DNREC takes action to thwart ‘upwind states’ from transporting air pollution into Delaware, which brings with it a wide range of public health problems

DOVER – On behalf of Delawareans and public health, DNREC has taken two recent actions through the federal court system and US Environmental Protection Agency aimed at requiring “upwind states” to reduce air pollution generated within their borders that carries into and pollutes Delaware’s air, causing asthma, respiratory disease, and other public health problems for Delawareans.

The first action – a petition filed in U.S. Court of Appeals for the District of Columbia Circuit challenges an EPA final rule that granted a one-year extension to the Philadelphia-based ozone nonattainment area to comply with the 2008 national ozone standard. This area includes Delaware, Pennsylvania, Maryland and New Jersey. Delaware believes EPA should require pollution reduction programs to address the transport of emissions from one state to another, rather than granting the extension. Pennsylvania, Maryland and New Jersey requested the extension of the attainment deadline, but Delaware argued against it based on its analysis that meteorological conditions were more responsible for temporary improved air quality readings in the nonattainment zone, rather than actual reductions in air pollution.

“Delaware residents, businesses and industry have made great strides in reducing our own sources of air pollution’” said

DNREC Secretary David Small. “But we cannot meet our air quality standards without sources in other states taking similar action. We are still dramatically affected by what upwind states are doing – or not doing – toward meeting air quality standards. If we are going to continue to ask Delawareans to do more, we need EPA to take steps to level the playing field between states. This action is the latest in a number that the Department has taken to seek EPA’s help.”

Delaware has complied with the requirements of the federal Clean Air Act by adopting in-state control measures for the prevention of emissions that would significantly contribute to non-attainment of the 8-hour ozone standard established by EPA. These actions have not only helped improve air quality in Delaware but have helped reduce impacts to our neighboring states that can be affected by the transport of air and contaminants. However, Delaware’s ability to achieve and maintain health-based air quality standards is severely impeded because more than 94 percent of bad ozone levels in Delaware are created by the transport of air pollutants from upwind states. DNREC’s Division of Air Quality has determined that attainment of the 8-hour ozone standards in Delaware is possible only through additional emission reductions in these upwind states that include Maryland and Pennsylvania and other states further west and as far away as Michigan, Indiana, Ohio and Kentucky..

Predictably, the return of typical summer weather conditions of hot, humid sunny days has led to ozone exceedances in the Mid-Atlantic region, and air monitors throughout the Philadelphia non-attainment area, including Delaware, have confirmed that air remains unhealthy by recording multiple exceedances of the ozone standard, with more exceedances likely to come over the next couple of months.

The second action taken this week by DNREC and Delaware is aimed specifically at the Brunner Island Power plant near York, Pa. Delaware filed a petition with the EPA under Section

126 of the Clean Air Act asking EPA to make a finding that emissions from the Brunner Island plant, with its three coal-fired electric generating units, significantly contributes to unhealthy ozone concentrations in Delaware.

Delaware's petition is based on computer modeling that demonstrates that emissions from Brunner Island's coal-fired units contribute heavily to ozone levels in Delaware that exceed the 2008 and 2015 8-hour ozone standards. EPA's granting of the petition would require the Brunner Island facility to promptly reduce the emissions that significantly contribute to ozone exceedances in Delaware.

Brunner Island's three coal-fired electric generating units are not currently equipped with modern nitrogen oxide (NOx) controls similar to those installed starting in 2010 at Delaware's NRG Indian River facility near Millsboro – which have reduced the annual NOx emissions rate by upwards of 80 percent from the last remaining coal-fired electric generating unit at that facility, according to DNREC statistics. Modern NOx controls, such as selective catalytic reduction (SCR), have been in commercial service at coal-fired electric generating units for decades, and have the ability to significantly reduce NOx emissions from coal-fired combustion sources.

NOx is a precursor pollutant to the formation of ambient ozone. Ozone is formed when chemicals in the air such as NOx and volatile organic compounds react together in hot sunny conditions. Under Section 126 of the Clean Air Act, the EPA must make the requested finding or deny DNREC's petition within 60 days after receipt.

Background on ozone The EPA established a short-term ozone standard (8-hour National Ambient Air Quality Standard) to address the potential health impact of short-term exposure to high levels of ozone. Short term exposure to ozone can cause rapid, shallow breathing and related airway irritation,

coughing, wheezing, shortness of breath, and exacerbation of asthma, particularly in sensitive individuals and asthmatic children. Short term exposure to ozone also suppresses the immune system, decreasing the effectiveness of bodily defenses against bacterial infections. Research studies indicate that markers of cell damage increase with ozone exposure. Some studies suggest that there is a link between ozone exposure and premature death of adults and infant death. Other studies indicate a link between ozone and premature birth and adverse birth outcome, cardiovascular defects, and adverse changes in lung structure development in children. Children, the elderly, those with chronic lung disease, and asthmatics are especially susceptible to the pulmonary effects of ozone exposure. Additionally, studies have shown that ozone can adversely affects trees and vegetation, can cause reduced crop yields, and can contribute to the "nitrification" of bodies of water.

The formation of atmospheric ozone is a particular problem in the eastern United States and to Delaware because of its strategic Mid-Atlantic location during warm summer months when atmospheric conditions are the most conducive to ozone formation. The summer months also tend to coincide with periods of high electric consumption and the required electric generation to meet the electric demand. High levels of NOx emissions associated with the generation of electricity using fossil fuels contribute to the formation of ozone. In fact, the annual period comprising May 1 through September 30 is referred to as the "ozone season."

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