



Remote Sensing Presentation for Joint Commission on Technology and Science

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Environmental System Products
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July 6, 2011





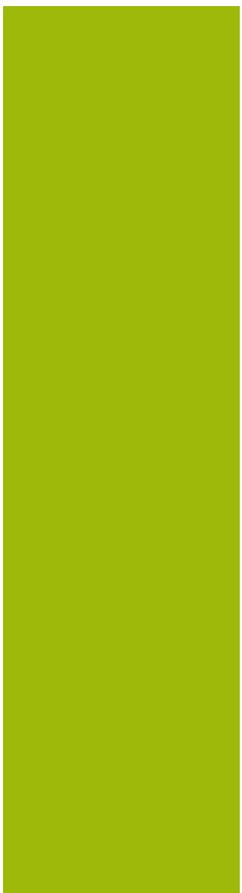
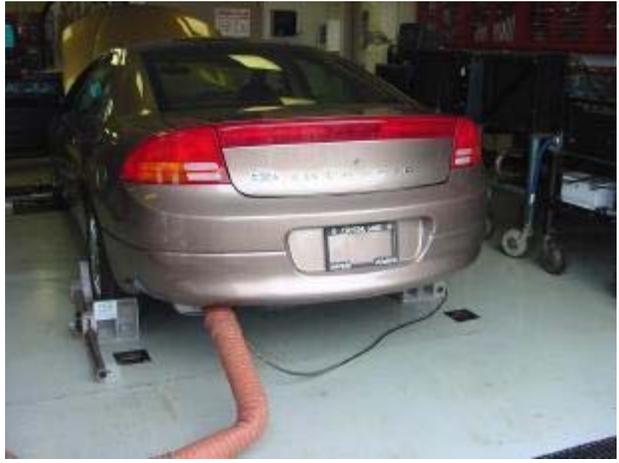
Emissions Inspections in Virginia

The logo for the Environmental Science Program (ESP), featuring the lowercase letters 'esp' in a white, sans-serif font on a yellow rectangular background.

- Clean Air Act requires vehicles located in non-attainment areas to obtain emission inspection. Currently only Northern Virginia drivers are impacted (Central and Tidewater regions are expected).
- Approximately 800,000 vehicles tested annually in NoVA.
- It is estimated that it takes about two hours per vehicle to obtain a emission inspection.
- If 30% of the vehicles are tested on-road, that's a savings of 480,000 hours.
- At \$10 an hour, that means a cost of at least \$4,800,000.00 in time.
- On road testing is not new. The NoVA region has one on-road site which has been in place since 2006.



Station Emissions Inspection





On-Road Emissions Inspection



I - Site Information
M - Mirror Alignment
C - Calibration
S - Statistics
R - Road Testing
Y - Replay
F1 - Help
F2 - Setting

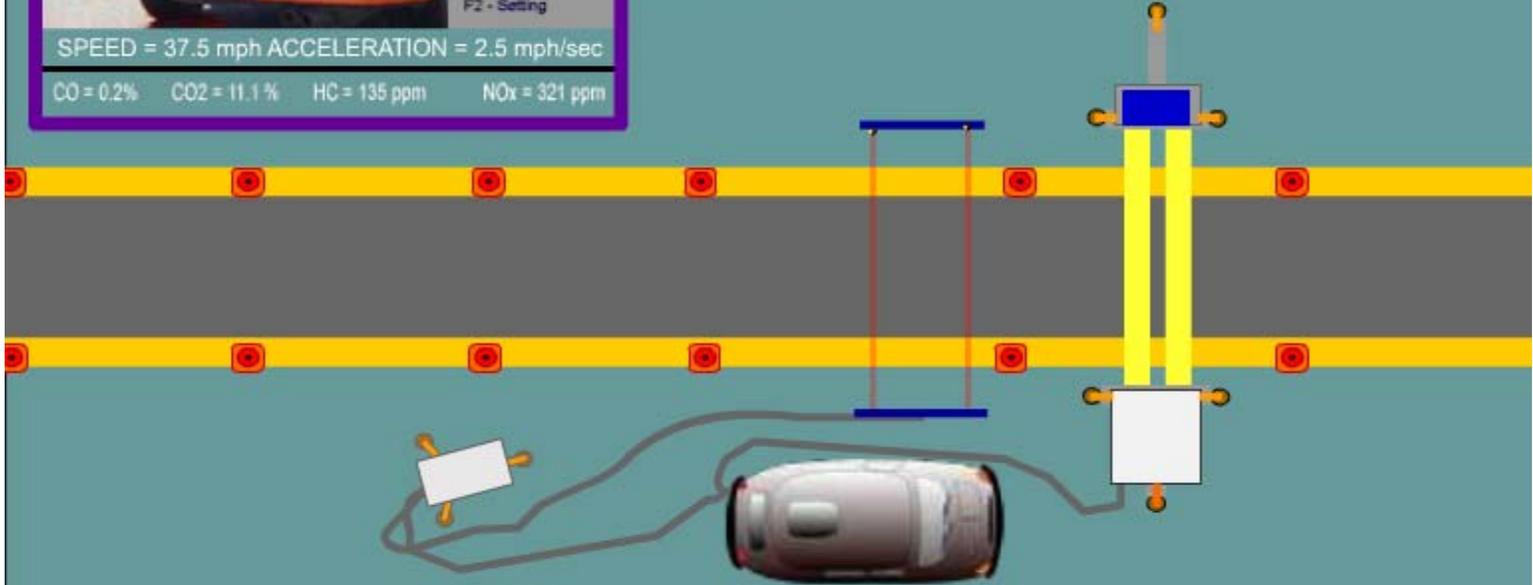
SPEED = 37.5 mph ACCELERATION = 2.5 mph/sec
CO = 0.2% CO2 = 11.1 % HC = 135 ppm NOx = 321 ppm

- 3 active systems collect all relevant information in less than 1 second.
- Hold the cursor above any button to highlight the components of a system
- Click for a description of system operation

Speed & Acceleration

Exhaust Emissions

Camera Capturing



Size of equipment enlarged for presentation purposes



Remote Sensing – How Does it Work?



Driving toward a cleaner, safer future.™





Remote Sensing Equipment



Gas Analyzer - Source/Detector Module

Computer Console

PC Screen View

Video Camera for License Plate Capture

Weather Station

The Corner Cube Mirror (CMM)

Speed/Acceleration System



It's About Consumer Choice and Consumer Convenience

The logo for ESP (Electronic Safety Program) is displayed in white text on a yellow rectangular background.

- On-road testing has been performed in 25 states and 16 countries.
 - California
 - Colorado
 - Texas
 - Virginia
 - Tennessee

- It's Voluntary – Motorists may still choose to use a traditional inspection station.

- Motorists Deserve a Choice – Expanding the on-road program will give Virginians greater access to a faster, more convenient testing option.