



July 19, 2016

The Honorable Gina McCarthy  
Administrator  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW.  
Washington, DC 20460

Dear Administrator McCarthy:

Air pollution from heavy-duty trucks remains a significant threat to public health in communities across the nation. The undersigned public health and medical organizations urge you to promptly propose a new standard to cut emissions of oxides of nitrogen (NO<sub>x</sub>) from heavy-duty vehicles by 90 percent, limiting emissions to 0.02 grams per brake horsepower-hour (g/bhp-hr). Cutting these emissions will significantly reduce ambient ozone pollution in our communities and help reduce the enormous health burden air pollution imposes on people who live, work or attend school near roadways.

The cleanup of NO<sub>x</sub> and particulate matter from heavy-duty diesel vehicles has prevented thousands of premature deaths and hundreds of thousands of asthma attacks. Now, a new, stronger standard is necessary to protect public health. The U.S. Environmental Protection Agency (EPA) last updated the NO<sub>x</sub> emissions standards for heavy-duty vehicles in 2001 and fully implemented the NO<sub>x</sub> emissions standards in 2010. Since then, the evidence has grown showing that stronger limits on NO<sub>x</sub> emissions are needed, including evidence from the adoption of more stringent national air quality standards for NO<sub>2</sub> in 2010 and for ozone in 2008 and 2015.

Millions of Americans still live in communities with unhealthy ozone pollution levels. Given the urgent health challenges caused by ozone pollution, stronger measures including a stronger heavy duty vehicle standards are needed to drive down vehicle emissions and assist clean-up efforts to meet the health-based ozone standard adopted in 2015. Furthermore, research continues to show that NO<sub>x</sub> plays a crucial role in documented health risks from near-road pollution exposure. EPA has published strong evidence in the January 2016 review of the latest science showing that NO<sub>x</sub> can cause serious harm at lower levels than was known previously, particularly for those who suffer the most from traffic pollution.<sup>1</sup> Curbing NO<sub>x</sub> will have significant and lasting health benefits, especially for reducing ozone and nitrogen dioxide pollution.

## **Ozone**

Oxides of nitrogen are primary precursors in the formation of ozone, one of the nation's most widespread air pollutants. The scientific and medical understanding of the harms to human health from exposure to ambient ozone pollution has grown considerably stronger since EPA established the last NOx standard for heavy-duty vehicles in 2001. Reducing NOx emissions from heavy-duty vehicles will help reduce ozone pollution and protect public health.

As documented in the 2013 *Integrated Science Assessment* for ozone, the greatly expanded information on the harm ozone poses to human health showed the need for strengthening the national ambient air quality standard for ozone. The largest body of research documented the impact of ozone on respiratory symptoms, lung function changes, emergency department visits for respiratory disease, and hospital admissions, particularly for children with asthma. Evidence had also accumulated about the cardiovascular effects of ozone, with the strongest evidence for increased risk of premature death. New studies warned that short- or long-term exposure to ozone may affect cognitive abilities and pose reproductive and developmental harms.<sup>2</sup>

In 2015, EPA adopted a more protective standard for ozone of 70 parts per billion averaged over 8 hours. EPA projected that many counties in California and several in other states across the nation would still need additional measures to reduce ozone by 2025 to meet the standard, requiring steps beyond emission reduction actions already in place. Reducing NOx emissions from heavy-duty vehicles would provide a crucial additional ozone-reduction tool to these counties that is only possible by federal action.

## **Nitrogen dioxide**

Nitrogen dioxide (NO<sub>2</sub>) has long been recognized as a widespread and harmful air pollutant. As EPA concluded in the 2016 *Integrated Science Assessment* (ISA), nitrogen oxides, including NO<sub>2</sub>, cause a range of harmful effects on the lungs, including increased inflammation of the airways; worsened cough and wheezing; reduced lung function; increased asthma attacks; greater likelihood of emergency department and hospital admissions; and increased susceptibility to respiratory infection, such as influenza. Greater evidence now exists showing that long-term exposure to NO<sub>2</sub> likely causes the development of asthma in children. New evidence discussed in the ISA also links short- and long-term exposure to cardiovascular harm, diabetes, premature death, poor birth outcomes and cancer.<sup>3</sup>

Children, older adults, and people with asthma or other lung disease and people with cardiovascular disease are at greatest risk. These categories include millions of people. For example, there are an estimated 24 million people, including 6.3 million children, with asthma in the U.S.<sup>4</sup>

In addition, people who work, live or attend school along major highways also face increased risk, especially those living within 300 feet of a 4-lane or larger highway, railroad or airport.<sup>5</sup> In 2008, EPA cited the most current assessment of that population at 47.8 million people, based on the 2003 American Housing Survey.<sup>6</sup> EPA cited the likelihood that "[p]eople living or spending time near or on roads" would face "increased risk for NO<sub>2</sub>-related health effects" as one of the major findings in this current review of the science in the 2016 ISA.<sup>7</sup>

**Truck NOx Reductions are Achievable**

According to the Manufacturers of Emissions Control Association in comments to EPA, achieving further reductions in NOx will be possible through the combinations of more advanced diesel engines with advanced diesel exhaust emission control technologies, including advanced substrates, improved SCR catalysts and/or NOx adsorber catalysts.<sup>8</sup> In addition, emerging technologies will continue to provide additional compliance pathways.

**Stronger limits are needed to protect public health from these pollutants**

In light of the significant health benefits from curbing heavy-duty vehicle NOx emissions and confidence of the pollution control industry that such standards can be met, the time to act is now. We urge you to move forward with regulations to cut NOx emissions to no higher than 0.02 g/bhp-hr to protect the health of the public with this crucial step that will reduce air pollution.

Sincerely,

Allergy & Asthma Network

National Environmental Health Association

Alliance of Nurses for Healthy Environments

Healthcare Without Harm

American Lung Association

National Association of City and County Health Officials

American Public Health Association

Physicians for Social Responsibility

American Thoracic Society

cc. The Hon. Janet McCabe, Acting Assistant Administrator for Air and Radiation, U.S. EPA  
Christopher Grundler, Director of the Office of Transportation and Air Quality U.S. EPA

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<sup>1</sup> U.S. Environmental Protection Agency. Integrated Science Assessment for Oxides of Nitrogen -- Health Criteria. EPA/600/R-15/069. January 2016.

<sup>2</sup> U.S. Environmental Protection Agency. Integrated Science Assessment for Ozone and Related Photochemical Oxidants. EPA/600/R-10/076F. February 2013.

<sup>3</sup> U.S. EPA, ISA. 2016.

<sup>4</sup> Centers for Disease Control and Prevention. National Center for Health Statistics. National Health Interview Survey, 2007-2010 and 2014. Analysis performed by American Lung Association Epidemiology and Statistics Unit using SPSS software.

<sup>5</sup> U.S. EPA, ISA. 2016.

<sup>6</sup> U.S. EPA, "Primary National Ambient Air Quality Standards for Nitrogen Dioxide, Final Rule." 75 Fed. Reg. 126 (9 February 2010).

<sup>7</sup> U.S. EPA, ISA. 2016 Executive Summary, page 1xxxvii.

<sup>8</sup> Written Statement of the Manufacturers of Emission Controls Association on the U.S. Environmental Protection Agency's Proposal to Revise the National Ambient Air Quality Standards for Ozone Docket ID No. EPA-HQ-OAR-2008-0699 March 16, 2015 [http://www.meca.org/attachments/2560/MECA\\_EPA\\_ozone\\_NAAQS\\_testimony\\_031715.pdf](http://www.meca.org/attachments/2560/MECA_EPA_ozone_NAAQS_testimony_031715.pdf)