Burlington Northern Santa Fe Corporation

Wilmington (Watson) Railyard

March 26, 2009
A Guide To Risk Management

Risk managers are responsible for protecting human health, but they must also consider public acceptance as well as technological, economic, social and political factors when arriving at their decisions.
Watson

31 Acres

- Primarily Classification (Switching) yard
  - 13 trains / day
  - 9 switch locomotives typically in use for switching the yard and local industry
- Some fueling operations
2005 Emissions
1.92 Diesel Particulate Matter in tons per year

- Linehaul locomotives (Arriving & Departing trains) 72%
- Switch Engines 22%
- Other (TRU, off road, basic services) 6%
Emission Reductions

- Use of 15 ppm sulfur fuel for purchases in California
- Compliance with the 1998 MOU for nitrogen oxides
- 30% reduction in switch engine idling due to 2005 MOU
- Reduced idling from current locomotives with idle control devices
- Compliance with CARB rules for refrigerated units
- Compliance with CARB rules for off-road equipment
- Compliance with USEPA new rules for locomotive emissions
## Emission Reductions

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<tr>
<th></th>
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<tbody>
<tr>
<td>Basic Services</td>
<td>0.06</td>
<td>0.01</td>
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<tr>
<td>Switching</td>
<td>0.43</td>
<td>0.37</td>
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<tr>
<td>Arriving and Departing Trains</td>
<td>1.39</td>
<td>0.79</td>
<td>0.57</td>
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<td>On-Road Fleet Vehicle</td>
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<tr>
<td>Other Off-Road TRU</td>
<td>0.03</td>
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<td>Other Off-Road Track Maintenance</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>1.92</strong></td>
<td><strong>1.20</strong></td>
<td><strong>0.85</strong></td>
<td><strong>0.60</strong></td>
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Emission Reduction

Diesel PM Emission Estimates (short tons)

- No Growth
- Growth
Emission Reductions

Diesel PM Emission Estimates (short tons)

- Other Off-Road Track Maintenance
- Other Off-Road TRU
- Switching
- Arriving and Departing Trains
- Basic Services

Years:
- 2005
- 2010 - No Growth
- 2010 - With Growth
- 2015 - No Growth
- 2015 - With Growth
- 2020 - No Growth
- 2020 - With Growth
The railroads recognize there are serious air quality concerns, both for ozone and for particulate matter in Southern California.

People living adjacent to the Watson rail yard are exposed to far less emissions than by persons living adjacent to freeways and other major transportation facilities.

Diesel emissions from the Watson rail yard are going down, 64-69% reductions are projected from 2005 to 2020 depending on growth.