Public Hearing to Consider Proposed Amendments to Transport Refrigeration Unit (TRU) Airborne Toxic Control Measure (ATCM)

Sacramento, California
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California Environmental Protection Agency
Air Resources Board
Overview

• Background
• Proposed Amendments
• Emissions Impacts
• Recommendation
Background

• TRU ATCM adopted February 2004
• U.S. EPA approved waiver
  January 16, 2009
• Enforcement delayed until
  December 31, 2009
TRU Applications

What is a TRU?
- Refrigeration systems powered by integral diesel engines
- Used to control the environment of temperature sensitive products that are transported in trucks, semi-trailers, railcars, and shipping containers
TRU Gen Set Applications

- What is a TRU Generator Set?
  - Refrigeration systems on ocean-going shipping containers and semi-trailers are electrically driven
  - TRU gen sets are attached during land-leg of a trip
  - Electrically-driven refrigeration systems plug into TRU gen sets
Key Requirements of Current Regulation

- Web-based registration
  - All TRUs based in California
  - Voluntary for TRUs based outside California
- Submit Operator Reports
  - Affects all California terminals where TRUs are assigned
- Meet in-use performance standards
  - Affects all TRUs that operate in California
  - Phased compliance schedule
Implementation Status

- Outreach training, compliance assistance
- Stakeholder issue meetings
- Regulatory advisories
- Compliance technology development and verification
- Conducted and participated in technology forums
- ARBER: Web-based TRU registration system
- Toll-free helpline
Proposed Amendments

• Today’s proposed amendments
  – Three time-critical issues
  – Need resolution by end of 2010

• 2011 amendments to address remaining issues including:
  – Revisit 7-year operational life requirement
  – Other stakeholder proposals
Proposed Amendment #1

• Model year 2003 and MY 2004 (<25 hp – truck)
  – Allow option of less stringent in-use standard now and more stringent standard later
    • Low-Emission standard met in 2010/2011 by retrofitting with Level 2 control system
    • Ultra-Low-Emission standard met in 2017/2018
  – Rationale:
    • Limited availability of Level 3 control systems (ULETRU)
    • Level 2 control systems (LETRU) readily available
Proposed Amendment #2

• Flexibility Engines
  – In-use requirements based on engine manufacturer year for pre-2011 engines
    • Fair treatment of consumers
    • Prevents unexpected loss of operational life
  – In-use requirements based on “effective model year” for 2011+ engines
    • Prevents future lost emission reductions
    • Discourages future use of dirtier flexibility engines
    • Provides consumers with clear information on remaining operational life of engine
Proposed Amendment #3

- Add TRU manufacturer reporting requirements:
  - Flexibility engine data needed to adjust compliance dates
  - Equipment model and engine information
  - Streamline the registration process
Minimal Impact on Anticipated Emission Reductions

- Temporarily defers very small emissions reductions until 2017/2018
Economic Impacts

• Amendment #1: LETRU option
  – Level 2 systems $1,300 to $2,300 less than Level 3 systems
  – Cost savings in 2010/2011 - $2.1 million
  – Compliance cost in 2017/2018 - $1.79 million
  – Net cost savings - $310,000

• Amendment #2: Flexibility engines
  – No end-user compliance costs

• Amendment #3: TRU manufacturer reporting
  – Reporting costs - $150,000
Recommendation

• Adopt the proposed amendments
• Direct staff to:
  – Issue implementation advisory
  – Continue outreach efforts
  – Continue work with TRU manufacturers on reporting mechanism
  – Return to Board in 2011 with proposed amendments to address remaining issues