

# Gaseous Pollutant Measurement Allowances for California's Heavy-Duty Diesel In-Use Compliance Regulation

Public Hearing

December 6, 2007

El Monte, California

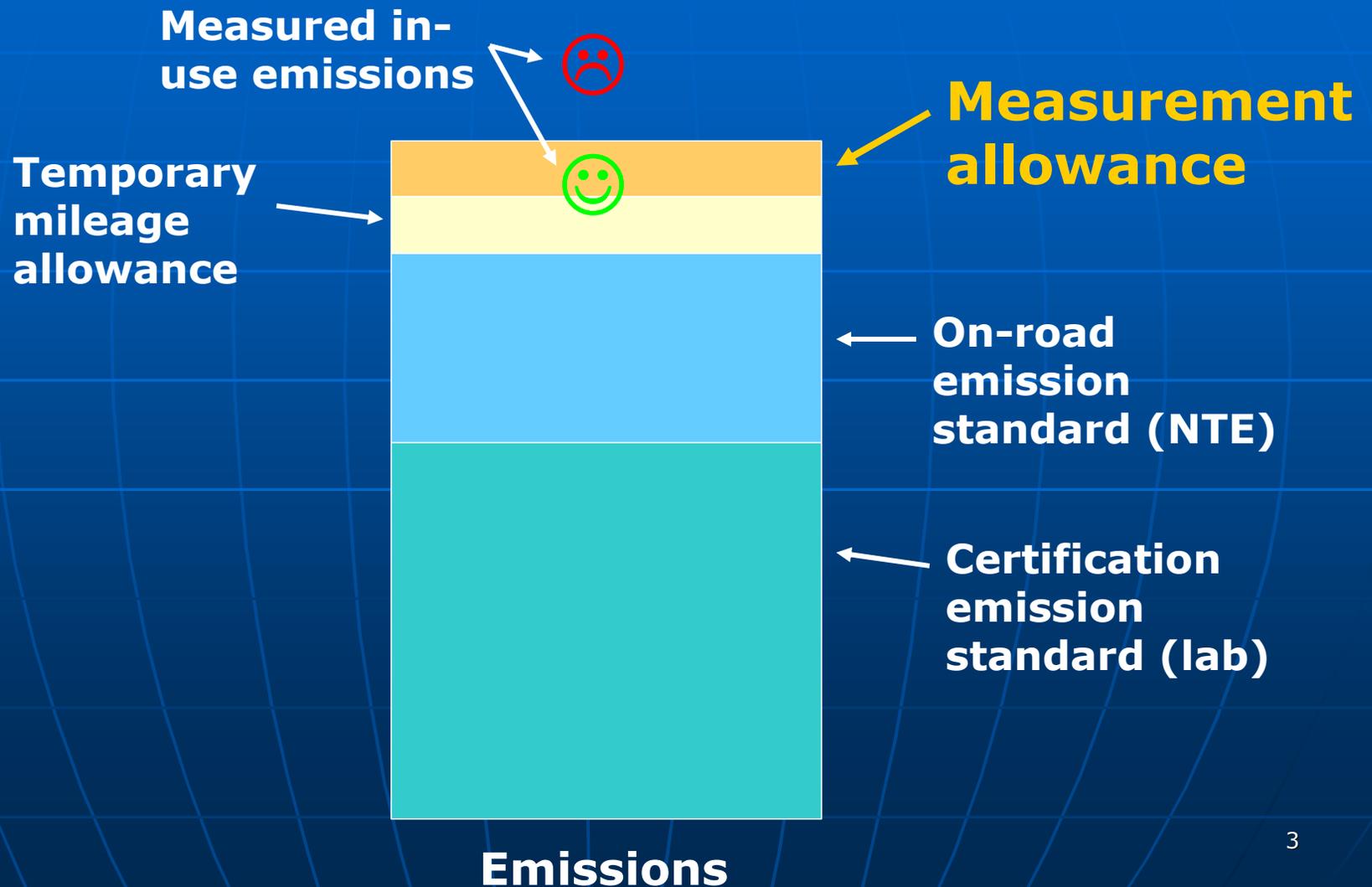


California Environmental Protection Agency  
 Air Resources Board

# Background

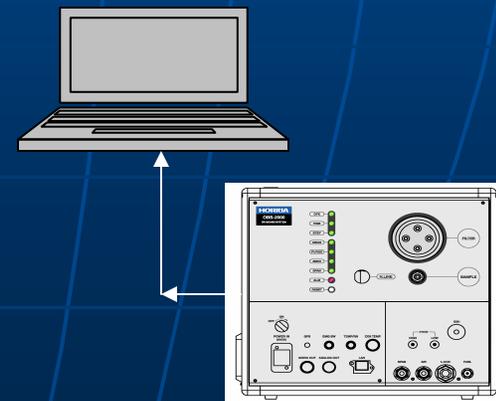
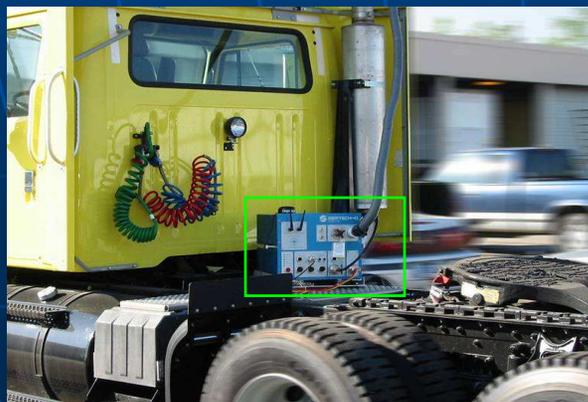
- Heavy-duty diesel in-use compliance regulations adopted in 2006
  - Previous procedure required engine removal for ARB emission testing
  - New procedure requires engine manufacturers to perform testing
- Testing to be conducted with portable emission measurement system (PEMS)
  - Installed on trucks
  - Data collected during routine operation
- Measurement variability of PEMS needed to be established

# Determining In-use Compliance



# Portable Emission Measurement System (PEMS)

- Allows for on-the-road, real time testing
- Uses same technology as in laboratories
- “Measurement allowances” account for real world variability



# Measurement Allowance Determination

- Measurement allowances needed before compliance can be determined
- Measurement Allowance Steering Committee established
  - ARB, U.S. EPA, engine manufacturers
- Testing program established to determine measurement allowance

# Test Plan for Measurement Allowance Determination

- Selection of appropriate simulation model
- Engine dynamometer and environmental chamber testing
- Model simulation runs for measurement allowance determination
- Used mobile laboratory to help confirm validity of measurement allowances

# Results:

## Measurement Allowances

<b>Regulated Pollutant</b>	<b>2007-09 MY (g/bhp-hr)</b>	<b>2010+ MY (g/bhp-hr)</b>
NOx	0.45	0.15
NMHC	0.02	0.01
CO	0.50	0.25
NOx+NMHC	0.67	NA

# 15-DAY Changes

- Alignment with recent U.S. EPA procedural changes
- NO<sub>x</sub>+NMHC measurement allowance for 2007 to 2009 model year engines
- New gaseous measurement allowances in 40 CFR 86.1912(a)(4) instead of 40 CFR 86.1912(a)(3)

# Staff's Assessment and Recommendation

- Proposed measurement allowances are necessary
- Proposed measurement allowances will assure high emitting trucks are correctly identified
- Staff recommends Board adoption with 15-day changes
- Allowances for PM emissions under development