



# Kinder Morgan Ethanol Blending Plans

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# Pipeline System Plans

- Current specification requires a CARBOB for blending with 5.7 vol%
- First pipeline shipments of 2010 will require 10 vol% downstream blending
- Single pipeline spec for efficiency



# Pipeline System Plans

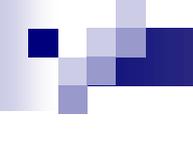


- Both Northern California and Southern California systems will convert concurrently
- Planned octane requirement for regular grade reduced from 85.0 to 84.0
- Planned octane requirement for premium grade reduced from 89.5 to 88.5



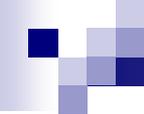
# On Spec, On Time

- Ethanol supply is the critical element for continued fuel distribution
- Supply shortages have been seen in other states
- “Great Shakeout” exercise in 2008 anticipated significant rail disruption
- Only suboctane product in terminals



# Preparations Underway

- Identified terminals in need of upgraded offload facilities
- Initiated permitting process for additional ethanol offloading facilities
- 15 million dollars in upgrades scheduled for completion in the fourth quarter 2009



# Kinder Morgan Terminals

- KM operates eleven terminals in the state

## **Northern California**

Bradshaw

Brisbane

Chico

Fresno

San Jose

## **Southern California**

Barstow

Carson

Colton

Imperial

Mission Valley

Orange

# Terminal Ethanol Receipt

- Ten of eleven terminals receive ethanol exclusively by truck & trailer
- Only Carson receives ethanol by a small dedicated pipeline (less than 2 miles long)



# Ethanol Scheduling



- In 2003 KM created an ethanol scheduling position at our Orange Headquarters
- Pipeline fuel deliveries are readily forecast
- Random truck deliveries cannot be allowed

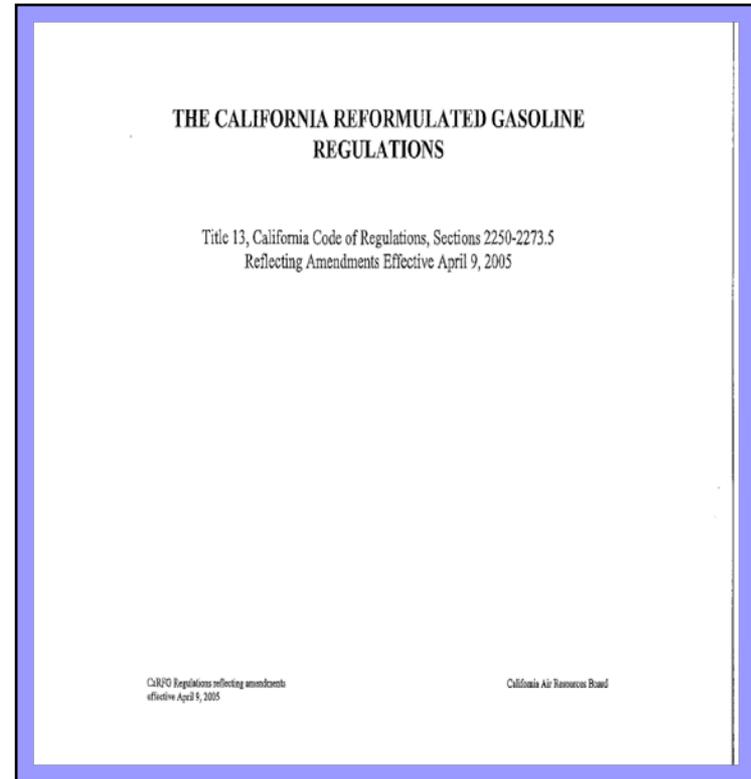
# Truck Offloading

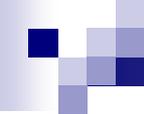
- Seven terminals will require twelve or more truck offloads daily
- Of these, four will require twenty-four or more truck offloads daily
- One of these will require over thirty truck offloads daily



# Regulatory Considerations

- We have initiated discussions with CARB concerning regulatory requirements for terminal conversion
- Regulators must address activities upstream of KM
- 19 other terminals served by KM pipelines must also plan their conversion
- No issues comingling at retail





# Mechanics of Terminal Conversion

- Employ moderate controls to diminish on hand inventories
- Plan a four to one dilution rate
- Synchronize deliveries of regular and premium grades as efficiently as possible
- Initiate new blend recipes at racks
- Continue terminal rack oversight program