UPRR Stockton Yard

• Facility Overview
• Sources of Emissions
• Comparison with Air Basin and Other Area Emissions
• Emission Reduction Measures
• Emission Trends – Past and Future
Union Pacific System Overview

- **Miles of Track**
  - 32,300 in 23 States
  - 3,455 in California
  - 1,272 in Los Angeles area

- **Employees**
  - 50,000+ in US
  - 5,900 in California
  - 200+ in Stockton

Fast Facts
**UPRR Stockton Yard**  
**Facility Overview (2005 Baseline Year)**

- 40-acre Facility with Rail & Locomotive Maintenance Operations
- Yard Includes:
  - 4 Receiving and Departure Tracks
  - 16 Tracks Used to Sort Rail Cars by Destination
  - 3 Tracks Used for Locomotive Service and Repair
  - 2 Tracks Used to Maintain or Repair Rail Cars
- Facility Operates 24 Hours a Day, 365 Days a Year
- About 6 Freight Trains a Day Originate or Terminate at UP’s Stockton Yard
- Another 35 Commuter Trains per Day Originate or Terminate at UP’s Stockton Yard
UPRR Stockton Yard
Comparison with Other Sources of DPM Emissions

99.6%
All Other San Joaquin Valley Air Basin Sources

0.4%
Stockton Area Sources

76%
Other Stockton Area Sources

24%
Stockton Rail Yard

Total DPM Emissions – All San Joaquin Valley Sources: 4100 tons per year
UPRR Stockton Yard
Sources of Diesel Particulate Matter (DPM) Emissions

- 3% On-road Diesel Trucks
- 3% Other
- 94% Locomotives

Total DPM Emissions – UPRR Stockton Yard: 6.9 tons per year
**UPRR Stockton Yard**

**UP Emission Reduction Measures**

- Increased Use of Idle Control Devices (ICDs) for Auto Start-Stop of Locomotives
  - 80% of Stockton Switchers Equipped Now
  - 78% of the SU Intrastate Units Equipped Now
  - 100% of CA Intrastate Units Equipped by June, 2008
  - 35% of UPRR Total Fleet
  - All New Locomotives Since 2001 Have Factory ICDs

- Aggressive Fuel Conservation Efforts – Since 1995
  - 12% Improvement in Fuel Efficiency
UPRR Stockton Yard
UP Emission Reduction Measures

• Continued Acquisition of Refrigerated Freight Cars As Fleet Is Upgraded
• Dispensing only Ultra-low Sulfur Diesel (ULSD) in CA
• Dispensing CARB ULSD at Stockton
• Continued Aggressive Employee Training
  – Fuel Conservation Via Use of Simulators
  – Locomotive Shutdown Procedures
  – Visible Emissions
UPRR Stockton Yard
UP Emission Reduction Measures

- Continued Aggressive Acquisition & Use of Tier 2 Road Locomotives With Advanced Emission Controls
  - 820+ Tier 2 Locomotives by December, 2007
  - 2,600+ Tier 0, 1, or 2 From 2000 Thru 2006

- Continued Remanufacture of Older Locomotives With New, Lower Emitting Components
  - 1,800 Units Since 2000
UPRR Stockton Yard
DPM Emissions by Source (Calendar Years 2000-2020)

Emissions (Tons/Year)


Other
On-Road Diesel Fueled Trucks
Locomotives

4.2
6.8
7.5
7.1
6.0
UPRR Stockton Yard
Emission Trends

• Locomotive Emissions Will Decrease
  – Reductions Due To Ongoing Fleet Modernization
  – Greater Reductions Likely Due To Fleet Ave Agreement
  – Pending Tier 3 & Tier 4 Locomotive Standards

• Overall 12% Reduction From 2005 to 2020
THE ROAD TO THE FUTURE ISN'T A ROAD AT ALL.