type for the geographic area being modeled	EPA converters were utilized for generating road type distribution based on vehicle type VMT.
Source Type Age Distribution	Vehicle age distribution	Registration distribution for the Chicago area for year 2008 was obtained from IL EPA for PM Hot-Spot project. The same data was utilized for calendar year 2029 assuming there will a little significant change in future fractions. EPA converters were utilized to convert this data in MOBILE format into MOVES compatible format.

Meteorology	Temperature and humidity	Hourly temperature and relative humidity values were obtained from IL EPA in AERMET format and was extracted to be used for MOVES.
Fuel Supply	Fuel supply parameters and associated market share for each fuel	MOVES default fuel data was used with changes made to Reid Vapor Pressure, Sulfur content based on local data. Local data for Cook county was obtained from IL EPA.
I/M Program	Inspection-maintenance program parameters	Local IM data from IL EPA

Table 3 describes the files attached

TABLE 3 List of files attached

Input File Name	**Description**
Consolidated_inputs.xls	This file has all inputs used for MOVES regional scale.
Cook_CountyPM_allmonths_detailedoutput.xls	MOVES output by road type, vehicle type and emission process.
Cook_CountyPM_allmonths_detailedoutput.xls	MOVES output by road type, vehicle type.