Environmental Technology Verification (ETV) Road Dust Palliatives

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Real World Clean Air Symposium

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ETV

- The Environmental Technology Verification Program (ETV) is a U.S. EPA program that generates independent and credible data on performance of technologies.

- Purpose – to help in decision making when selecting new environmental technologies.
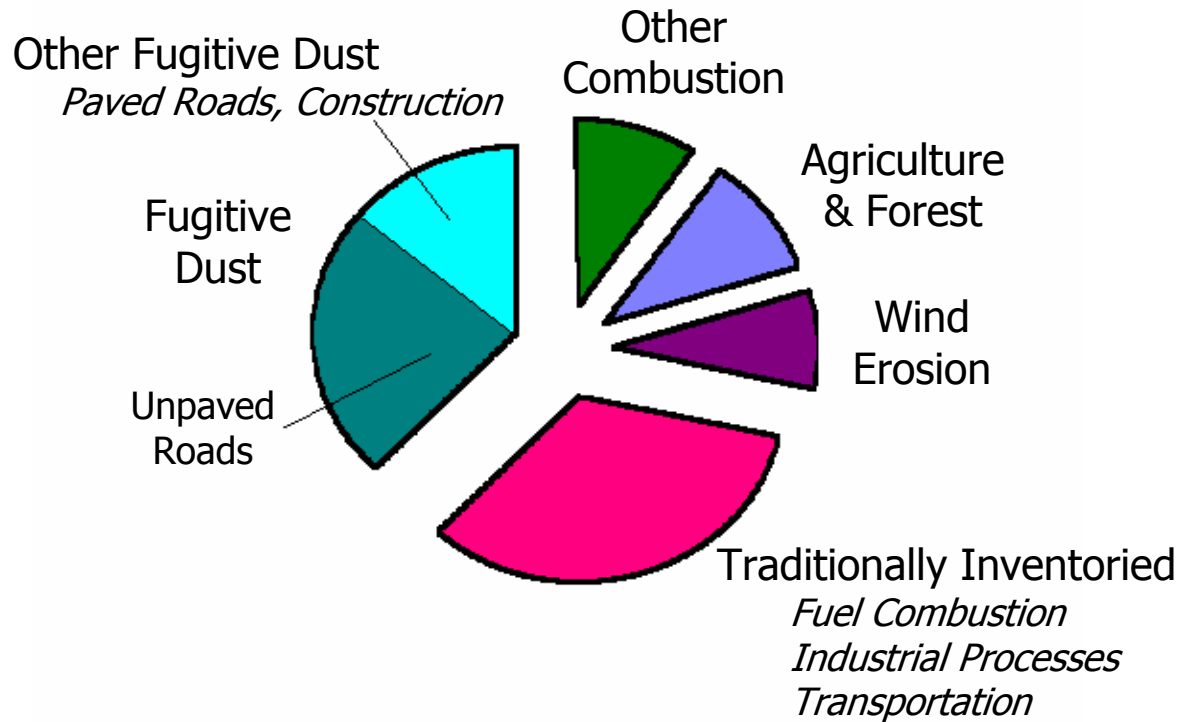
Sponsors

- Research Triangle Institute (RTI) manages the Air Pollution Control Technology Verification Center with Midwest Research Institute (MRI) as a subcontractor

- U.S. Army Corps of Engineers, Construction Engineering Research Laboratory funded Mobile Sampler Development

Dust Suppression and Soil Stabilization

- 1.5 million miles of unpaved roads in U.S.

- Dust generated from unpaved roads contributes to fine PM air pollution issues

- New products are coming onto the market

- Users want demonstrations

PM$_{2.5}$ Emissions

Direct PM$_{2.5}$ Emissions – 1997

Other Fugitive Dust
Paved Roads, Construction

Fugitive Dust

Unpaved Roads

Other Combustion

Agriculture & Forest

Wind Erosion

Traditionally Inventoried
Fuel Combustion
Industrial Processes
Transportation

Fall 2001 Fort Leonard Wood Test

- Air pollutant dust emissions only
- Correlating mobile dust sampler with profiling
- Seven products – three vendors
- Four test series over 3 months
- Completed field work in January

Dust Suppressant Application

Before Dust Suppressant

After Dust Suppressant

Profiling Towers

Mobile Dust Sampler

Next Verification Tests

- Tests will run 12 months

- Include emissions tests, dust suppression functionality and soil stabilization testing options

- Sites are
  - Maricopa County, Arizona
  - Fort Leonard Wood, Missouri

Schedule

- Site survey and vendor meetings   March 2002

- Product application uncontrolled   June 2002
  testing

- Control efficiency tests   Quarterly

- Verification statements/reports   Summer 2003