

Fuels Workshop on Regulatory and Non-Regulatory Fuels Activities for 2005

April 27, 2006

California Environmental Protection Agency



Air Resources Board

Agenda

☞ Introduction

☞ Gasoline

- Proposals for Flexibility, Enforceability, and Consistency
- California Predictive Model
- Permeation
- Emissions Inventory
- Test Methods

☞ Diesel

- Low-Sulfur Implementation
- Fuel Conductivity
- AB 679

Agenda (Continued)

- ☞ Alternative Fuels
 - E85 Demonstration Program
 - Biodiesel
 - LPG Test Program
- ☞ Presentations by Others
- ☞ Open Discussions
- ☞ Closing Remarks

Discussion Topic: Gasoline

Proposal for Flexibility, Enforceability, and Consistency

Predictive Model

- ☞ Committed to the Board to review need for update about every 5 years – last updated 1999
- ☞ Issues
 - Permeation
 - Carbon Monoxide
 - New Data
 - Emissions Inventory Model – EMFAC
 - High Emitters
- ☞ Present Proposal for new model to Board in 2006

Predictive Model

☞ New Datasets

- AAM/AIAM/Oil Industry Low Sulfur and Oxygenate Test Program
- Exxon Mobile
- CRC E-60
- CRC E-67
- Toyota
- Mexico ???

☞ Dataset soon to be released on Fuels webpage

Permeation Test Program

- ☞ In 2002, the CRC and ARB co-funded permeation study
- ☞ Results:
 - Ethanol fuel higher than MTBE on all vehicles and higher than non-oxy on almost all vehicles
 - 65% or 1.4 grams/day more than MTBE gasoline
 - 45% or 1.1 grams/day more than non-oxygenated gasoline
- ☞ ARB Emissions Inventory group working on using data to estimate emissions

Permeation - What's Next

- ☞ The CRC is proceeding with a second stage of the test program
- ☞ Two additional vehicles: LEV II and PZEV
- ☞ Two additional fuels: 10% ethanol and a higher aromatics fuel
- ☞ E-85 will also be tested on an flexible fueled vehicle
- ☞ E20 has been added to fuels matrix
- ☞ Final Report

Emissions Inventory

- ☞ EMFAC being updated for next rounds of SIPs
- ☞ New vehicle populations
- ☞ New temperature profiles
- ☞ Incorporating permeation information

Test Methods

Discussion Topic: Diesel

Implementation of Low-Sulfur Diesel Fuel Regulations

- ☞ Low-Sulfur regulation approved by Board in 2003
- ☞ Implemented in 2004
- ☞ Requires 15 ppmw sulfur limit on California motor vehicle diesel fuel
 - June 1, 2006 – Refinery
 - 45 days later – Terminals
 - 45 days later – Retail Outlets

Implementation of Low-Sulfur Diesel Fuel Regulations

- ARB staff, in conjunction with the CEC, is surveying the industry regarding the implementation
- So far, all California refiners appear to be on schedule and are expected to meet the June 1, 2006 limit of 15 ppmw

Diesel - Conductivity

- ☞ Issues brought up regarding fuel conductivity
- ☞ Staff is surveying the industry for practices
- ☞ Low-sulfur diesel been used fleets for several years

Assembly Bill 679

- ☞ The bill would also require the state board to convene a panel of interested parties to develop a test protocol for the evaluation of California Air Resources Board diesel fuel, and to recommend to the executive officer of the state board a subsequent test program that measures the emissions benefits of CARB diesel fuel.
- ☞ The bill would also require the state board, no later than December 31, 2007, to complete the test program and to submit the results of the test program to the Legislature.
- ☞ Need to get started

Discussion Topic: Alternative Fuels

E85 Demonstration Program

- ☞ AB 1007 requires the development of recommendations for a state plan to increase the use of alternative transportation fuels.
 - Assigns lead responsibility for developing the recommendations to the California Energy Commission in consultation with the Air Resources Board
 - Requires the plan to be developed and adopted not later than June 30, 2007.

E85 Demonstration Program

- ☞ State enter into agreement with GM, Chevron (CTV), and Pacific Ethanol to learn more about consumer awareness and acceptance of E85 as a motor vehicle fuel.
- ☞ FFVs, 50 to 100, in CalTrans fleet will use E85 at various locations for about 1 year.
 - Oakland and Marysville
- ☞ Vehicles near delivery

Biodiesel

- ☞ Initiate biodiesel research to study the impacts of biodiesel use in California
 - Emissions impact
 - Lifecycle assessment
- ☞ Governor's EO S-06-06 sets California biofuels production targets
 - 20 percent 2010
 - 40 percent 2020
 - 75 percent 2050

Liquid Petroleum Gas (LPG)

- ☞ LPG sampling study to determine the levels of residuals in the LPG production, storage, and distribution system.
- ☞ Solicit participation and input from LPG stakeholders
 - Sampling procedure
 - Sample analysis
 - Sampling protocol

Presentations by Others

Open Discussions

Closing Remarks