Health Impacts

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VT Program Mission

To develop more energy efficient and environmentally friendly highway transportation technologies that enable America to use less petroleum.
--EERE Strategic Plan, October 2002--

Goals

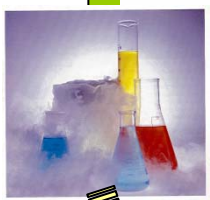
- To provide a sound scientific basis underlying any unanticipated potential health hazards associated with the use of new power train technologies, fuels and lubricants in transportation vehicles; and
- To ensure that vehicle technologies being developed by the Vehicle Technologies Program for commercialization by industry will not have adverse impacts on human health through exposure to toxic particles, gases, and other compounds generated by these new technologies.

Scope of Health Impacts Research Activity

Vehicle Technologies
- Combustion Engines
- Fuels Technology
- Materials
- Vehicle Systems

R&D Needs

R&D - Emerging Technologies



Fuels (pre-combustion)

Other Sources

Emissions Characterization

Transport, Transformations & Apportionment

Exposure & Dose

Cell, Tissue & Organ Response

Health Impacts

Health Impacts of New Technologies
- Characterize new emissions types (e.g., toxics)
- Characterize new fuels/blends for potential transport/use issues (e.g., spills, vapor inhalation)
- Identify unintended consequences
- R&D re-direction to mitigate or minimize impacts
- etc.

Health Impacts

R&D Needs

Health Impacts Research FY 2008 Key Activities

Health Impacts …….$2.225M

- Advanced Collaborative Emissions Study (ACES) sample collection and characterization of 2010 emissions compliant commercial vehicle diesel engines and from Selective Catalytic Reduction (SCR) Urea after-treatment devices.
- Characterizing emissions from new combustion engine systems, lubricants, and fuel formulations.
- Measurement of regulated emissions and unregulated air toxics from on-road cars and trucks.