Public Workshop to Discuss Reducing Emissions from Diesel-Fueled Cargo Handling Equipment at Intermodal Facilities

Port Equipment-Yard Hostler Emission Reduction Demonstration

November 10, 2004
Sacramento, California

Demo Program Objectives

- Combined POLA and ARB Project
- Determine Duty Cycle for Testing
- Evaluate Engine Replacement Options
- Demonstrate Aftertreatment Controls
- Certification Type and In-Use Testing
Duty Cycle

- Review Existing Duty Cycle Information
- Perform Additional Data Logging
- Determine Duty Cycle for Testing
- Perform Emission Testing
  - Chassis Cert. Style Testing (e.g. C1 steady-state)
  - In-Use Driving Cycle (e.g. transient)

Engine Replacement Options

- Baseline Equipment (Typical In-Use)
- New Off-Road Engine
- New On-Road Engine
### Aftretreatment Controls

<table>
<thead>
<tr>
<th>Engine Type</th>
<th>Equipment</th>
<th>Baseline Configuration</th>
<th>Control Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline equipment</td>
<td>3 yard hostlers</td>
<td>Uncontrolled</td>
<td>• DOC</td>
</tr>
<tr>
<td>(typical in-use)</td>
<td>(Baseline)</td>
<td></td>
<td>• DOC/ emulsified Fuel</td>
</tr>
<tr>
<td>New Off-road Engine</td>
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</tbody>
</table>

- Additional aftertreatments may be included in test program

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