Air Resources Board Regulatory Update
Cal/ACT Spring Conference
Riverside, CA
April 6, 2005
Speaker: Kathleen Mead

Presentation Outline
- Background
- Commercial Vehicle Idling
- School Bus Idling
- Fleet Rule For Transit Agencies
  - Existing Urban Bus Requirements
  - New Transit Fleet Vehicle Requirements
- Next Steps
Health Impacts of Diesels in California

- Annual health impacts - 2001
  - 2,900 premature deaths
  - 3,600 hospital admissions
  - 240,000 asthma attacks/respiratory symptoms
  - 600,000 lost days of work
- By comparison - 2001
  - 3,700 deaths from car accidents
  - 2,000 homicides

Why Reduce In-use Diesel Emissions?

- Diesel Engines are Long Lived
- New Engine Standards Offer Long Term Reductions
- In-use Emission Rules Provide Near-Term Reductions
- Control Technology is Available
Diesel Risk Reduction Plan -
In-Use Engine Measures

- **Adopted**
  - Transit Fleets - Urban Buses (2000)
  - Stationary Engines (2004)
  - Transportation Refrigeration Units (2004)
  - Portable Engines (2004)
  - Transit Fleet Vehicles (2005)

- **In Development**
  - Public HDV Fleets (2005)
  - Off-Road Engines (2006)
  - Private HDV Fleets (2007)

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**Airborne Toxic Control Measure**

**to Limit Diesel-Fueled**

**Commercial Motor Vehicle Idling**

- **Adopted**
  - July 22, 2004

- **Effective**
  - February 1, 2005
Applicability

- All commercial on-road diesel-fueled vehicles operating in California with GVWR > 10,000 pounds
- Applies to CA based and non-CA based vehicles operating in CA

Requirements

- Targets non-essential idling
- Limit the primary engine idle time to five (5) minutes at any location
- Manually shut-off engine
- Buses
  - Allowed 10 minutes prior to passenger boarding
  - No limit when passengers onboard
Exceptions

- Idling to prevent a safety or health emergency (e.g. special needs kids)
- Operate equipment such as wheelchair lift
- Queuing in the normal course of conducting business
- Adverse weather conditions or mechanical difficulties
- and several others

Contacts

- For enforcement or compliance questions:
  - Renae Hankins  (916) 322-8275
  - Jason Francis  (916) 324-9683
- For regulatory development questions:
  - John Kato  (916) 322-2891
  - John Gruszecki  (916) 327-5601
- Please Visit Our Website:

  http://www.arb.ca.gov/toxics/idling/idling.htm
School Bus Idling at Schools

- Applicable to:
  - Buses and Heavy-duty Vehicles
  - All Fuel Types
  - At or Within 100 Feet of K-12 School
    - includes school bus stops and school activity destinations
- Immediately turn off engine and restart 30 seconds before departing
- More Information:

Fleet Rule For Transit Agencies

- Adopted February 2000
- Applies to Public Transit Agencies
- Regulates Urban Buses
  - powered by a heavy heavy-duty diesel engine or a type normally powered by a heavy heavy-duty diesel engine
- New Engine Emission Standards for Urban Buses
- In-Use Fleet Requirements
Fleet Rule For Transit Agencies

- In-Use Fleet Requirements for UB
  - Fuel Path Selection & Purchasing Requirement
  - ZEB Purchasing Requirement
  - Ultra Low Sulfur Diesel Fuel Use
  - Maximum Allowable Fleet NOx Average
  - Percentage Reductions of Diesel PM Emissions

Not All Transit Vehicles Are Covered by the Fleet Rule

- Diesel or Alternative Fuel Non-Urban Vehicle: 25%
- Gasoline Non-urban Vehicle: 9%
- Alternative Fuel Urban Bus: 24.5%
- Diesel Urban Bus: 41.5%
New Requirements
Covers Transit Fleet Vehicles

- Adopted February 24, 2005
- Covers “Transit Fleet Vehicles”

Transit Fleet Vehicles (TFV)

- Passenger Carrying Vehicle or Non-Revenue Vehicle
- Vehicle Greater than 8,500 GVWR
- Powered by Heavy-Duty Engine
- Diesel and Alternative-Fuels
- Owned/Operated by a Transit Agency
- Not an Urban Bus
Commuter Service Bus

- Powered by a heavy heavy-duty diesel engine or a type normally powered by a heavy heavy-duty diesel engine
- Operates on a fixed route schedule, primarily during peak commute hours
- No more than 10 stops per day
- Defined as a transit fleet vehicle, not an Urban Bus

TFV Requirements

- In-Use Fleet Requirement Only
  - Emission Reductions Through Retrofit or Fleet Modernization
- Not Required
  - Stricter Urban Bus Engine Emission Standard
  - Ultra Low Sulfur Diesel
  - Path Selection or Purchasing Requirements
TFV Requirements
In-Use Fleet Emission Reduction

- Maximum Allowable NOx Fleet Average
- Percentage Reduction in PM Emissions
- Two-Phase Implementation
  - December 31, 2007
  - December 31, 2010

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<th>Fleet Type</th>
<th>Compliance Date</th>
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<td>Transit Fleet Vehicles</td>
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* in g/bhp-hr
TFV NOx Average Calculation

- Sum of the NOx engine certification standard (g/bhp-hr) of each transit fleet vehicle engine
  - include diesel and alternative fueled vehicles, not gasoline or urban bus.
- Divide by the total numbers of vehicles in the TFV fleet
  - calculation: \((1 \times 5g) + (4 \times 4g) + (5 \times 1.2g) / 10 = 2.7\)

UB and TFV Percentage Diesel PM Reduction

<table>
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<tr>
<th>Fleet Type</th>
<th>Baseline Year</th>
<th>% Reduction From Baseline</th>
<th>Year</th>
<th>2004</th>
<th>2005</th>
<th>2007</th>
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<td>40</td>
<td>60</td>
<td>85*</td>
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<td>2005</td>
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<td></td>
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<td></td>
<td>40</td>
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<td>80*</td>
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*In the final year of compliance and beyond the transit agency can meet a fleet average of 0.01 g/bhp-hr times the number of vehicles in the fleet (same as if all your vehicles are retrofitted with a Level 3 DECS or of a MY 2007 or newer).
TFV PM Calculation

- **Baseline**
  - Based on your TFV Fleet as of January 1, 2005
    - Example: 10 diesel TFV (MY 1994-2006) @ 0.1 g/bhp-hr. Baseline = 1.0g
  - Sum of the PM engine certification standard (g/bhp-hr) of each diesel transit fleet vehicle
  - no alternative fuel, gasoline engines or urban bus engines
- **Reductions are from the 2005 PM Baseline**
  - Example: On 12/31/2007: 40% reduction from Baseline (10g), therefore your total fleet PM must equal 0.6g.

Technical Feasibility

- **Experience with Current Rule**
  - Diesel Particulate Filters: approximately 1100 installed on California Urban Buses
- **Verified Diesel Emission Control Strategies**
  - Particulate Filters
  - Fuels
  - [http://www.arb.ca.gov/diesel/verdev/verdev.htm](http://www.arb.ca.gov/diesel/verdev/verdev.htm)
- **Starting with MY 2007 the PM emission standard equals 0.01 g/bhp-hr**
Reporting Requirements

- January 31st of each year thru 2016
  - Contain number, manufacturer, make, and model of engines and fuel type used
- January 31, 2006 Report
  - Transit Fleet Vehicles as of January 1, 2005
  - TFV NOx Fleet Average
  - TAs proposed actions to achieve 12/31/2007 PM and NOx requirements
- Late Penalty of $100 per day

Next Steps
Changes to the Urban Bus Requirements

- **Transit Fleet Vehicle Requirements**
  - Preparing finalization and submittal to OAL

- **Upcoming Urban Bus Changes**
  - Revisit the 2007 Urban Bus Standards
  - Bring Proposals for Four SCAQMD Fleet Rules

UB Standard Alignment with HDT Standards: Proposal

- **Need for Change**
  - No Diesel Urban Buses Available for 2004-2009
  - Keeps the Oldest, Dirtiest Diesel Buses on the Road

- **Proposal to Modify Section 1956.1 and 1956.8**
  - Harmonize Urban Bus Engine Emissions Standards with California’s 2007 HHD Truck Engine Standards
Changes to the Urban Bus Requirements

- Adoption of SCAQMD 1192 Requirements
- Only for Transit Agencies within the SCAQMD

SCAQMD Rule 1192

- Adopted 2000
- Applies to Public Transit Fleets With 15 or More Transit Vehicles
- Alt Fuel Purchase/Lease Requirement Beginning 2001
SCAB Urban Bus: Proposal


No Change Proposed for Transit Fleet Vehicles

- Emission Reductions Obtained Through the Current ARB TFV Rule
- ARB’s Rule Achieves Additional Reductions Beyond 1192
Public Process

- **Public Workshop 04/07/05 (Tomorrow!)**
  - El Monte 1:30-4:00
- **New workshop added on 4/27/05**
  - Sacramento 1:00 to 3:00
- **Comments Requested by 04/15/05**
- **Staff Report Released by 06/03/05**
- **Board Hearing 07/21-22/05**

COMMENTS REQUESTED

- **E-Mail To:**
  - David Salardino, dsalardi@arb.ca.gov
  - Please cc: Nancy Steele, nsteele@arb.ca.gov
- **Or Mail To:** 9528 Telstar Avenue, El Monte, CA 91731
- **Or Fax To:** (626) 459-4480
Contact Information

Fleet Rule For Transit Agencies (Implementation)
Kathleen Mead
Phone: (916) 324-9550
E-mail: kmead@arb.ca.gov

Questions?
What is Incentive Funding?

Carl Moyer Program

- Incentive grants to reduce air pollution emissions from heavy-duty diesel vehicles and equipment
  - Trucks, buses, off-road construction equipment, marine vessels, ag pumps, locomotives
- ARB sets guidelines
- Districts make the grants
In 2004, the Legislature passed increased, continuous funding
- Statewide funding
  - 2004-05 – $30.5 million
  - 2005-06 – $86 million annually (through 2015)
- Local funds from $2 DMV fee increase – up to $55 million

Who is eligible?
- Public or private owners of vehicles or equipment

How much are the grants for?
- Cover up to the incremental cost – project cost minus a baseline cost that would have been incurred anyway (e.g., rebuild cost)
- Based on emission reductions – limited to $13,600 per ton of pollution reduced
**Carl Moyer Program**
- What projects are eligible?
  - Purchases of new low-emission vehicles, repowers, and retrofits that bring early or extra reductions
- Where and when do you apply?
  - Contact your local district
  - [http://www.arb.ca.gov/msprog/moyer/contacts.htm](http://www.arb.ca.gov/msprog/moyer/contacts.htm)

**Motor Vehicle Registration Fee Program**
- Administered by Air Districts
- Up to $6 per vehicle
- $$ used to reduce emissions from motor vehicles
- Each district sets criteria for funding approval / RFP Process
More Information

- Implemented by Your Local Air Districts
  - http://www.arb.ca.gov/capcoa/roster.htm
- Carl Moyer Program
  - http://www.arb.ca.gov/msprog/moyer/moyer.htm
  - New Guidelines
    - Workshops: April and May 2005
    - Board Hearing in November 2005
- Air Quality Motor Vehicle Transportation Planning
  - http://www.arb.ca.gov/planning/tsaq/tsaq.htm