ALERT! November 2010

ALERT is a monthly update on transportation and air quality planning activities in the Delaware Valley.

Health and Air Quality

Study Finds that Air Pollution Impacts Genes that Regulate Severity of Asthma Symptoms

An article published in the October, 2010 issue of the *Journal of Allergy and Clinical Immunology* reported that exposure to air pollution is linked to decreased function of a gene that regulates the severity of asthma symptoms in children.

The article, authored by researchers at Stanford University and the University of California at Berkeley, claims that the study provides direct evidence that explains how some ambient air pollutants could have long-term health impacts beyond being a source of immediate lung irritation and inflammation.

The study included 181 children from the cities of Fresno and Palo Alto, California. The study pool included children with and without asthma. Fresno was chosen for its well known issues with air pollution and incidence of childhood asthma, while Palo Alto was included because of its relatively good ambient air quality.

Using daily air quality data provided by the California Air Resources Board, the researchers calculated each child's annual exposure to polycyclic aromatic hydrocarbons (PAH). PAH is a byproduct of fossil fuel combustion and a major pollutant in vehicle exhaust. The study found that the annual average exposure to PAH in Fresno was seven times that of children in Palo Alto. The study also found that the overall activity levels of the *Treg* gene (known to regulate immune response that controls asthma and allergy attacks) was lower in children in Fresno than the *Treg* gene activity levels in children from Palo Alto. The severity of asthma symptoms between children in the two cities corresponded with decreased gene function. Correspondingly children in Fresno with lower *Treg* gene activity levels, had more severe asthma symptoms than their counterparts in Palo Alto.

The researchers claim that this study traces the molecular path of increased risk of developing asthma and that since *Treg* genes are important for other autoimmune disorders, the implications of these findings may go beyond asthma.

For more information on this study please visit:
www.sciencedaily.com/releases/2010/10100517042.htm

SAVE THE DATE

Monday,
November 15, 2010
Philadelphia Diesel Difference Working Group
10:00 am

DVRPC Conference Center
8th Floor
6th and Race Streets
Philadelphia, PA

Thursday,
November 18, 2010
Coordinated Human Services Transportation Plan Public Meeting
2:00 pm

DVRPC Conference Center
8th Floor
6th and Race Streets
Philadelphia, PA

Transportation and Air Quality

EPA and US DOT Propose Fuel Efficiency Standards for Trucks and Buses

On October 25, 2010 the US Environmental Protection Agency (EPA) and the US Department of Transportation (DOT) announced the first national standards to reduce greenhouse gas (GHG) emissions and improve fuel efficiency of heavy-duty trucks and buses. Agency estimates project that GHG emissions will be reduced by 250 metric tons and save 500 million barrels of oil over the lives of the vehicles produced during the program's first five years.

According to EPA Administrator Lisa Jackson, the new standards will cut greenhouse gas pollution while reducing fuel costs for small businesses that rely on pickup trucks and heavy duty vehicle as well as shipping and delivery trucks. Secretary of Transportation Ray LaHood calls this proposal "a win-win for the environment, businesses, and the American consumer."

The proposed GHG emissions and fuel efficiency standards will impact three categories of heavy trucks: combination tractors, heavy-duty pickups and vans, and vocational vehicles. For the combination tractors, the agencies are proposing engine and vehicle standards that begin in model year 2014 that would achieve GHG emissions and fuel consumption reductions by up to 20% by the 2018 model year. For vocational vehicles the reductions in GHG emissions and fuel consumption would be 10% for those same model years. For heavy-duty pickups and vans the agencies are proposing separate diesel and gasoline truck standards with gasoline powered trucks required to reduce GHG emissions and fuel consumption by 10% by model year 2018 and diesel powered vehicles required to meet 15% emissions and fuel consumption reductions by model year 2018.

It is expected that the vehicle manufacturers will meet the new standards through widespread use of aerodynamic design improvements, tire rolling resistance improvements, and engine and transmission upgrades.

Overall, the DOT and EPA estimate that the heavy-duty national program would provide $41 billion in net benefits over the lifetime of model year 2014 – 2018 vehicles. The agencies expect that the increased fuel efficiency will result in significant fuel savings for drivers and operators over the life of the vehicles.

The EPA and DOT will be opening a 60-day public comment period on the new standards when this proposal is published in the Federal Register in November.

For more information on the proposed new heavy-duty truck standards and how to submit comments, please visit: *www.epa.gov/otaq/climate/regulations.htm* and *www.nhtsa.gov/fuel-economy*.

ALERT! is a DVRPC publication.

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