AMPO Air Quality Work Group Meeting: Updates for MPOs

September 22-23, 2011
Chicago, Illinois

Sarah J. Siwek & Associates
Updates on Three Items

• **FHWA Conformity Training**
  – FHWA has provided training through contract with Sarah Siwek in SC, MO, WVA, FL, and NV
    • Working to prepare potential new nonattainment areas under expected tightening of ozone NAAQS
      – Can continue to provide training if demand exists and minimum 20 persons

• **Examples of transportation conformity practices on FHWA website**
  – Recommendations for new examples

• **Clean Construction Act of 2011**
Seven Categories of Examples of Transportation Conformity on FHWA website

- Carbon Monoxide Screening protocols
  - CA/MN/NY/Wash, DC
- Conformity determination reports
  - ARC/GTC/Rocky Mt./NCTCOG
- Interagency consultation
  - OKI/Rocky Mt/Triangle Air Partnership/SCAG/ARC
- State and Local Procedures for determining whether projects require hot-spot analysis
  - SCAQ/ARC/KY/NC
- PM2.5 and PM10 Qualitative Analysis
  - AL/DC/IL/KY/MD/NY/VA
- On-road mobile source measures in SIPs
- Statewide information sharing and conformity work groups
  - CA/TX
Clean Construction
Washington, D.C.

  - Senate Environment & Public Works Committee held hearings
  - 6 co-sponsors (NY, NJ (2), RI, VT, MD)
  - 21 states have PM2.5 nonattainment areas
  - Intent is to include in Transportation Reauthorization bill
  - Bill supported by Association of General Contractors (AGC) and the Clean Air Task Force
  - Would allow use of all major program category funds to pay for retrofit costs (e.g. NHS/IM/STP/CMAQ, FTA funds, etc.)
Counties Designated Nonattainment for PM-2.5 (1997 Standard) and/or PM-2.5 (2006 Standard)

Designated Nonattainment
- 1997 PM-2.5
- Both 1997 and 2006 PN-2.5
- 2006 PM-2.5

Nonattainment areas are indicated by color. When only a portion of a county is shown in color, it indicates that only that part of the county is within a nonattainment area boundary.
Clean Construction Act of 2011
Overview

• Would apply in PM2.5 nonattainment and maintenance areas
• Applies to any off-road and on-road diesel equipment operated on highway or public transportation projects
  – Operate over 80 hours during life of project
  – Excludes:
    1) equipment that meets standards for new diesel engines;
    2) equipment that has already been upgraded;
    3) lift cranes that could be adversely impacted by emission control technology; and
    4) equipment brought onto a construction site for emergency situations.
What Would Clean Construction Cost?

• CATF and Emission Control Technology Association (ECTA) commissioned Sarah Siwek & Associates to estimate costs
• Eleven case studies were conducted on road and transit projects where retrofitted construction equipment was/is being used
• Three key findings
  – A retrofit requirement that mandates BACT would cost less than one percent of contract costs; in most cases less than one-half of one percent
  – Newer control technologies cost more but are more effective
  – Installation of retrofit equipment will not impact project schedules
### Table 1: Summary Table of Projects that Used Diesel Retros on Off-Road Construction Equipment

Shaded rows indicate use of DPFs only.

<table>
<thead>
<tr>
<th>State</th>
<th>Project</th>
<th>Construction Start/End</th>
<th>Total Project Cost</th>
<th>Contract Cost (where applicable)</th>
<th>Cost of Retrofits</th>
<th>Type of Retrofit</th>
<th>Retrofit as a % of Project or Contract Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT</td>
<td>I-95 New Haven</td>
<td>2002/14</td>
<td>$1 billion</td>
<td>$98.5 million</td>
<td>$141,107</td>
<td>DOC</td>
<td>0.14%</td>
</tr>
<tr>
<td>MA</td>
<td>Central Artery Tunnel</td>
<td>1991/07</td>
<td>$14 billion</td>
<td>All included</td>
<td>$1 million</td>
<td>DOC</td>
<td>0.01%</td>
</tr>
<tr>
<td>NY</td>
<td>Lower Manhattan Revitalization</td>
<td>2007/15</td>
<td>$7.7 billion</td>
<td>$188 million</td>
<td>$113,750</td>
<td>DPF</td>
<td>0.66%</td>
</tr>
<tr>
<td>CA</td>
<td>Alameda Corridor East</td>
<td>2004/14</td>
<td>$1.4 billion</td>
<td>$56 million</td>
<td>$250,000</td>
<td>DPF</td>
<td>0.45%</td>
</tr>
<tr>
<td>CT</td>
<td>2009-2010 DERA Contract</td>
<td>2009/10</td>
<td>N/A</td>
<td>Not contract specific</td>
<td>$510,000</td>
<td>DPF/DOC</td>
<td>N/A</td>
</tr>
<tr>
<td>NJ</td>
<td>New Jersey Turnpike</td>
<td>2009/14</td>
<td>$2.5 billion</td>
<td>Not contract specific</td>
<td>$187,175</td>
<td>DPF/DOC</td>
<td>.0075% to-date</td>
</tr>
<tr>
<td>NJ</td>
<td>Access to the Region’s Core</td>
<td>2009/18</td>
<td>$8.7 billion</td>
<td>$13.6 million</td>
<td>$25,000</td>
<td>DOC/DPF</td>
<td>0.18%</td>
</tr>
<tr>
<td>WI</td>
<td>DERA Non-Road Clean Diesel Program</td>
<td>2009/10</td>
<td>N/A</td>
<td>Not contract specific</td>
<td>$750,000</td>
<td>Repowers</td>
<td>0.01%</td>
</tr>
<tr>
<td>MA</td>
<td>Mass DOT (six projects)</td>
<td>2009/13</td>
<td>$1.1 million-$2.6 million</td>
<td>$7,200-$32,800</td>
<td>DOC</td>
<td>0.12%-0.71%</td>
<td></td>
</tr>
<tr>
<td>NY</td>
<td>Second Avenue Subway</td>
<td>2010/16</td>
<td>$4.4 billion</td>
<td>$34 million</td>
<td>$192,273</td>
<td>DPF</td>
<td>0.22%-0.57%</td>
</tr>
<tr>
<td>MD</td>
<td>Intercounty Connector (ICC)</td>
<td>2007/2012</td>
<td>$2.56 billion</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
</tbody>
</table>
Questions?

- Sarah J. Siwek
- ssiwek@aol.com