

March 23, 2017

Ali Mirzakhilili, P.E.
Director, Division of Air Quality
Department of Natural Resources and Environmental Control
State Street Commons
100 W. Water Street, Suite 6A
Dover, DE 19904

Dear Mr. Mirzakhilili:

Nemours Children's Health System

Nemours Children's Health System is pleased to have the opportunity to comment on the Department of Natural Resources and Environmental Control's (DNREC) Proposed Volkswagen Environmental Mitigation Plan.

Nemours/Alfred I. duPont
Hospital for Children

Nemours BrightStart!

Nemours CareConnect

Nemours is an internationally recognized integrated children's health system. In Delaware, we operate the Nemours/Alfred I. duPont Hospital for Children and 10 other service locations and employ more than 3,800 associates in the state. Nemours is leading the way in helping children grow up healthy by applying a holistic and multi-faceted approach that reaches children and families where they live, learn, work, play and worship.

Nemours Center for
Children's Health Media

Nemours Children's Clinic

Nemours Children's Hospital

Nemours Children's Primary Care

Nemours Children's Specialty Care

This approach encompasses working to advance policy, systems and environmental changes that improve health outcomes. Recently, as part of an award from the Centers for Medicare and Medicaid Innovation (CMMI), we adopted a new model of service delivery and health promotion with the goal to reduce asthma-related emergency department utilization and hospitalizations among Medicaid patients. In addition to interventions in the clinical setting, this model incorporated establishing partnerships with neighborhood leaders to develop the infrastructure in schools, child care, housing and other systems to reduce asthma triggers and promote a healthier environment in targeted ZIP codes. Although the CMMI funding has ended, Nemours maintains participation in various groups focused on addressing asthma and/or improving air quality, including the Delaware Asthma Consortium, the Air Quality Partnership and the WILMAPCO Nonmotorized Transportation Working Group.

Nemours Children's Urgent Care

Nemours duPont Pediatrics

Nemours Estate

Nemours Fund for
Children's Health

Data from Nemours' 2014 Delaware Survey of Children's Health (DSCH) show that lifetime asthma prevalence among Delaware children ages 0-17 exceeds the national rate. In Delaware, 17% of children ages 0-17 have ever been diagnosed with asthma versus the national rate of 14%. Survey data show statistically different percentages among racial and ethnic groups, with non-Hispanic black children most likely to have received an asthma diagnosis (31%), compared to Hispanic (15%) and non-Hispanic white children (14%).ⁱ Data from the Delaware Behavioral Risk Factor Survey (BRFS) show that in 2015, about 14.4% of adult Delawareans had asthma at some time during their lives; and 9.2% (an estimated 66,600 adults) reported that they currently have asthma.ⁱⁱ

Nemours Health &
Prevention Services

Nemours Office of Policy
and Prevention

These data underscore the need for Nemours to continue to work with organizations across all sectors to address environmental triggers of asthma, while also preventing and treating asthma in our patient

Nemours SeniorCare

population. To that end, we are submitting comments on the mitigation plan intended to maximize the potential health benefits for at-risk populations and also respond to the specific points for which DNREC is seeking feedback.

6. Whether to give preferences to certain fuels, such as diesel, compressed natural gas, propane, hydrogen fuel cell or battery electric?

Nemours supports conversions to clean diesel due to evidence on their positive health impacts. The Centers for Disease Control and Prevention (CDC) has identified clean diesel bus fleets as among those strategies with the potential to have a health impact in five years. CDC supports transition programs that retrofit diesel bus fleets to operate on clean diesel technology. In their support of this strategy, CDC cites evidence that the resulting emissions reductions are associated with fewer cardiovascular events and respiratory conditions like asthma, and improved lung function among children. A study of school bus diesel retrofits in the Puget Sound region of Washington showed that districts making these changes to their school buses experienced a 23% decrease in the number of pediatric bronchitis and asthma cases and 37% less pediatric pneumonia cases each month.ⁱⁱⁱ

11. How to determine whether a proposed project will benefit areas that have been disproportionately impacted by emissions of nitrogen oxides (NOx) or other pollutants, and information about such impacts in particular areas of Delaware

Nemours recommends that DNREC consult a variety of readily available existing data as part of this process:

- Data from the Delaware Division of Public Health and the community health needs assessments recently completed by hospitals and healthcare systems throughout Delaware can be helpful for determining those areas experiencing adverse health outcomes that could benefit from environmental mitigation strategies.
- Data compiled by the metropolitan planning organizations – WILMAPCO and Dover/Kent County MPO -- as part of their Environmental Justice (EJ) strategies can shed light on locations of EJ communities and their challenges.
- Data collected in conjunction with master plans and corridor studies (e.g. Route 9, SR 141, North Claymont); zoning regulation updates (e.g. New Castle County's Unified Development Code); and Blueprint Community planning processes may contain both quantitative health data and also qualitative data like resident feedback on community challenges, concerns and priorities.

12. The criteria for evaluating applications for funds. How should Delaware consider the following factors, and what other factors should it consider?

a. Reductions in emissions of NOx and other pollutants

Nemours recommends that DNREC concentrate funding allocations in those areas with high concentrations of emissions shown to negatively impact health. Carbon monoxide, nitrogen oxides, and ozone are associated with a long list of health issues, including myocardial ischemia, chest pain, coughing, throat irritation, and airway inflammation, and can aggravate existing health conditions like bronchitis, emphysema, and asthma.^{iv}

b. Ozone, particulate matter, visibility, climate change, public health and other environmental values

Nemours recommends that DNREC weight public health impact highly as part of this process. See comments above under #11 regarding Nemours' recommendations on data sources DNREC might utilize to identify areas with particular public health concerns.

d. The economic impacts of proposed projects

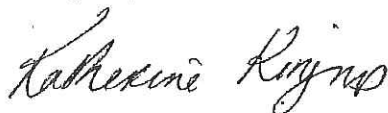
Nemours supports prioritizing applications with the potential to expand public transportation access in low-income, minority communities. CDC has identified increasing access to safer and healthier modes of transport as among those strategies with the potential to have a health impact in five years. In supporting this strategy, CDC cites the health benefits of public transportation, which include reductions in motor vehicle crashes, air pollution and physical inactivity. Public transportation provides a vital link between people who are unable to drive and everyday destinations like jobs, schools, healthy food outlets and healthcare facilities.^v

e. The geographic distribution of funds

Nemours supports priority being given to the distribution of funds to Environmental Justice (EJ) communities that data has shown to be disproportionately impacted by emissions. WILMAPCO's 2013 Transportation Equity Report showed that housing units in moderate and significant EJ areas were much more likely to be exposed to heavy emissions from nearby highways than housing in non-EJ areas. They found the following percentage of housing units exposed to nitrogen oxides within each designation area: 5.9% in non-EJ areas; 10.3% in moderate EJ areas; and 14.8% in significant EJ areas. Other pollutant emissions measured also varied by EJ designation, with higher exposures in moderate and significant EJ areas compared to non-EJ areas. Based on these findings, WILMAPCO recommended investing in diesel engine retrofits and replacements, supporting anti-idling policies, and ultimately separating incompatible land uses.^{vi}

In closing, Nemours hopes that DNREC will take into account these suggestions in order to maximize the positive health impact of the funds disbursed through the Environmental Mitigation Trust. Please feel free to contact us with any questions about these comments or to get additional information.

Best regards,



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Patricia P. Miller, MPP
Population Health Specialist
Nemours Health & Prevention Services

Enclosure

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- ⁱ Nemours Health & Prevention Services (2017). "Delaware Survey of Children's Health: Childhood Asthma in Delaware." Available online at: <http://datacenter.nemours.org/files.axd/42/NHPS%20Asthma%20Data%20Brief%202014%20DSCH.pdf>.
- ⁱⁱ Delaware Health and Social Services Division of Public Health, and Department of Natural Resources and Environmental Control Division of Air Quality, *The Burden of Asthma in Delaware: 2015 Update*, May 20, 2016. Available online at: <http://www.dhss.delaware.gov/dhss/dph/dpc/files/asthmaburdenupdate16.pdf>.
- ⁱⁱⁱ Centers for Disease Control and Prevention, "Health Impact in 5 Years." Available online at: <https://www.cdc.gov/policy/hst/hi5/index.html>.
- ^{iv} Centers for Disease Control and Prevention, "Health Impact in 5 Years." Available online at: <https://www.cdc.gov/policy/hst/hi5/index.html>.
- ^v Centers for Disease Control and Prevention, "Health Impact in 5 Years." Available online at: <https://www.cdc.gov/policy/hst/hi5/index.html>.
- ^{vi} WILMAPCO. *2013 Transportation Equity Report: Environmental Justice & Title VI*. Available online at: http://www.wilmapco.org/EJ/2013_EJ_T6_Report.pdf.