

Transport Refrigeration Unit (TRU) Airborne Toxic Control Measure (ATCM) Revision Workshop #1

March 24, 2010

Sierra Hearing Room, Sacramento, CA



California Environmental Protection Agency

 **Air Resources Board**

TRU Regulation

Outline

- Background Information
- Enforcement Status
- Proposed Revisions
- Overview of Rulemaking Process
- Next Steps
- Contact Information
- Discussion

Today only - email to:
sierrarm@calepa.ca.gov



Background

- TRU ATCM adopted February 2004
- Effective December 2004
- U.S. EPA approve waiver January 16, 2009
- Enforcement delayed until July 16, 2009
- Second enforcement delay to December 31, 2009

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TRU Regulation

Why Control TRU Emissions?

- Emissions per unit are high
- Create high risk near facilities
- Often near residences
- Contribute to overall exposure to diesel PM
- Large reductions are possible

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Basic Requirements

- Registration in ARBER – by July 31, 2009
 - All TRUs based in California
 - Voluntary for TRUs based outside California
- Operator Reports – by July 31, 2009
 - Affects all California terminals where TRUs are assigned
- Meet in-use performance standards
 - Affects all TRUs that operate in California
 - Phased compliance schedule – seven years after engine model year

Compliance Technologies

- Engine replacement – resets the compliance clock
- Unit replacement – resets the compliance clock
- Retrofit with correct level of VDECS
 - LETRU – Level 2 VDECS – model year 2003 & older
 - ULETRU – Level 3 VDECS – model year 2004 & later
- Use Alternative Technology
 - Electric standby/Hybrid electric
 - Hybrid cryogenic
 - Biodiesel – **Not Verified – Not a compliance option**
- See listing: Control Technology Options at:
http://www.arb.ca.gov/diesel/tru/documents/control_option_matrix.pdf

Enforcement Status Update

January and February 2010

- Over 2,800 Inspections
- 55 Citations issued for failure to register
- 157 Citations for not meeting emissions requirements (LETRU limits)
- Over \$180,000 in penalties assessed
- Compliance is required within 30 days of settlement

Proposed Revision Concepts

- 1. Extend the ULETRU compliance date for MY 2001 and older TRUs**
 - ULETRU compliance date was December 31, 2015
 - Considering adding two years for LETRU to ULETRU
 - Total of nine years between LETRU and ULETRU
- 2. Extend ULETRU compliance date for MY 2002 TRUs**
 - ULETRU compliance date was December 31, 2016
 - Considering adding two years for LETRU to ULETRU
 - Total of nine years between LETRU and ULETRU

Proposed Revision Concepts

3. Change in-use standard for MY 2003 trailer TRU engines (25 hp and greater)

- Comply with LETRU by December 31, 2010
 - Retrofit with Level 2 VDECS
- Comply with ULETRU by December 31, 2019
 - Retrofit with Level 3 VDECS or new engine
- Currently required to meet ULETRU by end of 2010
- Proposed two-step compliance to ULETRU; 9 years between steps

Proposed Revision Concepts

**≥25 HP TRU and TRU Generator Set Engines
In-Use Compliance Dates**

| MY | In-Use Compliance Year | | | | | | | | | | | | | |
|-------------|------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | '07 | '08 | '09 | '10 | '11 | '12 | '13 | '14 | '15 | '16 | '17 | '18 | '19 | '20 |
| '01 & Older | | L | L | L | L | L | L | L | UL | UL | U | U | U | U |
| '02 | | | L | L | L | L | L | L | L | UL | UL | U | U | U |
| '03 | | | | UL | U | U |
| '04 | | | | | U | U | U | U | U | U | U | U | U | U |
| '05 | | | | | | U | U | U | U | U | U | U | U | U |
| '06 | | | | | | | U | U | U | U | U | U | U | U |
| '07 | | | | | | | | U | U | U | U | U | U | U |
| '08 | | | | | | | | | U | U | U | U | U | U |
| '09 | | | | | | | | | | U | U | U | U | U |
| '10 | | | | | | | | | | | U | U | U | U |
| '11 | | | | | | | | | | | | U | U | U |
| '12 | | | | | | | | | | | | | U | U |
| '13 | | | | | | | | | | | | | | U |

Note: The compliance date is December 31st of the year shown in the column headings.
 "L" stands for LETRU, or Low-Emissions TRU in-use performance standard.
 "U" stands for ULETRU, or Ultra-Low-Emissions TRU in-use performance standard

Proposed Revision Concepts

≥25 HP TRU and TRU Generator Set Engines In-Use Compliance Dates

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| '01 & Older | | L | L | L | L | L | L | L | UL | UL | U | U | U | U |
| '02 | | | L | L | L | L | L | L | L | UL | UL | U | U | U |
| '03 | | | | UL | U | U |
| '04 | | | | | U | U | U | U | U | U | U | U | U | U |
| '05 | | | | | | U | U | U | U | U | U | U | U | U |
| '06 | | | | | | | U | U | U | U | U | U | U | U |
| '07 | | | | | | | | U | U | U | U | U | U | U |
| '08 | | | | | | | | | U | U | U | U | U | U |
| '09 | | | | | | | | | | U | U | U | U | U |
| '10 | | | | | | | | | | | U | U | U | U |
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Proposed Revision Concepts

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| '01 & Older | | L | L | L | L | L | L | L | UL | UL | U | U | U | U |
| '02 | | | L | L | L | L | L | L | L | UL | UL | U | U | U |
| '03 | Case 3 | | | UL | U | U |
| '04 | | | | | U | U | U | U | U | U | U | U | U | U |
| '05 | | | | | | U | U | U | U | U | U | U | U | U |
| '06 | Case 1 | | | | | | U | U | U | U | U | U | U | U |
| '07 | | | | | | | | U | U | U | U | U | U | U |
| '08 | | | | | | | | | U | U | U | U | U | U |
| '09 | | | | | | | | | | U | U | U | U | U |
| '10 | Case 2 | | | | | | | | | | U | U | U | U |
| '11 | | | | | | | | | | | | U | U | U |
| '12 | | | | | | | | | | | | | U | U |
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Proposed Revision Concepts

4. Change in-use standard for MY 2003 and 2004 truck TRU engines (less than 25 hp)

- Currently requires ULETRU
 - Retrofit with Level 3 VDECS
- Proposed changing to LETRU
 - Retrofit with Level 2 VDECS or new engine
- Meet ULETRU nine years later (2019 or 2020)

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Proposed Revision Concepts

<25 HP TRU and TRU Generator Set Engines
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| '01 & Older | | L | L | L | L | L | L | L | UL | UL | U | U | U | U |
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| '05 | | | | | | U | U | U | U | U | U | U | U | U |
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| '07 | | | | | | | | U | U | U | U | U | U | U |
| '08 | | | | | | | | | U | U | U | U | U | U |
| '09 | | | | | | | | | | U | U | U | U | U |
| '10' | | | | | | | | | | | U | U | U | U |
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Proposed Revision Concepts

- **Reasons for ULETRU to LETRU changes**
 - Level 3 VDECS slow coming to market
 - Better alignment with new engine standards
 - Provides additional two years for cost recovery
 - Still have additional analysis to do on impact of changes on emissions, risk, and cost

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TRU Regulation

Proposed Revision Concepts

5. **Extend ULETRU compliance date by one year for those who complied with LETRU by December 31, 2008**
 - Applies to MY 2001 and older units
 - With earlier proposed changes, ULETRU deadline would be December 31, 2018
 - Conditions must be met to qualify

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Proposed Revision Concepts

- 6. Adding requirements to ensure Electric Standby (E/S) is being used**
- Nonretail Locations
 - Automated GPS-based recordkeeping, or
 - Implement an internal policy to shut down engine when not using E/S, or
 - Manual recordkeeping to demonstrate engines not operating at facilities, **and**
 - Demonstrate capability to plug in at nonretail facilities.
 - Retail Locations
 - Limit TRU engine operation at retail delivery points to 30 minutes

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Proposed Revision Concepts

- 7. Propose using TRU model year instead of engine model year if difference is no greater than 1 year.**
- If more than one year, then would revert back to the engine model year
 - Consistent with TRU Advisory 08-01

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Proposed Revision Concepts

- 8. Add TRU dealer requirements for operational noncompliant units**
- In yard – registration and in-use compliance are not required provided:
 - Not operated onsite except as demonstration
 - Not offered for sale to person doing business in California
 - On road – can move unit provided:
 - Not operating/not loaded with perishable goods
 - Maintain documentation supporting reason for transit

Proposed Revision Concepts

- 9. Add an exemption for nonoperational TRUs not covered by dealer exemption**
- Add requirements for demonstrating nonoperational status
 - Consistent with TRU Advisory 08-09-R2

Proposed Revision Concepts

- 10. Add exemption from registration requirements for licensed dealers**
- Cover new TRUs
 - In-use consignment TRUs provided unit is in ARBER

Proposed Revision Concepts

- 11. Add an exemption from registration requirement for licensed dealers provided certain conditions are met:**
- Units are not leased or rented
 - Maintains records of hour meter reading of unit when it came under dealer control
 - Make records available to inspector upon request

Proposed Revision Concepts

12. **Add exemption for TRUs used during federal- and/or state-declared emergencies**

Proposed Revision Concepts

13. **Add provision to allow EO to grant compliance extensions in limited situations:**
- Equipment not received or installed due to manufacturer delays or installation issues
 - TRU is registered in ARBER
 - Documentation showing orders were placed in a timely manner
 - Installer statements of installation difficulties
 - Extension request form is submitted before the original compliance deadline.

Proposed Revision Concepts

14. Add compliance extension provision if EO determines that suitable compliance technology not available

- Application is submitted no later than four months before the compliance deadline
- EO may grant one year extension
- EO may provide a one time extension of up to one year

Proposed Revision Concepts

15. Require OEM or dealer to provide supplemental information new replacement engines

- Engine manufacturer
- Engine model
- Model year (effective model year if prior-tier engine - last year of the emissions standard tier met by replacement engine)
- Emissions standard tier met (e.g. Tier 2)
- Engine power rating
- Needed to facilitate registration and enforcement

Proposed Revision Concepts

16. Require engine rebuilder to certify that engine will achieve emission levels equivalent to original certification levels

- Documentation that all parts are of a certified configuration of matched parts
- Supplemental labels affixed on rebuilt engines with information needed for registration

Proposed Revision Concepts

17. Require engine rebuilders, TRU dealers, and engine installers to provide a document to the TRU owner that contains the engine information needed to register in ARBER

Proposed Revision Concepts

- 18. Revise the regulation's IDN and Operator Report requirements to better aligned with ARBER screens**

Proposed Revision Concepts

- 19. Clarify the prohibitions on sale of noncompliant units**
- Prohibit private parties from selling noncompliant units in California to persons that could be reasonably expected to do business in California
 - Allow dealers to sell noncompliant units with disclosure documentation
 - Allow dealers to purchase noncompliant units but restrict resale to California business unless brought into compliance prior to resale
 - Require written disclosure on bill of sale of the current compliance status and when that status will expire

Proposed Revision Concepts

20. Clarify compliance responsibilities for drivers, brokers, carriers, and shippers:

- Drivers – provide information: license, registration, origin & destination of freight, motor carrier and/or broker information
- California-based brokers – must only dispatch compliant TRUs and provide broker information to dispatched driver
- Motor carriers – may only dispatch compliant TRUs and provide motor carrier information to dispatched driver
- California-based shippers – may not ship freight from its California facility in a TRU-equipped truck or trailer unless has ARB issued IDN

Proposed Revision Concepts

21. Add provision that would be triggered if new ULETRU compliant engines are not available in 2013

- EO may allow prior Tier engine to be used upon finding that new ULETRU compliant (0.02 g/hp-hr) engines are not available
- Engine must be retrofitted within one year of Level 3 VDECS availability but no earlier than one year after being placed in service
- On and after December 31, 2020, all TRU engines must meet ULETRU

Proposed Revision Concepts

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| '03 | | | | UL | U | U |
| '04 | | | | | U | U | U | U | U | U | U | U | U | U |
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Proposed Revision Concepts

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| '01 & Older | | L | L | L | L | L | L | L | UL | UL | U | U | U | U |
| '02 | | | L | L | L | L | L | L | L | UL | UL | U | U | U |
| '03 | | | | UL | U | U |
| '04 | | | | | UL | U |
| '05 | | | | | | U | U | U | U | U | U | U | U | U |
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| '07 | | | | | | | | U | U | U | U | U | U | U |
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| '09 | | | | | | | | | | U | U | U | U | U |
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Proposed Revision Concepts

- 22. Phase in requirements for replacement engines to meet ULETRU if replacement engine is installed after January 1, 2014**
- Retrofit deadline would be one year after the engine replacement date.
 - Applies to TRU replacement engines of all horsepower categories:
 - New replacement engines that do not meet ULETRU (0.02 g/hp-hr); and
 - Rebuilt replacement engines that do not meet ULETRU

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Proposed Revision Concepts

- 23. Add OEM requirements to address engine availability during transitional model year**
- Prior model year engines can be installed in current model year TRUs until March 31st of that year

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Proposed Revision Concepts

- 24. Add requirements for OEMs that sell new TRUs and/or TRU generator sets in California to provide prior year unit and engine information by March 1st of each year**

Proposed Revision Concepts

- 25. Add a provision to allow the use of unique equipment identification numbers instead of affixing an ARB IDN**
- Equipment ID number is truly unique (BIC code or AAR's railcar reporting mark)
 - Unique equipment ID number is affixed so that it can be seen from both sides of the unit, consistent with TRU Advisory 08-03-R2 and 08-10-R1

Proposed Revision Concepts

26. Add a subsection to clarify lessor and lessee requirements

- Revise the definition of owner to clarify that lessor is responsible for registration and compliance with in-use performance standards
- Add a provision for delegating responsibilities to lessee, if certain conditions are met
- Consistent with TRU Advisory 08-04

Proposed Revision Concepts

27. Add requirements for hybrid cryogenic temperature control (HCTC):

- Demonstrate engine not operating at nonretail facility
 - Automated GPS-based recordkeeping, or
 - Adopt internal policy to shut down engine, or
 - Manual recordkeeping, and
- Limit TRU engine operation at retail delivery points to 30 minutes

Proposed Revision Concepts

- 28. Require all TRU engines operated in CA to have an engine serial number**
- These engines are typically pre-Tier 1 engines. The compliance date should be consistent with the first phase of the in-use standards.

Overview of Rulemaking Process

- Workshops - informal comments
 - March 24, 2010 - Draft concepts
 - April 28, 2010 - Draft language
 - May 26, 2010 – Draft language
- 45-Day Public Notice of Rulemaking
 - Formal comment period begins
September 29, 2010
- Board Public Hearing – November 18, 2010
 - Formal comments to Board
 - Formal comment period ends

Next Steps

Workshop #2:

April 28, 2010
10:00 a.m. to 12:00 Noon, Pacific Time
Sacramento, CA

Workshop #3:

May 26, 2010
10:00 a.m. to 12:00 Noon, Pacific Time
Sacramento, CA

Board Hearing:

November 18, 2010

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TRU Regulation Contact Information

- TRU website: <http://www.arb.ca.gov/diesel/tru.htm>
- TRU List Serve: <http://www.arb.ca.gov/listserv/tru.htm>
- TRU Help Line: 1-888-878-2826 (1-888-TRU-ATCM)
- Comments after workshop:
Rich Boyd (rboyd@arb.ca.gov, 916-322-8285) or
Rod Hill (rhill@arb.ca.gov, 916-327-5636)



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Proposed Revision Concepts

Questions and Comments

During workshop:

- Email questions and comments during workshop to:
sierrarm@calepa.ca.gov
- Conference call-in line
Toll-free in US and Canada: 800-779-1505
Toll Number: 212-2687-1669
Passcode: 55390

After workshop:

- Call Rich Boyd (916-322-8285) or Rod Hill (916-327-5636)