



# Update of Heavy-duty Emission Levels for MOBILE6

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# Overview



- EPA intends to update heavy-duty emission factors in MOBILE6
  - Plan to follow same methodology employed in MOBILE5, using updated inputs
  - Equation:
    - » Emission factor (g/mi) = work-specific emission (g/bhp-hr)\* conversion factor (bhp-hr/mi)



- This presentation provides the methodology for work-specific emission levels for 1988 model year and newer vehicles
- A separate analysis (a work assignment with Acurex Environmental Corporation) will provide updated conversion factors
  - a final report for this work assignment will be available in November

# Emission Factor Update Approach



- Limited representative HDV test data produced since release of MOBILE5
  - MOBILE5 contains in-use test data for pre-1988 MY and uses certification data for later years
- Use MOBILE5 data for pre-1988 MY
- Use certification data as a surrogate for 1988 and later

# Methodology



- Certification data is complete for MY 1988 to MY 1995
- Certification data contains zero-mile level (ZML) emissions and deterioration rates at end of useful life (DR)
  - Useful life varies by heavy-duty engine class
  - Deterioration rates were converted to grams per brake horsepower-hour per 10,000 miles

# Methodology



- Emission levels from certification data were weighted by engine sales and rated power
- Model years were grouped according to changes in EPA standards/technology
- Projections were made for 1996 and later