

**REGULATORY UPDATE ON ATCM
TO REDUCE PARTICULATE MATTER EMISSIONS FROM
TRANSPORT REFRIGERATION UNITS**



July 22, 2003



**California Environmental Protection Agency
Air Resources Board**

Proposed Regulation Overview

- **Comments/input received after June 5th**
- **Changes made to proposed language**
 - ◆ **In-Use**
 - ✦ Removed “low-use” exemption
 - ✦ Enhanced operator accountability
 - ✦ LETRU early compliance ==>delayed ULETRU
 - ✦ ARB identification numbers
 - ◆ **Facility**
 - ✦ Simplified reporting information

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TRU EMISSIONS INVENTORY UPDATE

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Revisions to the TRU Emission Inventory Since June 5 Workshop

- Analyzed addition sales data provided by manufacturers.
- Revised Population of TRUs.
- Revised Growth Factors by horsepower groups.

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Revisions to the TRU Emission Inventory Since June 5 Workshop

CY 2000	PM (tpd)	PM (tpd)	NOx (tpd)	NOx (tpd)
	Before 6/5	After 6/5	Before 6/5	After 6/5
<15 hp	0.10	0.06	1.37	0.84
15-25 hp	0.07	0.04	0.79	0.44
25-50 hp Ca	1.94	1.82	13.66	12.67
25-50 hp Out of State	0.64	0.60	4.51	4.18
25-50 hp Rail	0.13	0.13	0.92	0.93
>50 hp	NA	NA	NA	NA
TOTALS	2.65	2.60	21.25	19.06

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Statewide TRU Population in CY 2000

Horsepower Group	Population Before 6/5/03	Population After 6/5/03
<15 hp (Ca)	7623	4623
15-25 hp (Ca)	3497	1946
25-50 hp (Ca)	24925	22772
25-50 hp (Out-of-State)	8225	7515
25-50 hp (Rail)	1678	1678
> 50 hp	0	0
Total	46007	38535

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Revisions to the TRU Growth Factors Expressed As Yearly Growth in %

HP	June 5	Proposed
<15	1.5	4.58
15-25	1.5	3.04
25-50	1.5	5.20

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RISK DISCUSSION

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Health Risk Assessment for Diesel TRUs

- Prepared to assist in the development of the Diesel TRU ATCM
- Based on general assumptions of operations
- Methodology is consistent with OEHHA Risk Assessment Guidelines
- Provides a qualitative assessment of potential impacts due to operation of diesel TRUs

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Dispersion Modeling General Assumptions of TRU Operation

- TRU engine size is 35 hp with a 60% average load factor
- Analyses completed for a range of diesel particulate emission rates
- Emissions assumed to occur 7 days per week within TRUs operation area
- Cancer health risks estimated based on ***engine operation time***

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Methodology is consistent with OEHHA Risk Assessment Guidelines

- Diesel particulate cancer risk factor = 3.0×10^{-4} per $\mu\text{g}/\text{m}^3$ ambient concentration
- OEHHA Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA, 2002)

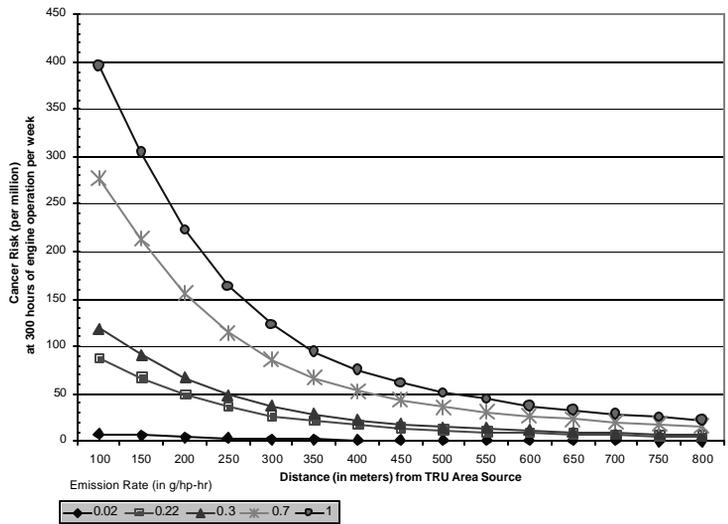
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Qualitative Assessment of Potential Impacts due to Operation of Diesel TRUs

- Graphic shows 300 TRU engine hours of operation per week
- Comparison of health risks at 0.02, 0.22, 0.3, 0.7, and 1.0 g/hp-hr emission rates

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Comparison of Cancer Health Impacts for TRU Operations based on Particulate Emission Rates (West LA meteorological data)



COST DISCUSSION

Cost Analysis

- Background
 - ✓ H&SC 39665(b)(5), Economic Impact Statement, & State Administrative Manual (SAM) Section 6680

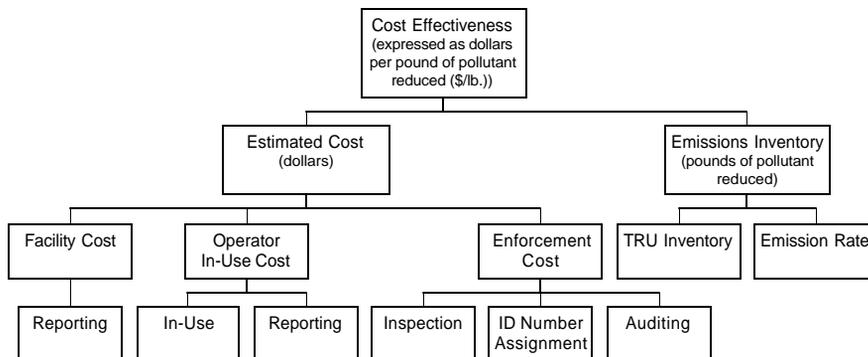
- Regulatory Cost Identification
 - ✓ Facilities
 - ✓ Operators
 - ✓ Enforcement

- Question & Answer Session

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Cost Analysis (cont'd)

Cost-Effectiveness Calculation Methodology



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Regulatory Development Schedule

- Next Public Workshop: September 11, 2003
- Board Hearing: October 2003

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