ALERT! January 2012

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

Air Quality Regulations

US EPA Issues First National Standards for Mercury Pollution from Power Plants

On December 21, 2011, the U.S. Environmental Protection Agency (EPA) issued the *Mercury and Air Toxics Standards* (MATS). These are the first ever national standards to require coal-fired power plants to control emissions of mercury, arsenic, cyanide, acid gas, nickel and other toxic materials using widely available emissions control technologies. Pollution control technologies are already in use at over 50 percent of the nation's coal-fired power plants. The MATS will level the playing field by requiring installation of control devices at the remaining generating facilities. Power plants will have three years to meet the new emissions standards and in some cases, where the stability of the electric grid requires it, permitting agencies may provide a fourth year for power generators to meet the standards.

Power plants are responsible for emitting half of the mercury and over 75 percent of the acid gas pollution in the U.S. annually. In 1990, Congress passed the Clean Air Act and mandated that the EPA control toxic air pollutants, including mercury. After twenty years of working with stakeholders, including 900,000 public comments, and a court mandated deadline, the EPA has issued a rule that the EPA feels will minimize costs and maximize flexibility for industry, while slashing toxic air pollution emissions and protecting public health.

EPA estimates claim that once fully implemented the MATS will prevent 11,000 premature deaths and 4,700 heart attacks each year. EPA estimates that the American people will see $9 in public health benefits for every dollar spent to reduce air pollution.

According to the EPA, the MATS and final Cross State Air Pollution Rule, which was announced during the summer of 2011, are the most significant steps to reduce pollution from power plant smokestacks since the Acid Rain Program in the 1990s.

These rules are not without their opponents. Members of Congress and governors of states that host coal-fired power plants have voiced opposition to both Clean Air Rules. Opponents most often claim that these rules will jeopardize electricity generation in the U.S. as many plants decide to shut-down rather than incur the costs of installing pollution control technologies.

For more information on the Mercury Air Toxic Standards, please visit:
http://www.epa.gov/mats

SAVE THE DATE

Monday,
January 23, 2012
Philadelphia Diesel Difference Working Group
10:00 AM

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

Wednesday,
February 15, 2012
Air Quality Partnership Board Meeting
10:00 AM to 12:00 PM

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

Information

NASA Satellite Confirms Sharp Decline in Pollution from U.S. Coal-Fired Power Plants

A team of scientists from NASA and Environment Canada have used the Ozone Monitoring Instrument (OMI) on NASA's AURA satellite to confirm major reductions in sulfur dioxide (SO_2) emissions generated by coal – fired power plants in the eastern U.S. since the enactment of the Clean Air Interstate Rule (CAIR) in 2005.

SO_2 is a leading contributor to acid rain and also facilitates the formation of fine particle pollution or $PM_{2.5}$. The CAIR called for steep cuts in SO_2 emissions from power plants but allowed plant operators to decide how they would meet the emissions reductions. The rule also allowed power companies to trade emissions credits. As a result of the CAIR many power plants installed desulfurization devices and took other measures to reduce SO_2 emissions. Ground-based and smokestack monitors indicate that SO_2 emissions have been almost halved since 2005. (The CAIR was replaced by the Cross State Air Pollution Rule in the summer of 2011. This new rule was ordered by the US Court of Appeals to address deficiencies in the CAIR).

NASA scientists have previously used the OMI to measure SO_2 levels in large plumes of volcanic ash and over heavily polluted industrial regions in China, but this study is the first to measure lower concentrations of SO_2 surrounding U.S. power plants. This study also benefits from the extensive ground network of air quality monitors surrounding the power plants that allowed the scientists to compare concentrations measured from the AURA satellite and on-the-ground monitors. The ground-based monitors have measured a 46 percent decline in SO_2 emissions since 2005. This finding is consistent with the 40 percent reduction observed by the OMI measurements.

The confirmation of the accuracy of measuring SO_2 levels from satellite imagery will allow scientists to measure emissions levels from sources around the world and be confident of the readings even in absence of ground-level monitors to confirm the measurements. The scientists intend to expand this methodology to measure other pollutants of interest such as nitrogen oxides.

For more information on NASA's satellite air pollution monitoring, please visit:
http:aura.gfsc.nasa.gov

SEPTA Receives $1.2 Million from EPA to Improve Air Quality

On December 8, 2011, EPA Regional Administrator Shawn Garvin presented SEPTA officials with a check for $1.2 million to repower a 1950's era switcher locomotive with two generator sets (GenSet) and a diesel particulate filter. This project is expected to reduce nitrogen oxide and particulate matter emissions by approximately 80 percent from levels previously generated by the diesel locomotive by reducing engine idling when the locomotive is not in active use and filtering particulate matter from the diesel exhaust.

ALERT! is a DVRPC publication.

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