San Pedro Bay Ports
Clean Air Action Plan

presented by
Thomas Jelenic
Port of Long Beach

Action Plan Development

• Clean Port Summit – March 2006
  - Outcome: work together towards solutions
• SPBP Clean Air Action Plan Working Group formed
  - Both Ports
  - South Coast Air Quality Management District (AQMD)
  - California Air Resources Board (CARB)
  - Environmental Protection Agency (EPA)
Action Plan Drivers

- Minimize health risk from port operations
- Accelerate existing emissions reduction efforts
- Set consistent project-specific & source-specific standards
- Enable port development

Action Plan Foundations

- Work cooperatively to minimize adverse environmental impacts of operations
- Build upon ports & tenants existing programs
- Reduce “Fair Share” of port-related operational emissions
- Ensure that all new projects meet health risk criteria
- Action Plan is a “Living Document” which will be updated & improved annually
Sources and Challenges

Target Pollutants: DPM, NOx, SOx

- **DPM - Diesel Particulate Matter**: Microscopic particles that includes soot from diesel exhaust; toxic air contaminant
- **NOx - Nitrogen Oxides**: An ozone precursor that significantly contributes to smog
- **SOx - Sulfur Oxides**: A precursor to particulates
- The South Coast Air Basin exceeds federal air quality standards for both ozone and particulate matter
## Control Measures

<table>
<thead>
<tr>
<th>Measure #</th>
<th>Control Measure/ Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPBP-HDV1</td>
<td>Performance Standards for On-Road HDV</td>
</tr>
<tr>
<td>SPBP-HDV2</td>
<td>Alt Fuel Infrastructure for On-Road HDV</td>
</tr>
<tr>
<td>SPBP-OGV1</td>
<td>OGV Vessel Speed Reduction</td>
</tr>
<tr>
<td>SPBP-OGV2</td>
<td>OGV Reduction of At-Berth Emissions</td>
</tr>
<tr>
<td>SPBP-OGV3</td>
<td>OGV Auxiliary Eng Fuel Improvement Standards</td>
</tr>
<tr>
<td>SPBP-OGV4</td>
<td>OGV Main Eng Fuel Improvement Standards</td>
</tr>
<tr>
<td>SPBP-OGV5</td>
<td>OGV Main &amp; Aux Eng Emission Improvement</td>
</tr>
<tr>
<td>SPBP-CHE1</td>
<td>Performance Standard for CHE</td>
</tr>
<tr>
<td>SPBP-HC1</td>
<td>Performance Standards for HC</td>
</tr>
<tr>
<td>SPBP-RL1</td>
<td>Rail Switch Engine Modernization</td>
</tr>
<tr>
<td>SPBP-RL2</td>
<td>Operational Controls for Line-Haul RR</td>
</tr>
<tr>
<td>SPBP-RL3</td>
<td>Clean Rail Yard Standards</td>
</tr>
<tr>
<td></td>
<td>Technology Advancement Program</td>
</tr>
<tr>
<td></td>
<td>Infrastructure &amp; Operation Efficiency Improvement</td>
</tr>
<tr>
<td></td>
<td>Construction Standards</td>
</tr>
</tbody>
</table>

## Three Levels of Standards

- **San Pedro Bay Standard**
- **Project Specific Standards**
- **Source Specific Performance Standards**
Standards – Three Levels

• San Pedro Bay Standards
  – Reduce public health risk from port-related toxics
  – Prevent port-related violations of National Ambient Air Quality Standards (NAAQS)
  – Reduce port “Fair Share” pollutant emissions

• Project Specific Standards
  – Meet 10 in 1,000,000 excess cancer threshold
  – Implement maximum feasible controls for projects exceeding CEQA thresholds for criteria pollutants

• Source Specific Standards

Ports’ Five-Year Commitments

• Heavy-Duty Vehicles (Trucks)
  – Replacement/Retrofit of frequent & semi-frequent callers
  – LNG Fueling Infrastructure
  – Two Ports & AQMD $206,000,000

• Ocean-Going Vessels
  – 100% compliance w/VSR to 20 nautical miles; extend to 40 nautical miles
  – Port of Los Angeles – 15 berths will be AMP’d
  – Port of Long Beach – 7 to 13 berths will be shore-powered
  – ≈0.2% sulfur fuels for main & auxiliary engines
  – NOx and PM controls on new and existing vessels
  – Two Ports $144,000,000
Ports’ Five-Year Commitments

- Railroad Locomotives
  - Standards for switcher and line-haul locomotives
  - Standards for new or modified rail yards
  - Two Ports $10,000,000
- Cargo Handling Equipment
  - Standards for equipment
- Harbor Craft
  - Standards for harbor craft
- Infrastructure and Efficiency Improvements
  - Two Ports $5,000,000
- Technology Advancement & Source Testing
  - Two Ports $15,000,000

Evaluation of Technologies/Concepts

- Technology Advancement Program
  - Combine expertise & resources
  - Source category emission reductions
  - Evaluate “Green Container Transport” concepts
  - Emission inventory improvements
  - Ports’ funding commitment: $15 million over 5 years
Implementation Strategies

- Lease requirements
- Tariff changes
- CEQA mitigations
- Incentives
- Voluntary measures
- Capital lease backs
- Credit trading
- Government-backed loan guarantees

Estimated Emission Reductions

<table>
<thead>
<tr>
<th>Category</th>
<th>DPM (tons/yr)</th>
<th>NOx (tons/yr)</th>
<th>SOx (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trucks</td>
<td>782</td>
<td>6,417</td>
<td>3</td>
</tr>
<tr>
<td>Ships</td>
<td>393</td>
<td>5,355</td>
<td>2,430</td>
</tr>
<tr>
<td>Cargo Handling Equipment</td>
<td>11</td>
<td>376</td>
<td></td>
</tr>
<tr>
<td>PHL Switchers</td>
<td>3</td>
<td>163</td>
<td></td>
</tr>
<tr>
<td>Total Reductions - 5th Year</td>
<td>1,186</td>
<td>12,148</td>
<td>2,433</td>
</tr>
</tbody>
</table>
**Funding**

Proposed Minimum Commitments Over Next Five Years:

- Port of Los Angeles $177,400,000
- Port of Long Beach $181,000,000
- SCAQMD Initial Commitment $36,000,000

Other Commitments Needed:

- Bond & Other Funding?? “Our Fair Share”
- Tenants/Shipping Industry??

---

**Tracking, Monitoring, and Reporting**

- Expanding Port-Area Air Monitoring Network
  - Two Ports and AQMD
  - Cooperation on Methods/Evaluation
- Emissions Inventory
  - Regular Updates
- Monitor Progress on Clean Air Action Plan
  - Track implementation of each measure
- Report Progress on Clean Air Action Plan
  - At least annually
Next Steps

• June 28th – Release Draft begin public review
• Brief tenants and customers – June 29/30
• Public Workshops:
  – July 10th – 6 pm – Banning’s Landing
  – July 12th – 7pm – Long Beach Council Chambers
  – July 19th – 7pm – Cesar Chavez Park
  – July 25th – 6pm – Peck Park
• Public Comment Period Ended – August 28th
• Plan Revisions as Appropriate – September/October
• Board Approval – November
• Implement Action Plan!