Reducing Emissions from In-Use On-Road Diesel-Fueled Heavy-Duty Drayage Trucks at California Ports and Intermodal Rail Yards

September 2007
ARB Outreach Efforts

- Initial staff report – April 2006
- Public consultation meetings
- Meetings with trade associations, interest groups, & stakeholders
- Local community groups
- Drayage trucker meetings
- Air Districts
- Port and rail yard site visits
- Surveys and flyers
- Regulatory development workshops
Air Pollution Reduction Regulations

- Diesel Risk Reduction Plan:
  - 75% reduction in PM by 2010
  - 85% reduction in PM by 2020
- Goods Movement Action Plan
- State Implementation Plan
- Federal Clean Air Act:
  - Must attain ozone and PM standards
Statewide NOx and PM - Heavy Heavy Duty Trucks (Class 8)

- HHDT Represent:
  - ~30% of Statewide PM
  - ~25% of Statewide NO\textsubscript{X}

- Without additional regulations, in 2014, pre-2004 trucks will represent 40% of NO\textsubscript{x} and 50% of PM emissions of HHDT operating in California.
Population of Heavy-Duty Drayage Trucks

<table>
<thead>
<tr>
<th></th>
<th>Number of trucks</th>
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<tbody>
<tr>
<td>Ports of LA* and LB**</td>
<td>10,500</td>
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<tr>
<td>Port of Oakland</td>
<td>2,800</td>
</tr>
<tr>
<td>Rest of ports</td>
<td>1,000</td>
</tr>
<tr>
<td>Intermodal rail yards</td>
<td>3,600</td>
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<tr>
<td>Total number of trucks in drayage service</td>
<td>17,900</td>
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* LA: Los Angeles  **LB: Long Beach
2007 Baseline Emissions – Drayage Trucks

<table>
<thead>
<tr>
<th></th>
<th>PM Emissions (tons/year)</th>
<th>NOx Emissions (tons/year)</th>
</tr>
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<tbody>
<tr>
<td>Ports and Intermodal Rail yards*</td>
<td>605</td>
<td>12,600</td>
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*Drayage Fleet Total of ~75,000 trucks
<table>
<thead>
<tr>
<th>CA Ports: 14-total</th>
<th>Benicia, Crockett, Hueneme, Humboldt Bay, Long Beach, Los Angeles, Oakland, Pittsburgh, Redwood City, Richmond, Sacramento, San Diego, San Francisco, and Stockton</th>
</tr>
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<tbody>
<tr>
<td>Intermodal Rail yards: 11-total</td>
<td>Burlington, BNSF Oakland, Commerce Eastern BNSF, Commerce UP, ICTF UP, LATC Union Pacific, Lathrop Intermodal UP, Northern Santa Fe (BNSF) Hobart, Richmond BNSF, San Bernardino, Stockton Intermodal BNSF, and Union Pacific (UP) Oakland</td>
</tr>
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Applicability / Exemptions

- **Applies to:**
  - Trucks
    - Diesel-fueled
    - Class 8
    - On-road
  - Motor carriers
  - Ports
  - Class I rail yards

- **Exemptions:**
  - Specialized use vehicles
  - Emergency vehicles
  - Military
  - 'Small' ports
Compliance Schedule – Major Milestones

**Legacy Fleet**

- **By end of 2009**
  Pre-1994 MY trucks would be retired and replaced with 1994-2002 MY trucks with level 3 VDECS
  - 1994 – 2002 MY trucks would be equipped with level 3 VDECS
  - 2003 – 2006 MY trucks would be equipped with level 3 VDECS
  - 2003 – 2006 MY trucks can wait until 2015 and meet phase 2 requirement

- **By end of 2013**
  Pre-2003 MY trucks would be retired and replaced with trucks that meet or exceed 2007 federal engine standards

- **By end of 2015**
  2003 – 2006 MY trucks would be retired and replaced with trucks that meet or exceed 2010 federal engine standards

**Non-Legacy Fleet**

- **By end of 2009**
  Pre-1994 MY trucks would be retired and replaced with 1994-2002 MY trucks with level 3 VDECS

- **Trucks Entering Service through 2009**
  Meet or exceed 1998 federal engine standards with a level 3 VDECS

- **Trucks Entering Service 2010 - 2014**
  Meet or exceed 2007 federal engine standards

- **Trucks Entering Service 2015 and later**
  Meet or exceed 2010 federal engine standards
Compliance Schedule - Phase 1

- **By end of 2009**
  - Pre-1994 MY trucks would be retired and replaced with 1994-2002 MY trucks with level 3 VDECS
  - 1994 – 2002 MY trucks would be equipped with level 3 VDECS
  - 2003 – 2006 MY trucks would be equipped with level 3 VDECS
    or
  - 2003 – 2006 MY trucks can wait until 2015 and meet phase 2 requirement
Compliance Schedule - Phase 2

- **By end of 2013**
  Pre-2003 MY trucks would be retired and replaced with trucks that meet or exceed 2007 federal engine standards

- **By end of 2015**
  2003 – 2006 MY trucks would be retired and replaced with trucks that meet or exceed 2010 federal engine standards

- **By end of 2019**
  2003-2006 MY trucks equipped with level 3 VDECS would be retired and replaced with trucks that meet or exceed 2010 federal engine standards
Compliance Schedule - Non-Legacy Trucks

- **Trucks Entering Service through 2009**
  Meet or exceed 1998 federal engine standards with a level 3 VDECS

- **Trucks Entering Service 2010 - 2014**
  Meet or exceed 2007 federal engine standards

- **Trucks Entering Service 2015 and later**
  Meet or exceed 2010 federal engine standards
Truck Registry

- Drayage Truck Registry (DTR):
  - Help ensures compliance

- Register:
  - Prior to Dec 31, 2009 - Legacy
  - After Dec 31, 2009 - Non-Legacy

- Types of information collected:
  - Truck owner name, address, and contact info
  - Engine make, model, and year
  - VIN
  - Vehicle license number and state of issuance
  - Compliance information (e.g. Diesel Particulate Filter)

- Fines for non-compliance
Implementation: Truck Owner

- Truck owner responsibilities:
  - Register with the Drayage Truck Registry
  - Affix compliance sticker on truck
  - Ensure truck meets requirements of regulation
  - Maintain emission control device
  - Keep maintenance log
  - Fines issued for non-compliance

- Possible one-time extension
Implementation: Motor Carrier

- Motor carrier responsibilities:
  - Informing truck owners:
    - Regulatory provisions
    - Compliance deadlines
    - Truck owner requirements and penalties
  - Ensure trucks are in compliance with regulation before dispatching to the port or rail yard (DTR, Emission Standards etc.)
  - Bill of lading info requirement
  - Fines for dispatching non-compliant trucks
Implementation: Marine Terminals & Rail yards

- Marine terminals & rail yards responsibilities:
  - Through 2013, trucks without stickers may be let in after check-in
  - Deny entry for trucks not in compliance with regulation (DTR sticker) starting 2010
ARB Enforcement

- Field inspections:
  - Compliance with regulation
  - Proper installation and operation of emission control devices
  - Emission control device maintenance records
- Terminal operators – only allow properly DTR stickered trucks
- Primary motor carrier audits
## Emissions Benefits

- **Expected Emissions Reductions**

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<tr>
<th>Year</th>
<th>PM</th>
<th>NOx</th>
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<tr>
<td>2010</td>
<td>85%</td>
<td>3% (increase)</td>
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<tr>
<td>2014</td>
<td>87%</td>
<td>64%</td>
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Action Items
Future Meetings/Contact Info

- Staff report including draft regulation – Sept. 2007
- Board consideration – November 2007
- Future public workshops:  
  - To be determined
- Regulation contact information:  
  Michael Miguel, Manager  
  Phone: (916) 445-4236  
  email: mmiguel@arb.ca.gov

Website:  
http://www.arb.ca.gov/msprog/onroad/porttruck/porttruck.htm
Questions/Comments