

DIESEL RETROFIT PROGRAM

Solid Waste Collection Vehicle Rule February 2002



California Environmental Protection Agency



Air Resources Board

Regulation Planning Process

- ◆ Workshop 1:
 - ◆ June 26th & 28th, 2001 in Sacramento & El Monte
- ◆ Workshop 2:
 - ◆ September 4th - 5th, 2001 in Sacramento & Los Angeles
- ◆ Workshop 3:
 - ◆ February 26th & 28th in Oakland & El Monte

Board Plans

- ◆ Verification Procedure Rule
 - ◆ May 16, 2002
- ◆ Solid Waste Collection Vehicle Rule
 - ◆ June 20, 2002
- ◆ Fuel Delivery Tanker Truck Rule
 - ◆ November 14, 2002
- ◆ Additional On-Road and Off-Road Vehicles
 - ◆ 2003-2004

Proposed Rule – Purpose

- ◆ Diesel PM Identified as Toxic Air Contaminant
 - ◆ August 1998
 - ◆ Diesel Risk Reduction Plan adopted Sept. 2000
 - ◆ Airborne Toxic Control Measures Reduce Risk
 - ◆ Using Best Available Control Technology

Proposed Rule - Scope

- ◆ Applies to Owners of Solid Waste Collection Vehicles
 - ◆ 1970 - 2006 Model Year Diesel Engines
 - ◆ HDDV Greater than 14,000 lbs. GVWR
 - ◆ Used to Collect Residential and Commercial Waste
- ◆ Applies to Cities, Counties, and Member Agencies of Regional, State, or Federal Agencies
 - ◆ Contract
 - ◆ Permit
 - ◆ License for Solid Waste Collection

Proposed Rule - Compliance Methods for Owners

- ◆ Choose the Best Available Control Technology for Each Vehicle
- ◆ Follow the Implementation Schedule
- ◆ Meet the Fuel Requirement
- ◆ Submit Reports to the ARB
- ◆ Keep Records

Proposed Rule - BACT Options

- ◆ Use Diesel Engine or Power System that Meets the 0.01 g/bhp-hr PM Standard
 - ◆ Repower
 - ◆ Replacement
- ◆ Use Alternative Fueled Engine in Place of Diesel Engine
- ◆ Use Diesel Emission Control Strategy Verified to Highest Diesel PM Emission Reduction Capability

Verification Procedure

- ◆ Level 3 (85% Diesel PM Reduction)
 - ◆ Diesel Particulate Filter (DPF)
 - ◆ Verified DPFs Exist for Collection Vehicles
- ◆ Level 2 (50 - 84% Diesel PM Reduction)
 - ◆ Fuel Additives, Fuel Emulsion Techniques
 - ◆ No Verified Level 2 Strategies Yet
- ◆ Level 1 (25 - 49% Diesel PM Reduction)
 - ◆ Diesel Oxidation Catalyst
 - ◆ No Verified Level 1 Strategies Yet

DPF Research

- ◆ Current Exhaust Temperature Data Logging
 - ◆ Four Fleets (2 Public, 2 Private)
 - ◆ Front, Side, Rear Loaders and Rolloffs
 - ◆ Mix of Engine Model Years and Models
 - ◆ Initial Results Available by June 2002
 - ◆ Exhaust Temperatures
 - ◆ Correlated to Vehicle Speed
 - ◆ Correlated to Engine Load

Proposed Rule – Implementation Schedule

Tier	Engine Model Years	Percentage of Active Fleet	Implementation Date
1	1994 – 2002	25	July 1, 2004
		50	July 1, 2005
		100	July 1, 2006
2	1970 – 1993	25	July 1, 2006
		50	July 1, 2007
		100	July 1, 2008
3	2003 – 2006	25	July 1, 2007
		50	July 1, 2008
		100	July 1, 2009

Proposed Rule – Active Fleet

- ◆ Total Number of Solid Waste Collection Vehicles in an Owner's Active Fleet as of January 1st each Year
 - ◆ Alternative Fueled Vehicles Included
- ◆ Early Implementation Counts Towards Vehicles in Compliance with Regulation

Proposed Rule – Fuel Requirement

- ◆ Beginning January 1, 2004 Active Fleet Fueled by:
 - ◆ Diesel Fuel with 15 ppm by Weight or Less Sulfur Content
 - ◆ Another Fuel Verified by ARB as Diesel Emission Control Strategy

Proposed Rule – Delays

◆ Implementation Delays

- ◆ No Verified Diesel Emission Control Strategy
 - ◆ Owner Applies for One Year Delay, or
 - ◆ Automatic One Year Delay Issued by ARB
- ◆ No Low Sulfur Diesel Fuel Available to Owner
 - ◆ Owner Applies for Delay
 - ◆ If Delay Granted, and Only Diesel Emission Control Strategy Available to Owner Uses Low Sulfur Diesel Fuel, Owner May Apply for BACT Delay

Proposed Rule – Dual Fuel Vehicles

- ◆ Definition: “Dual Fuel Vehicle is a vehicle powered by a combination of diesel fuel and natural gas.”
- ◆ Dual Fuel Vehicle Implementation in Tier 3 Phase-in
 - ◆ July 1, 2007 to July 1, 2009
 - ◆ Allow Sufficient Time to Research Emissions
 - ◆ Applies to Vehicles with over 0.01 g/bhp-hr Diesel PM Emissions

Proposed Rule – Reporting

- ◆ Reporting Requirement Compliance Plan Submission
 - ◆ Contact Information
 - ◆ Fleet Identification
 - ◆ Total Number of Collection Vehicles in Active Fleet By Engine Model Year Category
 - ◆ Proposed Emission Reduction Strategy

Proposed Rule – Reporting Schedule

Tier	Engine Model Years	Reporting Date
1	1994 – 2002	July 1, 2004
2	1970 – 1993	July 1, 2006
3	2003 – 2006	July 1, 2007

Proposed Rule – Record Keeping

- ◆ Records Must be Kept at Maintenance Facility and in Collection Vehicle
 - ◆ Proof of Purchase, Installation and Installation Date of Diesel Emission Control Strategy
 - ◆ ID or Serial Number Linking Strategy to Engine Family
 - ◆ Service Maintenance Dates
 - ◆ Fuel/Fuel Additives Receipts/Invoices
 - ◆ Diesel Emission Control System Maintenance Dates
 - ◆ Certificate of Training

Proposed Rule – Enforcement

- ◆ ARB Inspectors Enforce Compliance
- ◆ Future Regulation will Address Redefining Smoke Opacity Levels
 - ◆ HDVIP Amendment
 - ◆ PSIP Amendment

Planned Smoke Opacity Research

- ◆ Sample of Fleets Inspected for Maintenance Practices
- ◆ Determine Baseline Smoke Opacity Levels
- ◆ Determine Smoke Opacity Levels Using Diesel Emission Control Strategy
- ◆ Use a Variety of Methods
- ◆ Results will Dictate Future Regulation

Proposed Rule - Compliance Methods for Municipalities

- ◆ As of July 1, 2004, a City, County, or Member Agency of a Regional, State, or Federal Agency may Not Contract, Permit, or License Non-Compliant Collection Vehicle Owners
- ◆ Report annually beginning January 31, 2004
 - ◆ Municipality Contact Information
 - ◆ Collection Vehicle Owner Contractor, Permittee, and Licensee Contact Information
 - ◆ Start and End Dates of Each Applicable Contract, Permit, and License

Proposed Rule – Some Discussion Issues

- ◆ Method for Calculating Active Fleet Size
- ◆ Compliance Verification by each Contractor, Permittee, and Licensee in Annual Report from City, County, or Member Agency of a Regional, State, or Federal Agency
- ◆ Dual Fuel

Proposed Rule - Comments

- ◆ Comments due by March 8, 2002
- ◆ Send Comments to:
Crystal Reul
9480 Telstar Ave., Ste. 4
El Monte, CA 91731
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(626) 350-6543
- ◆ For additional information:
<http://arbis.arb.ca.gov/diesel/dieselrrp.htm>