

# **MOBILE6**

## **EPA's Highway Vehicle Emissions Model**



**North American Vehicle Emission Control  
Conference**

**Atlanta, April 4, 2001**

**Megan Beardsley**

**U.S. EPA, Office of Transportation and Air Quality**

# Overview



- Background
- Comparing MOBILE6 and MOBILE5
- MOBILE6 rollout
- Future Work

# What Is MOBILE6?



- Tool for predicting HC, CO & NOx from cars, trucks and motorcycles under various conditions
- Used for SIPs, Conformity, NEPA, TRENDS, EPA rulemakings
- Replacement for current MOBILE5

# Mobile--Coverage



- Vehicle standards:
  - Pre-control, Tier 0, Tier1, LEV & Tier2
- Gasoline & diesel
- Gasoline content: RFG, RVP, oxygenates, sulfur
- Speed, air conditioning, off cycle, temperature
- Inspection/Maintenance
- 1955-2050 calendar years

# Current Status



- Preliminary model now available to state & local agencies.
- Final release expected in summer, 2001.

# How Does M6 Compare to M5?

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- New and improved data
  - e.g. In-use deterioration of newer technology
- Updated understanding of emissions
- New regulations since 1992
- Thorough stakeholder and peer review
- More user friendly input and output

# M5 Vs. M6

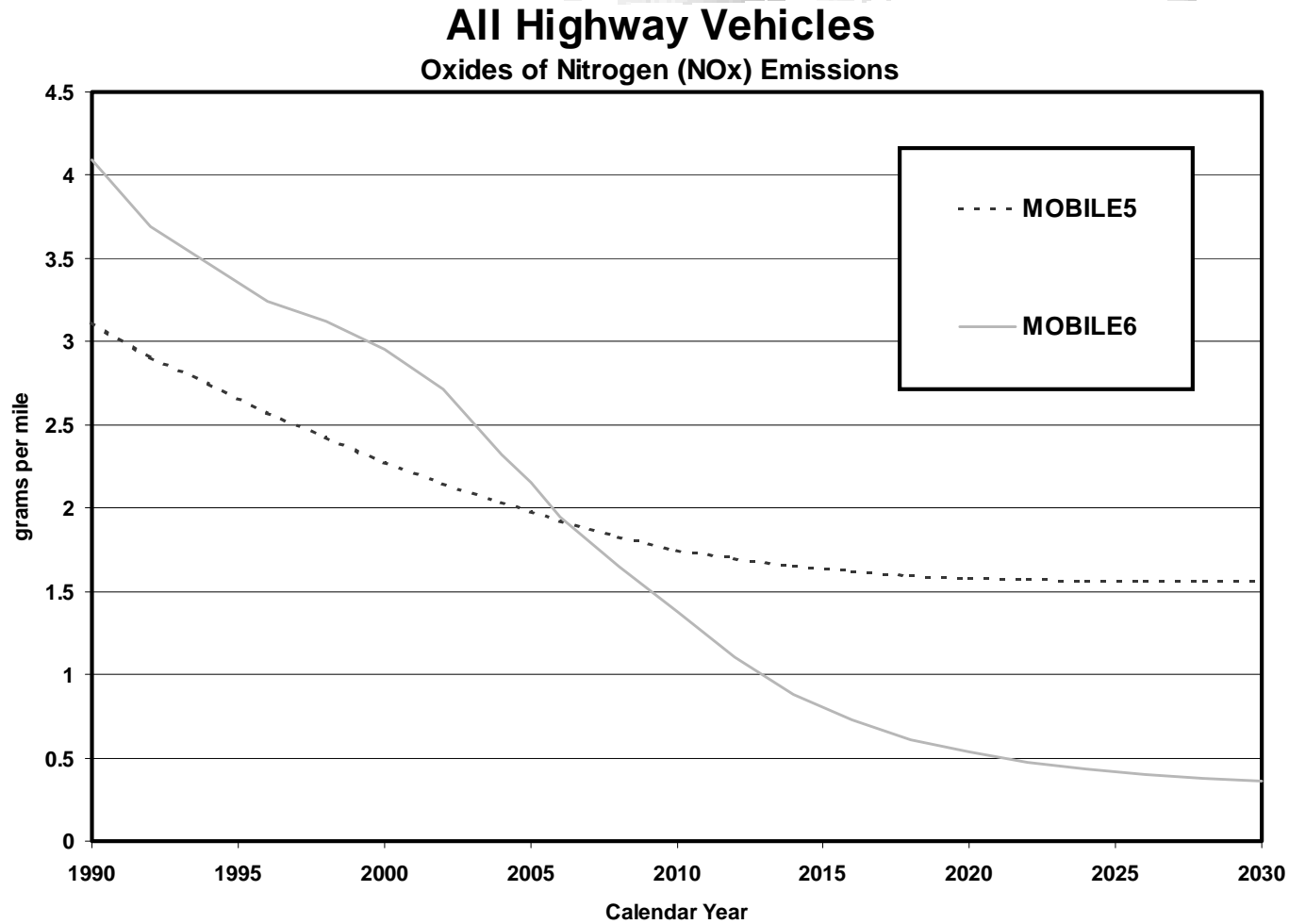
## How Do the Numbers Differ?

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- General trend:
  - M6 estimates higher than M5 in past.
  - M6 estimates lower than M5 in future.
  
- However, results vary based on local conditions & assumptions.
  - Must run model with local area inputs to understand local area implications.

# MOBILE6 Vs. MOBILE5

## National Run



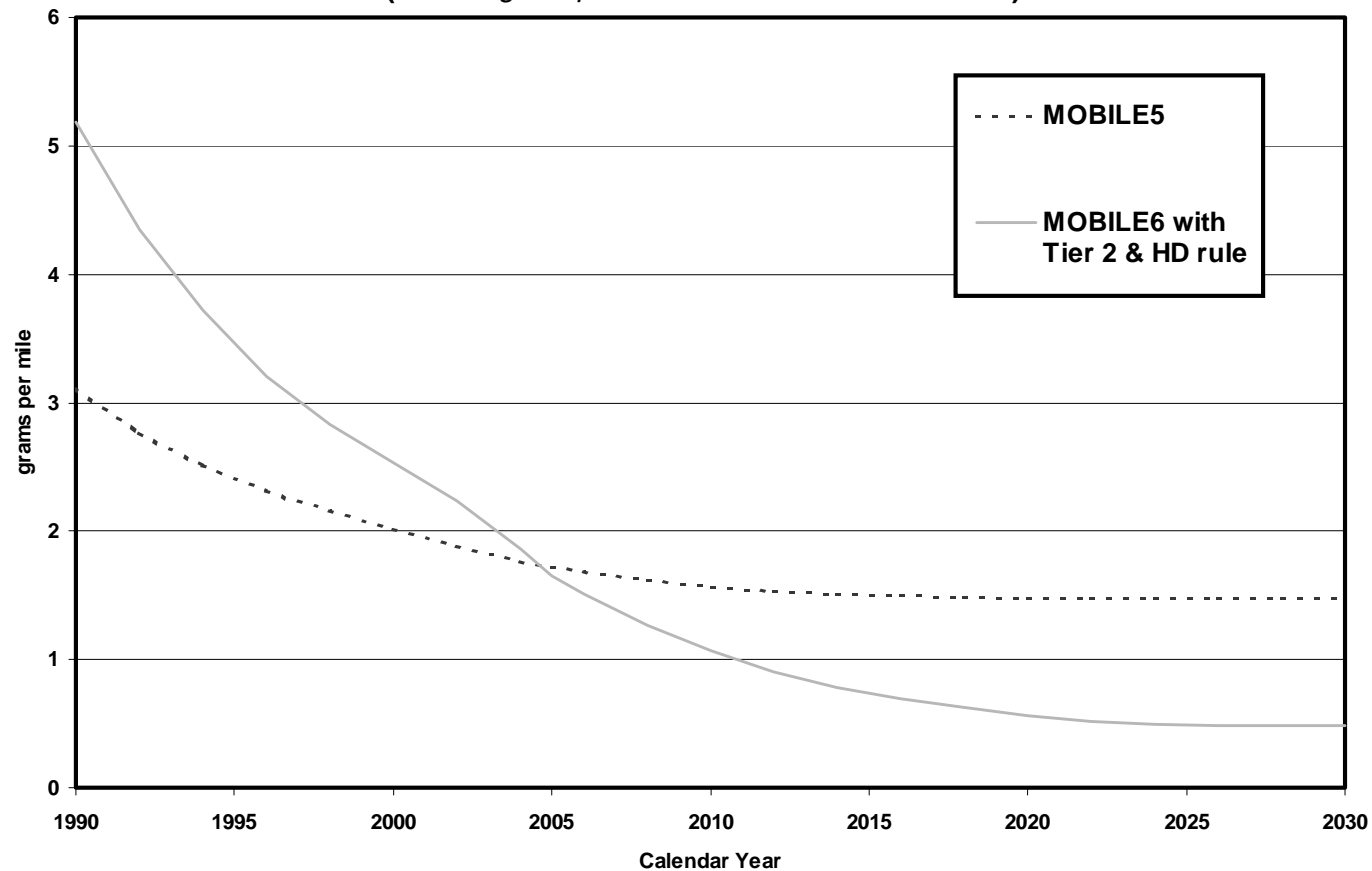


# MOBILE6 Vs. MOBILE5

## National Run

### All Highway Vehicles

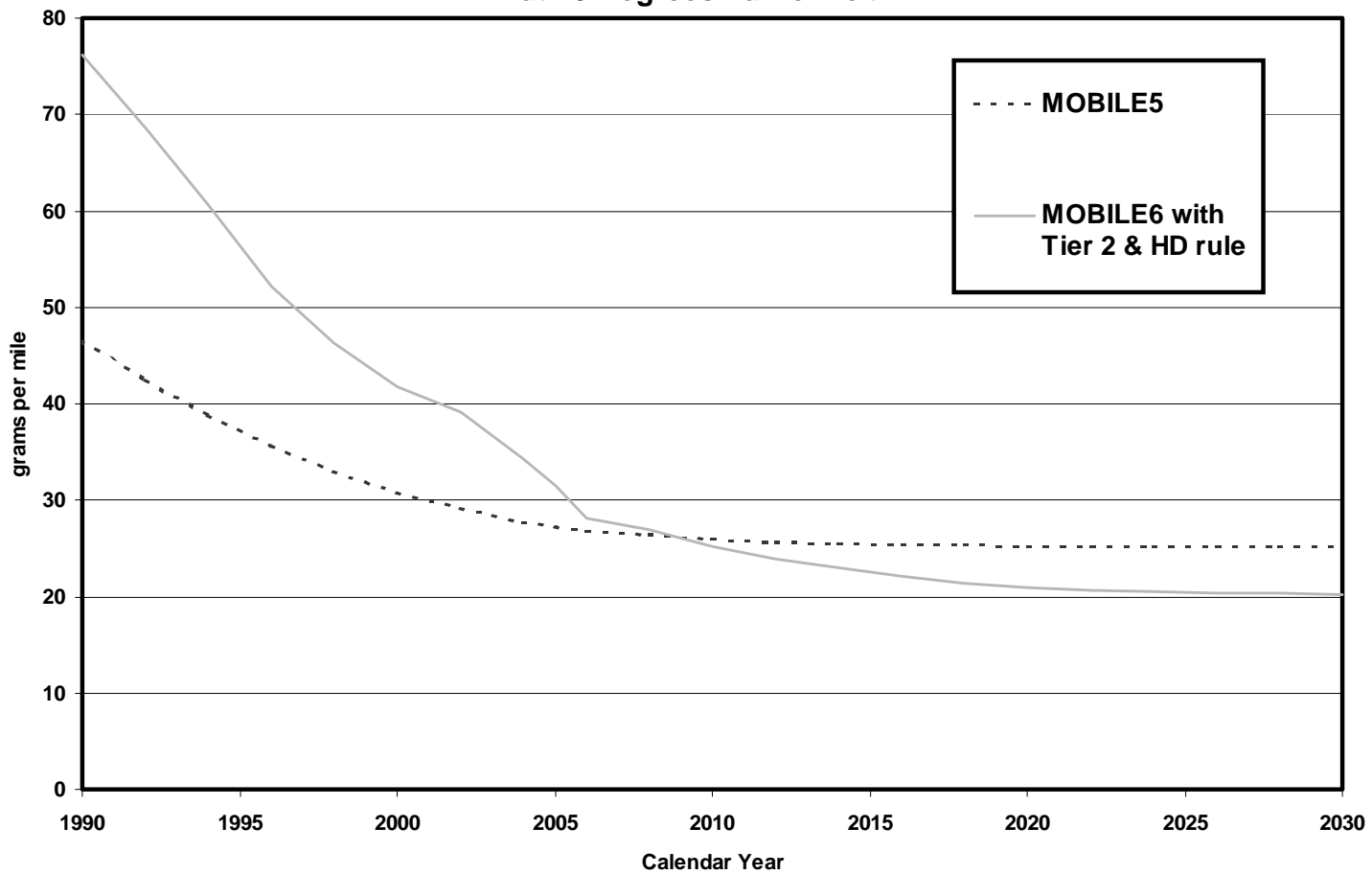
Volatile Organic Compounds (VOC) Emissions  
(Including Evaporative and Exhaust Emissions)



# MOBILE6 Vs. MOBILE5

## National Run

All Highway Vehicles  
Carbon Monoxide (CO) Emissions  
at 20 Degrees Fahrenheit



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# M6 Vs. M5

## Why Higher in Past, Lower in Future?

### Higher

- Acceleration and AC
- Sulfur on catalysts
- HD NOx excess
- More older vehicles
- Less oxy CO benefit
- More SUVs
- Etc.

### Lower

- SFTP rule
- Tier 2
- HD NOx consent decree
- Better durability of control technology
- HD 2007 rule
- Etc.

# Limited Release



- M6 has been released to state and local agencies for 90 day preview.
- Preview will allow states to:
  - Become familiar with M6 inputs, outputs and results.
  - Understand local implications for SIPs and conformity.
  - Identify user support needs.

# M6 Support Materials



- General public
  - Fact sheet
- State and local staff
  - Policy guidance documents
  - Conference calls with state & local organizations.
- Model users
  - Users' guide
  - "Frequently Asked Questions"
  - [mobile@epa.gov](mailto:mobile@epa.gov)

# MOBILE6 Training



- Computer-based training on CD.
- Train EPA and DOT regional staff in Ann Arbor, April 25-26.
- Training at IEIC in Denver, April 30.
- Three user training sessions in EPA Regions.
- Assist with DOT, other training efforts.

# Life after MOBILE6



M6.1      Add particulates

M6.2      Add toxics

M6.3      Add greenhouse gases

New Generation Model      A fresh start!