Summary of Improvements from July 2014 Release of MOVES2014 Model

EPA published an updated version of the MOVES2014 model in October 2014 called "**MOVES2014 October Release**".

This version of the model fixes a significant error in the new nonroad portion of MOVES2014 and a few minor issues with the onroad portion of MOVES2014. In the onroad portion of the model, EPA fixed an error in the spreadsheet that some states (e.g, Maryland) use to estimate evaporative emissions from vehicles meeting California Zero Emission Vehicle (ZEV) standards.

Following is a summary of a few important changes/improvements.

Nonroad Potion of MOVES2014 Model

Change	Impact on Criteria Pollutants	Details	Notes
Repair to Nonroad population problems	None for users of Nonroad inventory results.	No impact on direct emissions output from MOVES2014, but some post-processing scripts calculated incorrect rates because of artificially inflated population and activity output. In addition, some scripts incorrectly handled population when multiple days and months were selected.	Equipment population and source hours in MOVES activity output will drop by a factor of two with the fix. Rates calculated by the post-processing scripts will drop by a factor of two or more, depending on the number of days and months selected.
A fix for a problem with the emission rate-per-hour emissions for Auxiliary Power Units (APUs).	Low	Corrects an error in rates that occurs only when "model year" was not checked in the output detail pane. This error does not affect inventory output or output to other rates tables.	
A fix to a divide-by-zero error for Nonroad runs of the 1990, 1999 and 2000 calendar years.	Low	Incorrect emissions were produced when a user modeled calendar year 1990, 1999 or 2000 and did not select all pollutants.	Before the fix, the model also logged an error in the error output table.
Onroad Potion of MOVES2014 Model			
A fix in the spread-sheet used to estimate evaporative emissions from vehicles meeting California Zero Emission Vehicle (ZEV) standards		Affected evaporative emissions from vehicles meeting California Zero Emission Vehicle (ZEV) standards used by a few states such as, Maryland.	

Diesel refueling displacement vapor loss set to zero.	Low	Diesel refueling displacement vapor loss was incorrectly reported. It is now correctly set to zero.	
Improvement to increase speed for processing large runs.	None	--	Very large runs with many worker "bundles" now run more quickly.
A change to the SampleVehiclePopulation table that repairs an error in the sourcetype fractions for long-haul single unit trucks and short-haul combination trucks (SourceTypes 53 and 61)	Low	This error sometimes caused incorrect results when using the Alternative Vehicle and Fuel Technologies (AVFT) importer to change the fuel mix for these sourcetypes. Users not importing local AVFT tables are unaffected.	
A change to the PollutantProcessAssoc table so MOVES now correctly requires users to model PM2.5 running processes whenever requesting output of brakewear emissions	Low	Without this fix, some runs where users requested brake wear lacked these emissions. Users requesting brake wear emissions plus PM2.5 running emissions are unaffected.	
A code change that does not allow separate ramp output for "rates" runs.	Low	Emission rates (per -vehicle, per-profile) were incorrect in runs that requested output specifying "ramp" roadtypes. Rate runs that did not request "ramps" as separate output were unaffected. Inventory runs were unaffected.	With the fix, users may not request separate ramp output in "rates" runs. Separate ramp output continues to function for inventory mode.
Change in fuel supply to correctly increase RVP of E15 fuels in RVP control areas without E10 waivers.	Low	The change increases evaporative emissions from E15 fuels in affected areas. It also causes very minor changes in exhaust emissions.	
An improvement to the default fuel supply to assure that every county has a default Compressed Natural Gas (CNG) fuel.	None	--	This will prevent a "red X" in the Fuels Importer if the user chooses CNG in the Runspec and imports the default fuel supply.
Change to I/M database to give unique program-IDs to alternative fuels.	None	--	This change has no impact on emissions but reduces the chance of confusion.