

A!ert

dvrpc | June 2015

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



Air Quality Regulations

Appeals Court Sides with EPA on Challenge to Ozone Non-Attainment Designations

On June 2, 2014, the U.S. Court of Appeals for the District of Columbia Circuit ruled that the Environmental Protection Agency (EPA) complied with the Clean Air Act in deciding which areas of the country failed to meet federal limits on pollutants that contribute to the formation of ground-level ozone or smog under the 2008 Ozone Standard regulations. This ruling supports an October 2014 Supreme Court Action in which that court refused to hear a suit by states and industry groups to overturn the 2008 Ozone Standards.

The Appeals Court rejected challenges from states, industry, and environmental groups that claimed the agency was being either too strict or too lenient in determining which areas satisfied federal ozone regulations.

States including Mississippi, Indiana, and Texas had challenged the EPA's designation of ozone non-attainment areas within those states' borders. When an area is designated as a non-attainment area or as an area that doesn't meet one of the National Ambient Air Quality Standards (NAAQS), such as ground-level ozone, that area or region is subject to regulations that target emissions reductions, including a requirement to demonstrate transportation conformity. These regulations often result in an increase in costs to states to implement the new regulations and coordinate activities to attain the NAAQS.

In November 2014, the EPA proposed a new ozone standard that is more strict than the 2008 standard of 75 parts per billion (ppb). The EPA will finalize the 2014 Ozone Standard in October 2015 and the new standard is expected to be set between 65-70ppb of ozone. Final non-attainment designations for the 2014 Ozone Standard are expected to be finalized in October 2017 after the states have an opportunity to comment on the EPA's proposed non-attainment area designations in 2016. This schedule is contingent on the process not being delayed due to court challenges of the new standard.

The entire DVRPC region is anticipated to be included in a non-attainment area under the new ozone standards but the region is expected to meet this new standard by 2025 as regulations currently on the books are implemented.

For more information on the 2014 Ozone Standard, please visit: www.epa.gov/groundlevelozone/actions.html.



Save the Date

**Monday,
June 15, 2015**

**National Clean Diesel
Campaign Funding
RFP Due to U.S. EPA**

For more information
Please visit

www.epa.gov/cleandiesel/prg-national.htm

**Thursday,
July 23, 2015**

**Public Meeting: FY 2016 NJ
TIP, Connections 2040 Long-
Range Plan Amendment and
Conformity Determination
for TIPs and Plan
4:00 – 6:00 pm**

*Location of Meeting:
DVRPC Conference Center
8th Floor
6th and Race Streets
Philadelphia, PA*



Air Quality Information

Drexel University Researchers Provide First Independent Look at Emissions from Natural Gas Extraction from the Marcellus Shale

A team of environmental engineers from Drexel University are the first independent researchers to take a closer look at the air quality effects of natural gas extraction in the Marcellus Shale region of Pennsylvania. The group used a mobile air quality monitoring vehicle to survey regional air quality and pollutant emissions at 13 sites including wells, drilling rigs, compressor stations, and processing areas in parts of northeastern Pennsylvania, known to produce “dry gas” which is comprised mostly of methane, and southwest Pennsylvania which produces “wet gas” which has higher levels of hydrocarbons, including ethane and butane. Their work establishes baseline measurements for this relatively new area of gas extraction.

The researchers, led by Peter DeCarlo, PhD, an assistant professor in the College of Engineering and College of Arts and Sciences, and J. Douglas Goetz, a doctoral researcher in the Drexel Air Resources Research Laboratory, published their findings in the journal *Environmental Science & Technology* in May 2015.

The team looked specifically at gaseous chemicals and particulate matter released into the air from natural gas extraction. They compared levels of carbon monoxide, methane, ethane, nitrogen oxides, and other volatile organic compounds (VOCs) to those found in shale formations across the country where natural gas was being extracted. Methane and ethane are greenhouse gases, while VOCs and nitrogen oxides are the constituents of ground-level ozone.

According to DeCarlo, air emission studies of shale gas extraction facilities in this region have thus far focused solely on the release of methane due to its impact on the climate system. DeCarlo’s research has a broader scope and is the first to also test for air pollutants that could pose a more immediate and local health hazard.

Despite not having direct access to the sites, the group was able to use a fence line sampling protocol that allowed them to make downwind measurements with the mobile laboratory and provide an accurate assessment of site emissions and potential air quality impact.

The most significant findings of the research include:

- Relatively small increases in chemicals that affect air quality, such as nitrogen oxides and volatile organic chemicals, compared to other monitored regions. This indicates that these types of emissions cannot be generalized for all oil and natural gas extraction regions.
- The number of ultrafine particles originating from compressor stations was elevated, although the total particulate mass was not significantly increased. Ultrafine particles, though not regulated in the U.S., are thought to have health impacts.
- Methane emissions observed were generally higher than those reported in previous studies.

According to DeCarlo, “In terms of persistent impacts to local air quality, compressor stations and other post-extraction processing are major sources of pollutants that have the potential to affect downwind air quality.”

DeCarlo sees these findings as the first step toward a better understanding of the impact of natural gas extraction on the environment, which will allow leaders and citizens to make more informed choices and policies regarding the practice of gas extraction and energy policy as a whole.

For more information on the Drexel University team’s research on emissions from Marcellus Shale gas extraction, please visit: <http://drexel.edu/now/archive/2015/May/Marcellus-Shale-AQ>.



Air Quality Alerts

Protect Your Health, Sign Up for Free Air Quality Alerts

Summer is ozone season. If you haven’t already signed up for air quality alerts, visit www.airqualitypartnership.org and sign up to be notified when air quality in the Greater Philadelphia region is forecast to be unhealthy. Alerts are delivered right to your phone or email.



DVRPC, 8th Floor
190 N. Independence Mall West
Philadelphia, PA 19106-1520
Phone: 215.592.1800 | Fax: 215.592.9125 | Web: www.dvrpc.org