



Air Resources Board Activities to Reduce Emissions from Cargo Handling Equipment in California

**Faster Freight - Cleaner Air
Conference**

January 31, 2006

California Environmental Protection Agency



Air Resources Board

Overview

- ◆ Background
- ◆ ARB Programs for Reducing Emissions from Cargo Handling Equipment
- ◆ Future Activities
- ◆ Contacts



Background: Need for Reductions

- ◆ Dramatic increases in trade
- ◆ No current regulations addressing in-use off-road diesel engines
- ◆ Ports and intermodal rail yards pose specific public health concern for nearby residents
- ◆ Diesel Risk Reduction Plan, Governor's Action Plan, and State Implementation Plan

Current State Programs

- ◆ Regulation for diesel cargo handling equipment at ports and intermodal rail yards
- ◆ Proposed regulations for in-use off-road diesel equipment and large, spark-ignition (LSI) engines

Regulation for Mobile Diesel Cargo Handling Equipment at Ports & Intermodal Rail Yards



Regulation Overview

- ◆ Adopted by the Air Resources Board on December 8, 2005 with 15-day changes
- ◆ Applies to in-use and newly purchased, leased, or rented equipment
- ◆ Implementation begins January 2007

Newly Purchased, Leased, or Rented Equipment:

Performance Standards

- ◆ Yard trucks
 - 2007 or later on-road or final Tier 4 off-road engine
- ◆ Non-yard truck equipment
 - 2007 or later on-road, Tier 4 off-road, or highest level off-road engine with verified controls

In-Use Yard Trucks

Performance Standards

- ◆ 2007 or later on-road engine standard or equivalent

Compliance Schedule

- ◆ Phased in beginning December 31, 2007



In-Use Non-Yard Trucks

Performance Standards

- ◆ Certified on-road engines
- ◆ Off-road engines with verified controls (may require 2nd step to replace to Tier 4 off-road later or level 3 controls later)

Compliance schedule

- ◆ Phased in beginning December 31, 2007

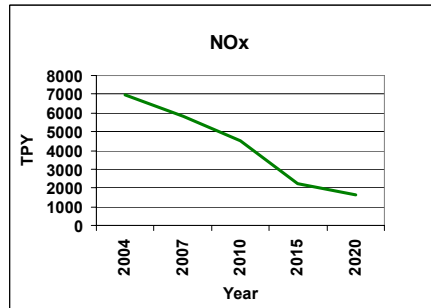
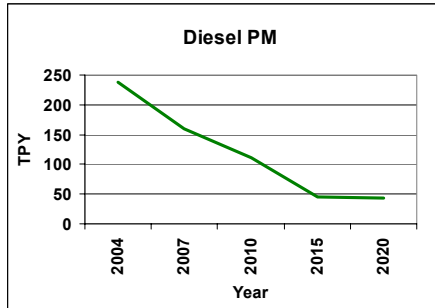


Compliance Extensions for Non-Yard Truck Equipment

- ◆ No verified controls available
- ◆ Use of experimental diesel PM emission control strategies
- ◆ Alternative Compliance Plan



Expected Diesel PM and NOx Emission Reductions



Estimated Reductions by 2020: Diesel PM = 81%
NOx = 77%

Other Programs to
Reduce Emissions
from Off-road
Engines/Equipment



Regulations under Development

- ◆ In-use off-road diesel engines
 - first workshops held November 2004
 - released updated draft regulatory concepts in January 2006
 - scheduled to be considered for adoption by the Board in December 2006
- ◆ Off-road large spark-ignition (LSI) engines
 - First workshop held May 2004
 - Board heard public testimony in June 2005
 - Scheduled to be considered for adoption by the Board in April 2006

Future Activities



Future Activities

- ◆ Implementation guidance for cargo handling equipment regulation
- ◆ Goods Movement Action Plan
 - continue to look at ways to further reduce emissions



Contacts

Program	Contact	Email & phone
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http://www.arb.ca.gov/msprog/offroad/orspark/orspark.htm		