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Testimony of Tamanna Rahman

to the

U.S. Environmental Protection Agency

on the

Proposed Refinery Risk and Technology Review and the New Source Performance Standards

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Los Angeles, California

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Thank you for the opportunity to testify here today for the American Lung Association. My name is Tamanna Rahman and I am a Ph.D. student in the Fielding School of Public Health at the University of California, Los Angeles, and my emphasis is in Environmental Health Sciences. My past professional and academic experience has been in the area of ambient air pollution and its related public health impacts. My current doctoral research considers how climate change will potentially exacerbate air quality-related health impacts among vulnerable populations in the Greater Los Angeles area and how to build resilience among these key populations. Today I speak in my role as a volunteer with the American Lung Association in California. I am presenting an overview of comments from the nationwide Lung Association, which will submit more detailed comments in writing.

The American Lung Association appreciates the opportunity to testify today in support of strong standards to limit toxic air emissions from petroleum refineries. The emissions from the 149 petroleum refineries in thirty-two states pose serious, recognized harm to millions of Americans who live near them and millions more who live where the emissions blow downwind.

EPA has calculated that, each year, these refineries produce 20,000 tons of emissions that are recognized as hazardous, including benzene and other carcinogens, hydrogen fluoride and other acid gases, and other persistent pollutants such as mercury. EPA's published risk review shows that at least 5.2 million people are exposed to levels of carcinogens from those refineries that places them at recognized risk of cancer. Among that group, fully half are from minority groups and one quarter of those exposed are under age 17.

Children face unique risks from breathing polluted air. Children are born with only about 20 percent of the lungs they will have as adults. The vast majority of their tiny lungs will develop after they are born, all while they are learning to sit up, to walk, to kick a ball, to ride a bike, and to watch fireworks on the fourth of July. Children are more active than adults and are more often outdoors. Their lungs will grow until they become adolescents.[i] The air they breathe during that period will shape how their lungs function—how they breathe—for the rest of their lives.[ii]

Toxic substances may put children more at risk than adults. For example, the California Environmental Protection Agency explored improved methodologies to determine susceptibility to carcinogens in utero and childhood after finding in 2001 that the existing approaches did not adequately reflect the risks to children. Their subsequent research found that the children generally display greater sensitivity to environmental

carcinogens than did adults. They recommended a more protective adjustment to risk assessments to reflect that greater risk.[iii]

The published risk review estimated that millions of the people exposed to carcinogenic refinery emissions are those whose income, education or language makes them likely to be at greater risk of harm. One in five had incomes below the poverty line. One in four adults lacked a high school diploma. One in ten had no one in the household over age 14 who spoke English.[iv]

People most at risk of harm from breathing these air pollutants depend on the EPA to take action to clean up air pollution from refineries. In addition to the groups I've mentioned already, people at risk include older adults; pregnant women; people with asthma and other lung diseases; people with cardiovascular disease; diabetics; and healthy adults who work or exercise outdoors. We urge EPA to examine and use the most current research on these and other cumulative impacts for children and adults in setting the standards and developing the "ample margin of safety." EPA should also recognize that many communities are downwind from more than one source, so EPA should factor in multiple exposures into the standards.

The Lung Association supports EPA's plan to strengthen requirements for refineries to control the emissions of these toxic pollutants. Stronger requirements will significantly reduce emissions from storage tanks and other components of the refineries that today threaten millions of people.

The Lung Association is pleased that, for the first time, EPA has added requirements for monitoring refinery emissions at the fence line to provide greater assurance that the facility is meeting the emission limits. Accurate measurements of the emissions coming from the facility are essential to ensure the refinery's neighbors actually receive the protections they are promised. That is why we urge EPA to strengthen the monitoring requirements. These data need to be reported in real-time and made publically available as with other air pollution monitoring. Waiting passively for the companies to decide when to report problems is not acceptable and will not protect public health.

The Lung Association is pleased that EPA has eliminated exemptions for emission limits during periods of start-up, shutdown and malfunction at each facility. EPA has finally recognized that these exemptions have created regulatory loopholes that have historically undermined the protections that the Clean Air Act intended the public to have.

The Lung Association supports steps to reduce the use of flaring. EPA should ban routine flaring and tightly limit other use of emergency flaring. This all-too-routine burning of oil and gas wastes valuable fuel and adds air pollutants. EPA should require monitoring and reporting of flaring emissions to the public.

Even with the proposed improvements, EPA needs to adopt standards that provide greater protection, including protection from the risks of accidents. The EPA's own assessment estimates that even when the refineries meet the proposed standards, only 18 percent more people will be protected, leaving nearly four million people breathing air that gives them an unacceptable risk of cancer. As the Lung Association will discuss in formal comments, cancer is far from the only health risk they will continue to face.

Thank you for the opportunity to speak.

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i American Academy of Pediatrics (AAP) Committee on Environmental Health. Ambient Air Pollution: Health Hazards to Children. Pediatrics 2004; 114: 1699-1707. Reaffirmed, 2010.

ii Gauderman WJ, Gilliland GF, Vora H, Avol E, Stram D, McConnell R, Thomas D, Lurmann F, Margolis HG, Rappaport EB, Berhane K, Peters JM. Association between Air Pollution and Lung Function Growth in Southern California Children: results from a second cohort. *American Journal of Respiratory and Critical Care Medicine* 2002;166:76-84.; Gauderman WJ, Avol E, Gilliland F, Vora H, Thomas D, Berhane K, McConnell R, Kuenzli N, Lurmann F, Rappaport E, Margolis H, Bates D, Peters J. The Effect of Air Pollution on Lung Development from 10 to 18 Years of Age. *New England Journal of Medicine* 2004;351:1057-1067

iii California Environmental Protection Agency. Appendix J-In Utero and Early Life Susceptibility to Carcinogens: The Derivation of Age-at-Exposure Sensitivity Measures. May 2009.

iv EC/R Incorporated, 2014.