California Environmental Protection Agency
AIR RESOURCES BOARD

Public Hearing To Consider Amendments to the Heavy-Duty Vehicle Smoke Inspection Program (Implementation of Assembly Bill 1009)

January 26, 2006

Sacramento, California

Overview

- Background
- Existing U.S. Standards for Heavy-Duty Engines
- AB 1009 Proposed Regulatory Amendments
- Summary and Recommendation

Health Impacts of Diesel Exhaust

Exhaust Constituent	Health Impact
Particulates	Premature Deaths Cancer Respiratory Disease
NOx & HC (Ozone Precursors)	Respiratory Disease

AB 1009 (Pavley)

- Restricts heavy-duty vehicle emission in California to vehicles designed to meet U.S. standards
  - Engine must meet U.S. emission standards
  - Requires owners to carry proof of compliance
- Applies to Heavy-Duty Commercial Vehicles (HDCVs) >10,000 pounds used on California roads
- ARB/CHP required to develop inspection protocols to ensure compliance

Which Vehicles Meet AB1009 Requirements?

- U.S. Standards in place since 1974
- Canadian vehicles
  - Canada has relied on U.S. standards since 1974
  - All Canadian vehicles meet U.S. standards
- Mexican vehicles
  - Mexican standards were aligned with U.S. for 1993-2003 model years
  - Prior to 1993 and after 2003 Mexican standards were less stringent

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Summary of Engines Meeting U.S. Standards

Country	Pre-1974	1974-1992	1993-2003	2004+
Canada	Compliant	Compliant	Compliant	Compliant
Mexico	Compliant	Non-Compliant	Compliant	Non-Compliant

Heavy-Duty Commercial Vehicle Survey

- Survey of 765 heavy-duty commercial vehicles (HDCVs) at locations in Southern California
- Approximately 1% of the HDCVs were equipped with non-U.S. certified engines
  - Percentage may increase with implementation of NAFTA
- About 30% of the HDCVs surveyed were missing the emission control label

Regulatory Proposal

- Determine if the engine meets U.S. standards
  - Inspect label of 1974 and later vehicles
  - Included as part of existing smoke inspections
- Operation of engines that do not meet U.S. standards will be fined
- Missing engine labels must be replaced
  - Provides evidence of meeting U.S. standards
  - Allows efficient inspections

Penalties

- Engines not meeting U.S. standards will be issued a $500 civil penalty
- A $300 civil penalty for missing engine labels
  - Penalty waived during the first year of implementation if label is replaced within 45 days

Cost of Compliance

- Estimated replacement costs of non-U.S. EPA compliant trucks (1% of fleet)
  - $1,500/vehicle for pre-1993 HDCVs
  - $4,500/vehicle for 2004+ HDCVs
- Estimated replacement costs of missing labels at $100/label (30% of fleet)
- Total estimated compliance cost $20 million

Estimated Emissions Benefits

Location	NOx (tpd)	PM (tpd)
Statewide	2.9	0.12
South Coast Air Basin	1.1	0.04

Estimated benefits for calendar year 2006 using California EMFAC2002 and U.S. EPA MOBILE5-MX emission model

tpd = tons per day

Cost Effectiveness

- $10.62/pound NOx and PM for pre-1993 HDCVs
- $1.09/pound NOx and PM for 2004+ HDCVs

Implementing the Pavley Requirements

- Add "label" inspection to existing smoke inspection program.
  - 11 inspection teams performing 17,000 inspections annually
  - Inspections performed at CHP inspection facilities, border crossings, random roadside locations, and fleet facilities
- Staff will continue outreach efforts to provide compliance assistance

Summary and Recommendation

- Staff's proposal will establish a cost-effective inspection process in compliance with AB 1009
- Prevents excess emissions from engines not designed to meet U.S. standards
- Staff recommends Board adoption of the proposed amendments