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

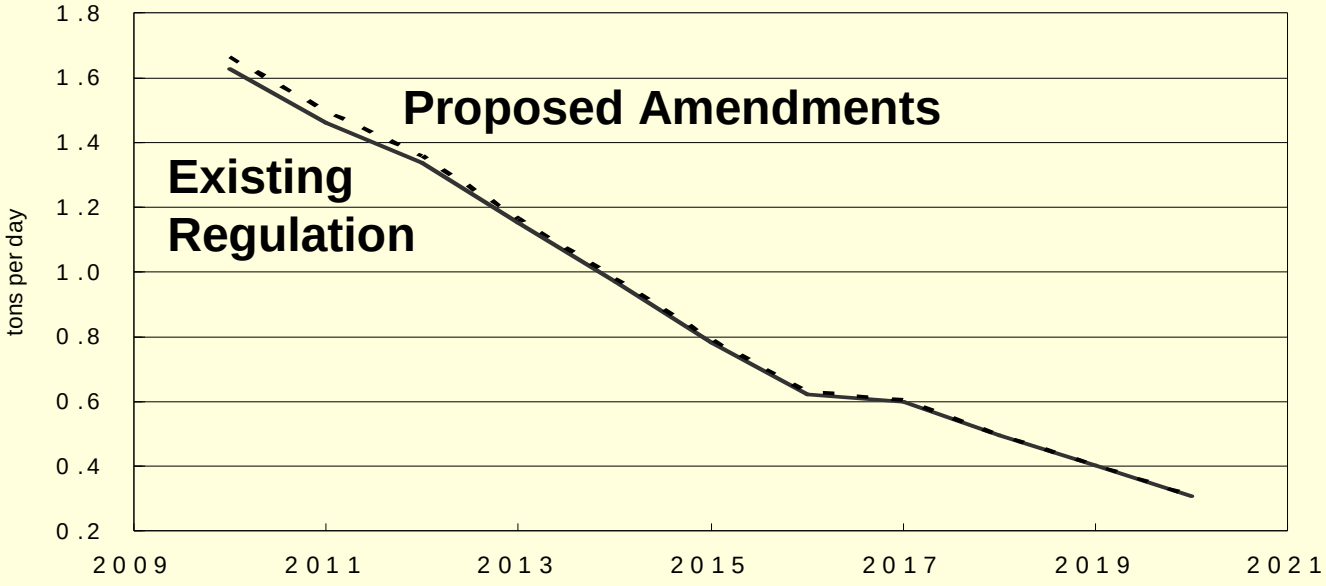
- **Flexibility Engines**
  - **In-use requirements based on engine manufacturer year for pre-2011 engines**
    - **Fair treatment of consumers**
    - **Prevents unexpected loss of operational life**
  - **In-use requirements based on "effective model year" for 2011+ engines**
    - **Prevents future 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