

EPA

Moderator: Sara Terry
May 20, 2020
9:00 a.m. ET

OPERATOR: This is Conference # 9498236.

Operator: Good day, ladies and gentlemen and thank you for standing by. Welcome to the Public Hearing on Proposed Review of the National Ambient Air Quality Standards with your speaker Kelley Raymond.

Kelley Raymond: Thank you. Good morning. My name is Kelley Raymond. And I'm a senior adviser in EPA's Office of Air and Radiation. I will be chairing today's public hearing on the EPA's proposed rule Review of the National Ambient Air Quality Standards for Particulate Matter. Welcome, thank you for coming today.

Joining on the panel are Dr. Scott Jenkins, Environmental Health Scientist in the Office of Air Quality Planning and Standards within the Office of Air and Radiation.

Scott Jenkins: Thank you, Kelley. Yes, as Kelley mentioned, I'm in the Office of EPA's Office of Air and Radiation. And I am the lead of the review of the PM NAAQS.

Kelley Raymond: And Mr. Jason Sacks, Senior Epidemiologist in the Center for Public Health and Environmental Assessment in the Office of Research and Development.

Jason Sacks: Thanks, Kelley. Yes, I'm Jason Sacks. I'm the assessment lead for the particulate matter Integrated Science Assessment.

Kelley Raymond: Thank you. On April 30th, 2020, EPA published in the Federal Register the proposed decisions on the primary and secondary PM NAAQS. This proposal is called Review of the National Ambient Air Quality Standards for Particulate Matter.

The Clean Air Act requires EPA to set two types of outdoor air quality standards – primary standards, to protect public health and secondary standards to protect the public welfare. In this proposal, EPA proposed to retain both the primary and secondary air quality standards for particle pollution also referred to as particulate matter or PM.

This proposal includes the review of the standards for both fine particles also known as PM_{2.5} and coarse particles also known as PM₁₀. The suite of standards covered by this proposal are the annual primary standard for PM_{2.5} currently set at the level of 12 micrograms per cubic meter, the 24-hour primary standard for PM_{2.5} currently set at the level 35 micrograms per cubic meter.

The 24-hour primary standard for PM₁₀ currently set at a level of 150 micrograms per cubic meter. EPA's current secondary standards for particle pollution are identical to the primary standards of PM_{2.5} and PM₁₀, except for the annual PM_{2.5} standard, which has a level of 15 micrograms per cubic meter.

Before we begin, I'd like to go through a few housekeeping items and ground rules that will help make today's hearing run smoothly. This is our first virtual hearing of this size, so please bear with us as we work through any technical difficulties.

Our goal is to make this as accessible to as many members of the public as we can, which is why we are not relying on a web-based system. First, I want to make everyone listening aware that there are two operator-assisted phone lines, one for speakers who registered in advance and one for those who registered to listen.

This will help the operator open the phone lines for the registered speakers while keeping background noise to a minimum by muting other lines. This is

how today's hearing will work. When I call on you to speak the operator will unmute your line. Please state your name and spell it to the transcript.

The teleconference will be transcribed and included in the record of comments on this rulemaking action. Each speaker will have five minutes to give comments. The timekeeper for this session is Dr. Scott Jenkins. And he will let you know when you have one minute remaining and also when you have reached your time limit.

To be fair to everyone, we're going to strictly enforce the five-minute limit. We're here to listen to you today. However, our panel may ask you questions to clarify your comment. When you're finished speaking, please remain on the line until I am able to confirm that there are no further clarifying questions from our panel.

Once we are done, the operator will remute your line. I will then call for the next speaker and so on. I encourage each of you to also submit a written copy of your testimony. Comments must be received on or before June 29th, 2020.

If time allows, we will also ask if any of those on the listener line would like to make a statement. Or even if you did not register in advance, we will try to accommodate last minute speakers, again, if time allows.

The operator will provide instructions for this process after we finish hearing from all registered speakers. If speakers have additional comments you would like to make or if you are listening and do not get an opportunity to speak, you may submit them in writing.

Again, comments must be received on or before June 29, 2020. I assure you that EPA gets equal consideration to both written and oral comments.

Instructions for submitting materials for the docket are available in the April 30 Federal Register notice.

Please note that there is a temporary suspension of mail delivery to EPA and no hand deliveries are currently accepted. For this reason, we encourage the public to submit comments via [regulations.gov](https://www.regulations.gov) or e-mail.

We may close the session 15 minutes after the last pre-registered speaker has testified if there are no additional speakers. We may take short breaks throughout the day as needed. Thank you, again, for your time today to share your comments on EPA's proposal. Let's get started.

Our first speakers this morning will be Ted Steichen, and Chad Whiteman.

Operator, could you please unmute the line for Mr. Ted Steichen.

Ted Steichen: I'm Ted Steichen and that's S-T-E-I-C-H-E-N. May I begin?

Kelley Raymond: Thank you, Ted. You may go ahead and begin. You have five minutes.

Ted Steichen: Thank you for the opportunity to provide public comment today. My name is Ted Steichen, a senior policy adviser at the American Petroleum Institute. API represents all segments of America's oil and natural gas industry. Its more than 600 members produce, process, and distribute most of nation's energy. The industry supports 10.9 million U.S. jobs and is backed by a growing grassroots movement of millions of Americans.

API was formed in 1919 as a standard-setting organization. In its first 100 years, API has developed more than 70 standards to enhance operational and safety, efficiency and sustainability. API supports the Environmental Protection Agency's proposed rule on the Particulate Matter National Ambient Air Quality Standards, which recommends retaining all six of the current PM standards.

API participated throughout the agency's public process of developing science and policy documents out of the phases for this proposed rule. Many industry groups across America, including ours agree that EPA's proposed rule is a smart balance that recognizes how continued implementation of the existing PM NAAQS will continue to reduce emissions and protect public health with an adequate margin of safety while meeting America's energy needs.

The U.S. has made significant progress in this area, as the U.S. has reduced PM2.5 annual concentrations by 39 percent since 2000. This proposal is an important step towards its continuing this progress.

Since 2000, the U.S. has reduced emissions that can contribute to PM, including reducing sulfur dioxide 84 percent while nitrogen oxide air releases are down 54 percent. Further emission reductions can be expected with continued implementation of existing regulations.

API has long argued that the existing PM NAAQS are working and will continue to work as the standards are fully implemented. Proponents of more stringent standards often support studies claiming to show health effects below the current NAAQS. But these studies failed to adequately quantify errors and uncertainties. Gradient will testify this morning in more detail about how the science supports the administrator's policy judgment regarding this proposed rule.

Estimated economic impacts of previous NAAQS proposals coupled with the lack of compelling new evidence to lower the standards underlying this proposed rule support the administrator's policy judgment as outlined in EPA's proposal to retain the current PM NAAQS.

Taking all the current science record into account, API supports the administrator's policy judgment that the current PM NAAQS are requisite to protect the public health with an adequate margin of safety. API urges EPA to finalize the PM NAAQS as proposed.

Kelley Raymond: Thank you, Ted.

Operator, our next speaker will be Chad Whiteman. Oh, I'm sorry. Do the panels have any clarifying questions for Mr. Ted Steichen?

Female: No.

Kelley Raymond: OK. Operator, our next speaker will be Mr. Chad Whiteman. Could you please unmute his line?

Mr. Whiteman ...

Operator: The line is open.

Kelley Raymond: OK.

Chad Whiteman: Hi.

Kelley Raymond: Could you please say and spell your name for the record?

Chad Whiteman: Of course. Chad Whiteman, C-H-A-D, last name Whiteman, W-H-I-T-E-M-A-N.

Kelley Raymond: Thank you. You have five minutes to speak. You may begin.

Chad Whiteman: Thanks. Thank you for the opportunity to speak today regarding the administrator's proposed decision for the review of the primary and secondary PM NAAQS. I'm Chad Whiteman and speaking on behalf of the U.S. Chamber of Commerce.

The Chamber is supportive of air quality standards that are necessary to protect public health and public welfare. And our members take the appropriate measures that are required of them to attain, remain in attainment of standards.

We support the administration ...

Kelley Raymond: Mr. Whiteman, I think we might have lost you.

Operator: Yes, there is – his line has problems.

Chad Whiteman: OK. Can you hear me now?

Kelley Raymond: Yes.

Female: Yes.

Kelley Raymond: We heard up until when you said this administration.

Chad Whiteman: OK. So we're supportive of the administration's decision to maintain the current ...

Kelley Raymond: Chad, I do apologize, but we're unable to hear your testimony. And I want to make sure that we're able to hear you.

Operator, is there anything we can do on our end?

Operator: It looks like it's on his side. I'm sorry.

Kelley Raymond: OK.

Chad Whiteman: Let me see if this is a better place here. Is that better?

Kelley Raymond: Sure. Let's try.

Chad Whiteman: OK. Sorry, guys. Across decades of planning and investment, businesses have worked with EPA and our state partners to lower ambient concentrations of PM and other criteria pollutants.

These emission reductions have occurred while the U.S. economy, population and energy use has steadily grown. Undoubtedly, a testament to successful collaboration between EPA, states, and industry (inaudible) such as highway vehicles and power sector (inaudible) PM2.5 precursors under certain atmospheric conditions were reduced by 89 percent and 59 ...

Kelley Raymond: Mr. Whiteman, I do hate to do this but I unfortunately can't hear you clearly and I'm afraid that the transcriber will be unable to hear. If possible, I think it might be best if we go to the next speaker and we will come back and see if it might be possible to have a better connection with you.

Chad Whiteman: OK. Thanks. Sorry.

Kelley Raymond: OK. No apology needed.

Operator, could we please turn next to Julie Goodman?

Operator: One moment, please.

Kelley Raymond: Julie, are you present?

Julie Goodman: I'm here.

Kelley Raymond: Thank you. If you would please state your name and spell it for the transcriber?

Julie Goodman: Julie Goodman, J-U-L-I-E G-O-O-D-M-A-N.

Kelley Raymond: Thank you. You have five minutes.

Julie Goodman: Thank you very much for the opportunity to speak today regarding the review of the National Ambient Air Quality Standards for Particulate Matter or the proposed action. I am an epidemiologist and board-certified toxicologist at Gradient, which is a risk sciences consulting firm.

I am speaking on behalf of Gradient, but my time spent preparing these comments and attending this meeting have been funded by the American Petroleum Institute. My colleagues and I at Gradient provided comments on the particulate matter integrated science assessment and policy assessment. And I participated in Clean Air Scientific Advisory Committee meetings prior to the proposed action being issued.

Gradient provided suggestions on improving the systematic review protocol, the evaluation of study quality and relevance and the causality framework in the ISA. In our comments on the PA, we concluded that currently available scientific evidence and risk-based information do not provide sufficient evidence to call into question the adequacy of the public health protection afforded by the current primary annual and 24-hour PM_{2.5} standards or indicate the alternative standard will increase public health or welfare protection.

In reviewing the proposed action, the administrator's proposal to retain the current standards is consistent with our evaluation and the available scientific evidence. The administrative conclusion that the annual PM_{2.5} primary standards should be retained is supported by all but one CASAC member.

The administrator's decision that the 24-hour primary standard should be retained is supported by all CASAC members. The administrator indicated that there are important uncertainties regarding epidemiology evidence of

health effects that are associated with PM_{2.5} concentrations below the current standards.

He also pointed out that experimental studies do not provide evidence for biological plausibility at PM_{2.5} concentration typical of areas meeting the current standards and that accountability studies do not provide clear support for the potential for increase public health protection from further reductions in ambient PM_{2.5} concentration beyond those achieved under the current primary PM_{2.5} standards. He does propose to retain the primary PM standards.

Now in contrast, the ISA and PA suggested that epidemiology studies showed elevated risks of health outcomes at PM_{2.5} concentrations below the current standards. However, among other issues, and as indicated by several CASAC members and the administrator and as discussed in the Gradient comments, the PM_{2.5} concentrations in these studies are impacted by potential exposure measurement error and the lack of near-road monitors.

Exposure measurement error can be large as a result of irrelevant exposure measurement windows, unaccounted residential mobility or temporal variation and poor prediction model performance.

Near-road monitors tend to capture higher PM_{2.5} concentrations than those in surrounding areas, so study reported mean PM_{2.5} concentrations would have been higher had near-road monitor has been in place.

Also U.S. EPA focused on the center of PM_{2.5} distributions, but it cannot be ruled out that the associations observed at the center of an air quality data distribution are driven by the upper portion of the distribution assuming risk increases with exposure.

With the second of PM_{2.5} risk assessment there major uncertainties with model PM_{2.5} concentrations as well as unconventional rounding choices and confounded levels of conservatism in the modeling such that the risk assessment is inadequate to evaluate any differences between proposed standards that only differ by one microgram per meter cubed.

It is also notable that the policy assessment acknowledged that it did not include a robust uncertainty analysis on the risk assessment. The administrator also concluded that PM2.5 secondary standard and the PM10 primary and secondary standards should be maintained.

This conclusion is supported by evaluations in the policy assessment and by all members of CASAC. With regard to PM10 primary standards, although more health effects evidence is available since the last review, it does not support causal or likely causal associations for any endpoint as indicated in the ISA.

As the administrator noted, all these studies that have similar uncertainties as those discussed in the prior review.

Scott Jenkins: You have one minute.

Julie Goodman: Thank you. Regarding welfare effects, including visibility impairment, climate effects, and material effects associated with PM2.5 and PM10, the PA states that "as a whole the current information which is not appreciably different from that available in the last review does not call into question the adequacy of protection provided by the current standards for these effects."

Overall, the administrative conclusion that the PM standard should be maintained is supported by CASAC with only one exception and more importantly by a strong body of scientific evidence. Thank you very much.

Kelley Raymond: Thank you, Julie. I would like to pause in case the panels have any clarifying questions.

Male: No questions.

Kelley Raymond: OK. Thank you.

Operator, would we be able to go back to Chad Whiteman now?

Operator: One moment, please.

Kelley Raymond: Mr. Whiteman, are you present?

Chad Whiteman: Can you hear me?

Kelley Raymond: Yes. I do apologize for before.

Chad Whiteman: OK.

Kelley Raymond: If we could please try again.

Chad Whiteman: OK. Thank you.

Kelley Raymond: Please state your name and spell and then you'll have to begin again for the transcriber.

Chad Whiteman: Sure. My name is Chad Whiteman. That's spelled C-H-A-D W-H-I-T-E-M-A-N.

Kelley Raymond: OK. You have five minutes.

Chad Whiteman: OK. Thank you for the opportunity to speak today regarding the administrator's proposed position for the review of the primary and secondary PM NAAQS. I'm Chad Whiteman and speaking on behalf of the U.S. Chamber of Commerce.

The Chamber is supportive of air quality standards that are protective – that are necessary to protect public health and public welfare. And our members take the appropriate measures that are required of them or remain in attainment of these standards.

We support the administrator's decision to maintain the current primary and secondary PM standards. This decision is consistent with CASAC's consensus advice on maintaining the current primary 24-hour PM_{2.5} standard, the primary PM₁₀ standard and the secondary standards and the CASAC's strong agreement on maintaining the current primary annual PM_{2.5} standard.

Across decades of planning and investment, businesses have worked with EPA and their state partners to lower ambient concentrations of PM and other criteria pollutants. These emission reductions have occurred while the U.S.

economy, population and energy use has steadily grown, undoubtedly, a testament to successful collaboration between EPA, states, and industry to put out new emissions control technologies and practices in a sound cost-effective manner. EPA's 2019 air trends, the national emissions inventory reports, detailed this progress.

The report shows that annual PM_{2.5} concentrations have declined by 39 percent since 2000 driven by major emissions reductions from sources such as highway vehicles and power sector. Total SO₂ and NO_X emissions which may contribute to the secondary formation of PM_{2.5} precursors under certain atmospheric conditions were reduced by 89 percent and 57 percent respectively during this time period.

The steady progress has allowed the quality in the U.S. – in the United States to become the envy of the industrialized world. The Clean Air Act requires the administrative's complete review of the NAAQS every five years. The Act also requires CASAC to provide advice to the administrator on whether to retain or revise the NAAQS.

CASAC noted in its December 2019 letter to EPA that EPA's integrated science assessment "does not provide a sufficiently comprehensive systematic assessment of the available science relevant to understanding the health impacts exposure to PM due to largely to a lack of comprehensive systematic review of relevant scientific literature, inadequate evidence and rationale for altered causal determinations."

(inaudible) that "given these limitations and underlying science basis for policy recommendations that the draft policy assessment does not establish that new scientific evidence and data reasonably call into question the public health protection afforded by the current 2012 PM_{2.5} annual standard."

In particular, CASAC raised concerns with the more recent epidemiology studies EPA cited in its policy assessment stating that "studies should be refined to more fully account for effects of confounding measurement and estimation errors, model uncertainty and heterogeneity and the evidence from

additional negative studies, intervention studies, accountability studies and time (series) studies should also be taken into account."

In addition to the uncertainties detailed by CASAC is the practicality that the current tools to address NAAQS are being pushed to the limits as new more stringent air standards are move closer to the background concentrations of criteria pollutants.

The role of background PM in the NAAQS is of a growing importance in regions throughout the country as a margin between background PM concentrations and NAAQS's shrinking leaving little room for reasonable economic growth and incrementally increase in the cost of compliance. In addition, PM contributions from exceptional events such as prescribed fires and wildfires become more significant the lower the PM standards. More ...

Scott Jenkins: One minute.

Chad Whiteman: ... important to recognize – thank you. It is important to recognize the potential of direct and indirect economic impacts that can accompany more stringent NAAQS requirements.

NAAQS compliance has a potential to adversely affect jobs, business, investment and permitting in a broad range of important economic sectors and activities, even having impacts in areas of the country that are in attainment with the standards.

The uncertainties identified by CASAC, the potential dampening of investment in economic growth across a broad swap of the economy and continued implementation of the 2012 PM NAAQS – the administration's decision to maintain the current NAAQS. Thank you for this opportunity to provide our comments.

Kelley Raymond: All right. Thank you, Mr. Whiteman. I'd like to pause in case the panels have any clarifying questions.

Female: No, thank you.

Kelley Raymond: OK. With that, operator, our next two speakers will be Paul Billings and Representative Kathy Castor, if you would please unmute the line of Paul Billings.

Operator: Its line is open.

Kelley Raymond: Paul, are you present?

Paul Billings: I'm here.

Kelley Raymond: Thank you. If you would please state your name and spell it for the transcriber.

Paul Billings: Sure. It's Paul Billings – P-A-U-L B-I-L-L-I-N-G-S.

Kelley Raymond: Thank you. You have five minutes.

Paul Billings: Good morning. I'm Paul Billings, National Senior Vice President of Public Policy for the American Lung Association. The American Lung Association was founded in the early 20th century to combat tuberculosis. And today, our mission is to save lives by improving lung health and preventing lung disease. There are nearly 37 million Americans living with lung diseases, including asthma, lung cancer, and COPD.

In addition, according to the Centers for Disease Control, more than 1.5 million Americans have been diagnosed with COVID-19. Sadly, 90,000 people have died. In 2020, everyone is aware of the importance of lung health and the dangers of respiratory illness.

Particulate matter air pollution is a serious threat to lung health and people with lung disease are at higher risk of harm of particle pollution. Particle pollution is linked to thousands of deaths each year and the Clean Air Act promises to protect the public from the harm of the air pollution.

I want to thank EPA for holding this virtual public hearing under extraordinary circumstances of COVID-19. We also appreciate EPA adding additional days to accommodate public participation. We note that the President declared a national emergency in March 13th in response to the

COVID-19 pandemic. Many lung health professionals, including physicians and researchers are focused on the response of the pandemic.

A rule as important as this merits full public participation. As such, we respectfully request an extension of the comment period of at least 30 additional days after the end of the national emergency or an additional 30 days to July 28th, 2020, whichever is later. Furthermore, once we – the emergency is lifted, we expect EPA to resume in-person public hearings.

The American Lung Association will submit detailed written comments. Today, I want to cover two points. First, requisite to protect public health with an adequate margin of safety, the Clean Air Act is clear that health standards must be requisite to protect public health.

To protect the public health, the American Lung Association recommends the primary standards be strengthened and calls for an annual PM2.5 standard to be set at 8 micrograms per cubic meter and a 24-hour standard to be set at 25 micrograms per cubic meter.

Recent U.S. and Canadian studies find evidence of premature death with levels at or in some cases below 8 micrograms per cubic meter. Two large studies of U.S. adults on Medicare have shown that premature death occurs after daily particulate matter exposure within the 24-hour standard of 35 micrograms per cubic meter and after annual exposure within the 12 micrograms per cubic meter standard.

A study of lifeguards in Galveston, Texas showed reduced lung volumes on days when particle levels were high. According to the EPA policy assessment, EPA's expert analyst examination of just 30 metro areas, they found that meeting an annual fine particle standard of 9 micrograms per cubic meter would prevent up to 12,500 premature deaths each year, 12,500 premature deaths each year compared to the current standard.

In sum, the current annual and 24-hour standard do not meet the laws, requirements to protect public health with an adequate margin of safety. To repeat, based on the statutory requirements and the scientific literature, the American Lung Association calls for strengthening the standards.

The annual PM_{2.5} standards would be set at 8 micrograms per cubic meter at 24-hour standard to be set at 25 micrograms per cubic meter.

Second point, process and expert input. The process that EPA used to arrive at this proposal to keep the current standards was deeply flawed. In previous reviews, the agency convened a panel of expert scientists to help review the recent research and recommend appropriate air pollution limits. Such a review panel added breadth, depth, and diversity of scientific expertise.

For this review, EPA administrator Andrew Wheeler disbanded that expert panel and restricted the review of scientific studies. We are deeply concerned that EPA ...

Scott Jenkins: One minute.

Paul Billings: ... that EPA departed from the past process that included an integrated scientific assessment, a risk of exposure assessment, and a policy assessment and completed this review without a standalone risk and exposure assessment.

Further, the policy assessment was drafted prior to the completion of the integrated science assessment. This proposal therefore falls far short of the rigorous scientific review the Clean Air Act requires.

In conclusion, the public wants and deserves air that is safe and healthy to breath. That is the promise of the Clean Air Act. The scientific evidence supports more protective annual and 24-hour PM_{2.5} standards. Thank you very much.

Kelley Raymond: Thank you. I'd like to pause in case there are any clarifying questions from our panelist.

Scott Jenkins: Yes. This is Scott Jenkins. You mentioned several studies in your testimony. I would just like to encourage you to include the full citations for those studies in your written comments. Thank you.

Paul Billings: We certainly will.

Kelley Raymond: All right. Thank you. Operator, if you would please unmute the line of Representative Kathy Castor.

Operator: One moment please. Ms. Castor, your line is open.

Kathy Castor: Thank you very much. I'm Congresswoman Kathy Castor. I represent the State of Florida in the U.S. House of Representatives. I also chair the House Select Committee on the Climate Crisis, which is tasked with finding common – yes?

Kelley Raymond: Representative Castor, if I?

Kathy Castor: Yes?

Kelley Raymond: If I might ask, would you mind spelling your name first for the transcriber, please?

Kathy Castor: Yes. Kathy with a K, K-A-T-H-Y, Castor is C-A-S-T-O-R.

Kelley Raymond: My apologies. Thank you. You have five minutes.

Kathy Castor: Thanks so much. I represent the State of Florida in the U.S. House of Representatives. And also chair the House Select Committee on the Climate Crisis, which is tasked with finding common sense solutions to one of the most challenging and costly problems we face as a society.

Today, I'm testifying on behalf of more than 700,000 Floridians who live in my Tampa Bay area district, and on behalf of millions of American families whose health depends on clean air. Air pollution can kill you.

And it can make you very sick. The overwhelming weight of the science has demonstrated the air pollution not only damages the heart and lung, but also increases the risk of premature birth, low birth weight, diabetes, and cancer.

Now, on top of all that, Americans are battling an unprecedented pandemic. The coronavirus has upended our lives and air pollution is making it worst, particularly for our neighbors who are at a higher risk. For example, people with underlying health conditions and many low-income communities and

communities of color that have been routinely exposed to higher levels of air pollution are more likely to be harmed. The COVID crisis is disproportionately affecting these same communities.

Last month, researchers from Harvard University briefed my committee on a very important finding. By analyzing data from thousands of counties across America, they found that higher levels of particulate air pollution or particulate matter were associated with higher COVID death rates.

It's just another example of what we've known for decades, that polluted air is putting American families at risk. That's why I'm calling on the EPA to do more to protect our families by fully enforcing the Clean Air Act, setting stronger safeguards against air pollution, and giving every American a fighting chance.

To that end, I call on the EPA to set stronger national ambient air quality standards for particulate matter pollution. I urge you to follow the science. Scientists say that to protect all Americans, EPA must strengthen the annual particulate matter standard to 8 micrograms per cubic meter and strengthen the 24-hour standard to 25 micrograms per cubic meter.

In fact, that is the recommendation of the American Lung Association. We know the harmful effects that particulate air pollution can have on vulnerable communities. It can increase the risk of heart attacks, trigger asthma episodes, and even lead to death.

The EPA's mission is to protect the human health and the environment. And we have an opportunity and a moral obligation to leave a better planet for our children, and that starts by making sure that the air that we breathe is clean and free of pollution and doing all we can to prevent lung cancer, heart problems, and asthma attacks.

Through American ingenuity, we can boost clean energy and energy efficiency. We can invest in clean hybrid and electric vehicles and we can take other immediate steps to clear the air pollution.

Unfortunately, the EPA has taken the opposite approach over the past four years, ignoring science, and turning it back on public health experts. The Trump Administration and EPA have rolled back hundreds of important health and environmental protection.

And that has put families at risk and left them on the hook for enormous cost. The science is clear. We need strong safeguards to protect public health. I strongly oppose the administration's push to keep the particulate matter standards at the current level.

Instead ...

Scott Jenkins: One minute.

Kathy Castor: ... I call on EPA to strengthen these standards and uphold its mission to protect Americans from pollution. I urge you to make the right decision for the sake of families and children across America. Thank you very much.

Kelley Raymond: Thank you, Representative Castor. I want to pause in case the panelists have any clarifying questions.

Female: No, thank you.

Kelley Raymond: OK.

Kathy Castor: Thank you very much.

Kelley Raymond: Thank you. The next two speakers will be John Bachmann and Giffe Johnson.

Moderator, if you would please open the line for Mr. John Bachmann.

Operator: And John, your line is open.

John Bachmann: Thank you. Yes?

Kelley Raymond: If you would please say and spell your name for the transcriber.

John Bachmann: Yes. I will. Yes. Yes. John Bachmann, J-O-H-N B-A-C-H-M-A-N-N.

Kelley Raymond: Thank you. You have five minutes.

John Bachmann: Thank you. I represent the Environmental Protection Network, a volunteer organization of former EPA employees and others concerned about public health and the environment.

Working in EPA's air office on science policy for 33 years. I had a lead role in all reviews of the PM standards through 2006. Accordingly, our comments focus on how this proposal breaks with all past PM proposals.

Paramount is a risible rationale for not revising the standards, which ignores the conclusion of EPA's own experts. Its dismissal of the evidence stands in stark contrast to the conclusions reached by five prior EPA administrators who were presented with epidemiological evidence that adverse effects were occurring at levels below the then-current PM standards.

Based on EPA's assessment of the evidence, the rationale presented in this proposal is wholly consistent with the mandate of the Clean Air Act to set standards requisite to protect public health with an adequate margin of safety.

Process, beginning two years ago, this month, EPA administrators have taken steps that broke the NAAQS process and crippled the CASAC. We believe the EPA authors of the science and policy assessments did a commendable job under these constraints, addressing CASAC comments and explaining why they rejected suggestions by some members on causality and the current standards.

Breaking with past proposals, given the continuing explosion of research on fine particles since the 1997 standards, recent PM proposals announced a provisional assessment of studies published after the cutoff date for the science criteria.

Assessment, reflecting the Clean Air Act requirement that such assessment accurately reflect the latest scientific knowledge. Though many relevant studies have been published the January 2018 cutoff date, EPA has so far ignored this step.

We footnote two pivotal examples. This proposal is the first not to present EPA's science policy experts' position on the current standard. These experts conclude, "The available scientific evidence, air quality analysis, and the risk assessment can reasonably be viewed as calling into question the adequacy of the public health protection afforded by the combination of the current annual and 24-hour primary PM_{2.5} standards. They're going to recommend consideration of stronger annual standards with levels as low as 8 to 10 micrograms per cubic meter." The rationale in the proposal totally ignores these conclusions. In the 2006 review, the court remanded the annual standard in part because the administrator did not adequately explain why the decision departed from EPA staff and CASAC recommendations.

The administrator's reluctance to give weight to recent epidemiology studies relies on conclusions on causality by a former industry consultant and two state toxicologists on CASAC, no epidemiologist.

EPA staff ultimately found their views on causality inconsistent with the weight of evidence in the science and policy assessments as well as the opinion of some on CASAC. As a number of former CASAC members have commented, they are also inconsistent with earlier CASAC reviews and recommendations on PM standards.

The administrator's demand for proof in controlled human studies of effects at levels below the current standards betrays both a deep misunderstanding of the purpose and limitations of these studies as well as the precautionary nature of Section 109.

He also support suggestion by some members of CASAC that newer scientific information since 2009 adds nothing new flies in the face of the basis of all past PM NAAQS reviews as summarized in the 2012 proposal,

The general approach used to translate scientific information into standards used in previous reviews focused on consideration of alternative standard levels that were somewhat below the long-term mean PM_{2.5} concentrations reported in epidemiological studies.

Scott Jenkins: One minute.

John Bachman: Thank you. This evidence-based approach was used by current EPA staff who cited a number of credible studies that suggested effects well below the current standards to evaluate alternative annual standards.

In addition to listening to its own EPA experts, the administrator should pay attention to the more balanced expert public comments he would have received directly if EPA had maintained or reinstated the PM panel as was recommended by CASAC itself in a letter to the administrator. You will be hearing from them soon.

The current consensus of EPA's science policy experts, some CASAC members and the 21-member independent PM panel – review panel is that the standards should be strengthened. The evidence and risk assessments strongly suggest an annual standard should be selected from a range of 8 to 10 micrograms per cubic meter and consideration be given to a stronger daily standard. Thank you.

Scott Jenkins: Your time is up.

Kelley Raymond: Thank you. I will pause there briefly in case the panelists have any questions for our speaker. OK.

Jason Sacks: No questions.

Kelley Raymond: Thank you. Operator, would you please open the line for Giffe Johnson?

Operator: And the line is open.

Kelley Raymond: Mr. Johnson, are you there?

Giffe Johnson: Yes, hi. Dr. Giffe Johnson, G-I-F-F-E J-O-H-N-S-O-N.

Kelley Raymond: Thank you. You have five minutes.

Giffe Johnson: Thank you. I'm speaking on behalf of the National Council for Air and Stream Improvement or NCASI. Before going in NCASI, I'd served as

faculty at the University of South Florida and have over a decade of conducting research and toxicology, epidemiology and risk assessment.

My comments today focus on proposed action to retain the current particulate matter standards based on the conclusion that's substantial uncertainties are associated with current evidence base that evaluates potential health impacts below the current NAAQS levels.

The principal areas of uncertainty that U.S. EPA identified in evidence base that precluded reliance on these studies for altering the standard include various methods used to estimate PM concentrations that have not been systematically evaluated, and number two, limited information on the potential for confounding micro pollutants also broadly contributes to the uncertainty of the evidence base. And three, uncertainty related to the biological possibility of serious effects from PM exposures resulting from the small number of controlled human exposure and animal toxicology studies that have been conducted.

NCASI agrees that these uncertainties exist in the current evidence base and substantially limit the interpretation of these studies regarding the relationship between PM exposures at policy relevant concentration and adverse health effects.

In addition, NCASI, in collaboration with subject matter experts, have developed a proposed systematic review protocol to evaluate this evidence base in order to more specifically characterize the uncertainties and study quality issues that exist within currently available studies. This proposed systematic review protocol based on the Office of Health Assessment and Translation framework has subsequently been applied to six articles highlighted in the ISA and the Policy Assessment as important in determining cause and effect relationships between policy relevant concentrations of PM_{2.5} and adverse health effects.

The protocol and the findings of the six evaluated articles will be submitted to the federal docket as part of our written comments. In our risk of bias

analysis, studies are ranked as tier one, two or three through an in-depth analysis of study features and methods.

Tier one studies are those that directly contribute to the evidence base and support an exposure-disease relationship. Tier two studies are not sufficient on their own to contribute to the evidence base, but may support a tier one study and evidence integration. Tier three studies are considered to have a degree of risk of bias that disqualify them from contributing to the evidence base.

In our analysis of six studies featured in the ISA and the Policy Assessment, one study ranked tier two and five studies ranked tier three. The results of this analysis indicate that the majority of studies reviewed are not of sufficient quality to contribute to the evidence base and that none are of sufficient quality to directly contribute to the evidence base as primary sources of evidence.

While a full evidence integration and complete systematic review were outside of its scope and resources of the study, the articles selected for review were highlighted in the ISA and PA as important pieces of evidence indicating that it is likely – unlikely that higher quality studies exist in the current body of literature.

And additional, albeit unanticipated benefit of using a rigorous systematic review process to evaluate these studies was the discovery of errata in some studies that further reduced their utility in contributing to the evidence base under systematic review. On the basis of applying a systematic review framework to the sentinel studies featured in the ISA and PA, NCASI agrees with the scientific defensibility of the U.S. EPA decision to not lower the current mass standards for particulate matter.

The submitted analysis detail sources of uncertainty, bias and errata, some of which are identified by U.S. EPA and some additional sources that were not. The conclusion of our analysis is that no body of evidence as sufficient quality is available to demonstrate a clear public health risk from particulate matter exposure at current levels of the NAAQS.

Scott Jenkins: One minute.

Giffe Johnson: Thank you. While NCASI agrees that the proposed action to not lower the current particulate matter standard is scientifically defensible, we also reiterate the need to incorporate further elements of systematic review into the NAAQS five-year review process and our attached analysis, we discuss the importance of defining and narrowing scope of research questions, developing detailed risk of bias criteria and a specific a priori evidence integration plan to ensure that a rigorous evaluation of the body of evidence occurs and that robust scientific conclusions are reached in the subsequent NAAQS reviews.

Thank you.

Kelley Raymond: Thank you. I'll pause momentarily in case the panelists have any clarifying questions?

Jason Sacks: I would just urge the panelists to provide the information on the examples they detailed within the submission to the docket.

Giffe Johnson: Yes, it will be provided in our written comments.

Kelley Raymond: OK, thank you. Our next two speakers will be Andrea McGimsey and Stewart Holm. Operator, if you would please unmute the line for Andrea McGimsey.

Operator: Thank you. And Andrea, your line is open.

Kelley Raymond: Andrea, please spell your name for the record.

Andrea McGimsey: Thank you, good morning. Sure it's Andrea McGimsey. That's A-N-D-R-E-A M-C, capital G-I-M as in Mary, S as in Sam, E-Y.

Kelley Raymond: Thank you very much. You have five minutes.

Andrea McGimsey: Good morning. I'm a native and resident of Virginia living in Ashburn and I'm a former member of the Loudoun County Board of Supervisors and during that time, I served on the Metropolitan Washington Air Quality

Committee. I'm currently the Senior Director for Global Warming Solutions at Environment America.

I'm here to ask that the Environmental Protection Agency strengthen the national ambient air quality standards for particulate matter. I support the recommendation of the American Lung Association to strengthen the annual PM2.5 standard to 8 micrograms per cubic meter and the 24-hour standard to 25 micrograms per cubic meter. In a recent report released by Environment Virginia called Trouble in the Air, we reviewed EPA's air pollution records from across the United States. Our reports on the particulate pollution is widespread exposing millions of Americans to potential health damage.

Thirty-four million people lived in areas with more than 100 days of elevated fine particulate pollution in 2018. This is simply unacceptable. And closer to my home, our report found that the D.C. metropolitan region experienced 60 days with elevated PM2.5 pollution in 2018. To close the national capital region's Clean Air Partners, although regional air quality is improving, pollution still threatens the health of 7.5 million people in our region and creates harmful effects on the environment and our ecosystems.

Poor air quality days impact our friends, neighbors, children, family, co-workers and our environment. In Loudoun County, we are home to many young families as well as a large number of senior citizens. Parents buy homes in our community, thanks to the wonderful school system and the opportunity to enjoy the Blue Ridge Mountains and D.C.'s wine country, grandparents move here to live near their families.

What these citizens might not think about is just how polluted our air is. Just to the northwest, our counties are the – county residents across Potomac River is the Dickerson Power Plant, it burns coal, directly polluting our air. And right in Loudoun, just at the west of our homes in Ashburn, the gas powered Shumwell Power Plant adds that pollution. Then there are all the cars and all the homes powered by gas and oil, the leaf blowers and lawn mowers and more and we have many airplanes flying overhead to and from Dallas International Airport.

Air pollution is linked to many health problems including respiratory illness, heart attacks, stroke, cancer and mental health problems. Research continues to reveal new health impacts. For example, maternal exposure to air pollution such as fine particulates and ozone is associated with a higher risk of low birth weight, pre-term birth and stillbirth. For older adults, long-term exposure to particulate pollution has been associated with an increased risk of Alzheimer's disease and other forms of dementia.

Children are particularly vulnerable to air pollution because their little bodies are developing and often because they spend more time outside. Children are also exposed to higher levels of air pollution because they walk or are pushed in strollers closer to the height of vehicle exhaust pipes. Particulate pollution can harm lung development in children and impair lung function in the long run. Particulate pollution is associated with increased risk of hospitalization for heart disease.

Fine particulate matter from sources such as vehicles and power plants are responsible for an estimated 107,000 premature deaths in the U.S. in 2011.

Scott Jenkins: One minute.

Andrea McGimsey: It's also crazy to me that when I've heard on the radio about the different color air alerts telling residents we shouldn't go outside and breathe, when it's code orange or red, don't we care about the vulnerable among us or the accumulative impacts on all of our own health? And when it's code purple, are we really OK with no one being able to go outside and breathe?

We must continue to cut pollution faster with the technology we have, from energy efficient appliances to electric vehicles, to solar and wind power production. All of that can be incentivized by you all setting a goal to make stronger standards for particulate matter. My message to you is simple, all Americans deserve to breathe clean air. Please strengthen these standards. Thank you.

Kelley Raymond: Thank you very much. I would like to pause in case our panelists have any clarifying questions?

Jason Sacks: No question.

Kelley Raymond: All right, you did mention one report, I think related to the D.C. region. If you wouldn't mind, please including that in the docket?

Andrea McGimsey: Yes.

Kelley Raymond: Thank you. Operator, if you would please unmute the line for Stewart Holm?

Operator: One moment, please. And the line is open.

Kelley Raymond: Stewart, if you wouldn't mind stating and spelling your name for the transcriber.

Stewart Holm: Stewart Holm, S-T-E-W-A-R-T H-O-L-M.

Kelley Raymond: Thank you very much. You have five minutes.

Stewart Holm: I appreciate the opportunity to provide comments to the EPA on the review for PM. We support the decision to retain the current standards without revision. For the primary PM_{2.5} standards the administrator proposes to conclude that there are important uncertainties in the evidence regarding the adverse health effects below the current standards and the potential public health impacts of reducing ambient PM concentrations below those standards. We agree with this conclusion.

Understanding the relationship between chronic exposure to PM and mortality is a fundamental issue of establishing an appropriate max for PM. EPA states that a causal relationship is one where the pollutant has been shown to result in health and welfare effects at relevant exposures based on studies encompassing multiple lines of evidence and chance confounding and other biases can be ruled out with reasonable confidence. This is the correct framing of the causality question.

What we find that the EPA process for evaluating and interpreting studies is insufficient for establishing causality. Substantial uncertainty remains in the evidence for associations between PM exposures and mortality. These associations can reasonably be explained considering uncontrolled

confounding and other potential sources of error and bias. There are many studies that have reported a statistical association between PM and mortality.

Some of the key studies are based on cross-sectional comparisons of people in different cities. These cross-sectional studies can be vulnerable to confounding due to differences across the city populations that may be correlated with PM exposure. Socioeconomic or behavioral factors could explain some or all of the correlations with health effects. Further cross-sectional studies often do not address the influence of long-term time trends in both ambient PM levels and mortality.

Based on the national trend, PM levels in cities are decreasing while life expectancy is increasing; if the relationship between PM exposure and mortality is not causal but rather PM concentrations and life expectancy coincidentally follow similar trends, then this can produce a spurious relationship between exposure and mortality. A statistical correlation does not mean causation at these lower exposure levels.

Several studies have assessed the potential for unmeasured confounding by comparing the mortality risk ratios for temporal and spatiotemporal exposures to PM. These include studies by (James, Greven, Pun and Um). The mortality risk ratios for temporal and spatiotemporal PM exposure and mortality differ, sometimes substantially.

The results have been reported to suggest the presence of unmeasured confounding. To briefly discuss their importance, I'd like to summarize (Pun). (Pun) examined the relationship between monthly one-year average PM exposure and monthly mortality for a cohort of the Medicare database.

Importantly, (Pun) showed that the long term relationship between PM and mortality is confounded by some other unmeasured factor. This difference in the long term relationship between PM exposure and mortality raised the potential for confounding the cross-sectional studies mentioned earlier. These findings are supported by the other studies I mentioned before.

Another important component of the (Pun) study was multivariable regression analysis to assess the association between mortality and PM with and without adjusting for potential confounding by behavioral covariates.

In summary for both all cause and cause-specific outcomes, risk ratios in non-adjusted models are positive and statistically significant for temporal PM component. On the other hand, risk ratios for spatiotemporal PM for both all cause and cause-specific mortality are often lower and statistically insignificant.

Additionally, comparing risk ratios for non-adjusted versus (BRFSS-adjusted) outcomes and temporal PM shows that the adjusted risk estimates are much lower. In contrast to the many PM studies, the (Pun) paper provides an approach that decomposes information from an (FP) study into distinct temporal and spatiotemporal components which might be affected by different degrees of confounding bias.

Most studies of long term air pollution exposure are focused on the cross-sectional comparisons. In (Pun), comparisons are made over time using each city as its own control. The result is a large difference in the estimated risk ratios for PM_{2.5} and all cause mortality as well as cause-specific mortality. The study illustrates the associated uncertainties and limitations that should be discussed further and these methods should be incorporated into future studies to better understand the relationship between PM and mortality.

Again, we support the proposed action to retain the current standard and I thank you for the opportunity to comment.

Kelley Raymond: Thank you. I'll pause in case the panelists have any clarifying questions for the speaker.

Male: We don't have any questions.

Male: Thank you.

Kelley Raymond: OK.

Operator, our next two speakers will be Laura Bender and Jonathan Levenshus. If you would please unmute the line for Laura Bender.

Operator: One moment, please. And the line is open.

Kelley Raymond: Laura, if you would please state your name and spell it for the transcriber.

Laura Bender: Laura Bender – L-A-U-R-A B-E-N-D-E-R.

Kelley Raymond: OK. Thank you. You have five minutes.

Laura Bender: Thank you. Good morning. My name is Laura Kate Bender and I'm the National Assistant Vice President for Healthy Air at the American Lung Association.

As you've heard, the Lung Association urges EPA to strengthen the National Ambient Air Quality Standards for fine particulate matter. The science shows that the annual standard for PM2.5 should be set at eight micrograms per cubic meter and the 24-hour standard should be set at 25 micrograms per cubic meter in order to protect the Americans' health with a margin of safety.

That margin of safety is critical because it applies to the people that the American Lung Association serves – kids and adults with asthma, people with chronic obstructive pulmonary disease, lung cancer, needless to say that someone in very family is at increased risk of health harm from air pollution.

I think of the list of people at greater risk of harm is long especially when it comes to particle pollution. Coming out of the most recent EPA review of science and fine particulate matter, the populations at greater risk now include infants, children and teens, people with lung disease especially asthma but also COPD, people with cardiovascular disease, people of color, current and former smokers, people with low incomes and people who are obese.

Plus the Lung Association's own review of the evidence also shows that people with lung cancer are at higher risk from particle pollution. A 2016 study found poor survival rates among lung cancer patients in areas with higher concentrations of particle pollution. The Lung Association also notes

that there continues to be strong evidence of increased risk to people with diabetes.

In EPA's review, they revised the previous percentage of the population with a higher risk of harm from PM but the research shows otherwise. And in part because of the increased risk of cardiovascular disease which is with diabetes, they continue to be at increased risk. Researchers also found evidence that long term particle exposure can increase the risk of developing diabetes.

And personally, as someone who is currently pregnant, I'm also concerned about potential increased risk from PM to my pregnancy, to pregnant women general. Multiple studies have found links or potential links between particle pollution exposure and low birth rate, birth defects and even infant death due to respiratory problems. And, of course, the risks don't stop when the baby is born.

It's clear the current particulate matter standard is not adequate to protect human health especially for all these populations of concern. In fact, the Lung Association and many other fellow health and medical organizations call for stronger standards for both the 24-hour and annual PM during the last review when EPA's rules were finalized. Since then, the evidence has only mounted that a stronger standard is needed for annual PM.

It's important to note that according to the evidence, there's no threshold for harm from particulate matter. But in order to fulfill all the requirements of the Clean Air Act, the Lung Association is asking EPA to put the annual PM_{2.5} standard to eight micrograms per cubic meter. This is the more protective end of the range recommended by EPA's former expert PM review panel which continue meet and make informed recommendations even after the agency disbanded it.

The panel stated in its letter an annual standard in the range of 10 to 8 micrograms per cubic meter would protect public health for the general public and for at risk groups. However, even at the lower end of the range, risk is not reduced to zero. The margin of safety increases as the level of the standard is lower within the range.

Recent studies find evidence that health harm and premature death at levels below the current standards down to eight micrograms per cubic meter and in some cases even below eight. These studies list the mortality and the risk for cardiac and respiratory problems. We also call on EPA to set the short term PM standard at 25 micrograms per cubic meter which is, again, the protective end of the range recommended by the expert review panel.

In some communities including parts of Alaska, the Northwest and New England, the annual PM levels are low. Instead, the primary risk from PM exposure comes from short term spikes to emissions from wood stoves and other sources. The short term PM standard needs to be stronger to protect these communities. The former PM expert review panel recommended the range of 30 to 25 micrograms per cubic meter and, again the lower levels within this range will provide an additional margin of safety.

They also found that based on the available scientific evidence, there's not a population threshold for 24-hour exposure within or below the recommended level at which the risks would drop to zero.

Scott Jenkins: One minute.

Laura Bender: Thank you. The scientific evidence is clear. EPA's current limits on fine particle pollution are not adequate to protect health. In order to fulfill its essential mission of protecting human health with a margin of safety, EPA must strengthen these standards. All Americans and especially those we serve at the American Lung Association with lung disease and other at risk populations are counting on it. Thank you.

Kelley Raymond: Thank you.

I would like to pause in case the panelists have any clarifying questions.

Male: No questions. Thank you.

Kelley Raymond: OK. Thank you very much.

Operator, if you would please open the line now for Jonathan Levenshus.

Operator: One moment, please. And the line is open.

Kelley Raymond: Jonathan, if you would please state and spell your name for the transcriber.

Jonathan Levenshus: Hello. My name is Jonathan Levenshus. Jonathan – J-O-N-A-T-H-A-N;
last name is L-E-V as in Victor – E-N-S-H-U-S.

Kelley Raymond: Thank you very much. You have five minutes.

Jonathan Levenshus: Thanks. My name is Jonathan Levenshus. I'm the Director of Federal Campaigns for the Sierra Club's Beyond Coal Campaign. The Sierra Club will be submitting written comments into the docket before the comment deadline.

But this morning, I want to speak in opposition to the EPA's proposal that maintains the outdated standard for particulate matter pollution. The EPA should withdraw this proposal and issue in its place a more protective air quality standard that will limit harmful particulate matter pollution and that will result in tens of thousands of lives being saved every year.

While I appreciate the opportunity to comment on this proposal and the EPA's decision to add additional public hearing dates for the public to testify, I strongly oppose the EPA's decision to proceed with today's hearing during a national health emergency. By issuing this proposal, the EPA is failing to take seriously the impact it will have on millions of Americans affected by harmful air pollution and that are experiencing the respiratory virus pandemic.

It's unconscionable that EPA is not tightening the particulate pollution standard especially as the growing evidence suggests that communities experiencing poor air quality are most at risk to death from COVID-19. Yet, even before COVID-19 spread to the U.S., the data clearly showed the existing particulate pollution standard was not doing enough to protect the public health.

Because it's so small, particulate pollution can lodge deep into the lungs and trigger asthma and heart attack, strokes and can even be lethal. That's why the EPA's own scientific experts recommended the legal limit of particulate

matter be lowered to between 8 and 10 micrograms per cubic meter. The current standard which was set in 2012 is 12 micrograms per cubic meter and results in over 52,000 premature deaths a year.

The EPA estimated that an annual standard of nine micrograms per cubic meter or 25 percent stronger than the current limit would prevent 12,500 premature deaths annually. An even stronger annual standard of eight micrograms per cubic meter would save even more lives and that's why we support this annual limit.

The EPA's political leadership ignores these recommendations and the estimates from their own scientists choosing instead to keep the weak standard in place. That means letting coal plants and other polluting facilities continue to foul our air at an unsafe level.

When I'm not working to protect our air and water from pollution at the Sierra Club, I'm the President of a youth soccer club in Indianapolis. The club has over 500 kids playing on about 40 teams. Even though year-round particulate matter levels have dropped in our area – thanks to the retirement and clean up of coal plant and dirty diesel engines – we still have to warn our coaches and parents each season about local air quality, especially in the summer months when the level of particulate matter pollution can spike.

What I've come to learn over the last several seasons is that someone on just about every team is vulnerable to air pollution from our club's youngest kids to our teens and even young adults. If they have a chronic lung disease such as asthma, they are more vulnerable to the risk of harm from particulate pollution.

Kids playing soccer and their coaches shouldn't have to worry about particulate matter pollution. They should be focusing on enjoying the game. Now more than ever, it's critical to keep environmental rules in place that protect the public from the adverse health impacts of toxic pollution. It's also critical that we follow the advice of our scientists and public health experts that concluded that the current particulate pollution standard needed to be updated and strengthened.

If we can do more to save lives from air pollution, we should. And for particulate matter pollution, we can. Withdraw this dangerous proposal, replace it with a more protective annual and daily standard that limits the particulate pollution that is putting too many kids, too many families and too many of our communities at risk. Thank you.

Kelley Raymond: Thank you. I'd like to pause in case our panelists have any clarifying questions.

Male: No questions. Thank you.

Kelley Raymond: OK. Thank you.

Our next two speakers will be Molly Rauch and Patrice Tomcik.

Operator, if would please unmute the line for Molly Rauch.

Operator: One moment, please. And the line is open.

Kelley Raymond: Molly, if you would please state and spell your name for the transcriber. Molly?

Female: Ms. Molly, check your mute button.

Molly Rauch: Good morning. Can you hear me?

Kelley Raymond: Yes, thank you. If you would please state and spell your name for the transcriber.

Molly Rauch: Molly Rauch, M-O-L-L-Y R-A-U-C-H.

Kelley Raymond: Thank you. You have five minutes.

Molly Rauch: Thank you for the opportunity to testify today. I'm Molly Rauch. I'm Public Health Policy Director for Moms Clean Air Force, a national organization of more than one million moms and dads fighting to protect our children from air pollution and climate change.

I'm here today on behalf of our members to urge EPA to strengthen the particle pollution standards. Before I address the substance of the standards, I'd like to raise some serious concerns I have with procedural issues around this rulemaking. We're in the midst of a global respiratory pandemic. This pandemic makes it vastly more difficult for the public to participate in responding to EPA's proposal. Yet EPA has neither deferred or extended the comment period. Indeed, the agency has set a timeline that would be considered rushed even without a national public health emergency and stay-at-home orders in place.

By setting a 60-day comment period, EPA is doing literally the bare minimum that is required by the law. This in the middle of a pandemic unprecedented in our lifetimes. This should be a time when the agency does absolutely everything in its power to creatively and diligently solicit public input. Instead, we have the bare minimum. This makes it perfectly clear how little Administrator Wheeler values hearing from stakeholders. This is deeply troubling to me as an advocate for public health and as someone who believes that civic engagement is a cornerstone of democracy.

And now on to the substance of the standards. Particle pollution is one of the most consequential pollutants regulated under the Clean Air Act, it is associated with tens of thousands of U.S. deaths each year. It causes heart disease, diabetes, and lung disease among other grave health impacts. And these are among the very underlying health conditions that make people more vulnerable to the coronavirus.

So there has never – really never been a time when the hazards of these underlying health conditions have been so clear. But instead of recognizing the vital importance of improving the health status and resilience of Americans, Administrator Wheeler has chosen to stick with outdated health-harming status quo standards.

In addition to causing underlying health conditions that make people more vulnerable to coronavirus, particle pollution itself may increase the risk of dying from the virus. New data analysis out of Harvard University indicates that a small increase in long-term exposure to PM2.5 of only one microgram

per square meter is associated with a large increase in COVID-19 death rate, an 8 percent increase. This is preliminary data, but it is deeply troubling.

In D.C. where I live with my three children, average particle pollution levels have been steadily falling for two decades and they now fall well within the NAAQS at nine micrograms per square meter. I am someone who has suffered from breathing problems in the past, and so this improvement is important to me personally. At the same time, I want to know if the air my family breathes is safe.

When the independent particulate review panel, the group of scientists dismissed by Andrew Wheeler in 2018 met to consider the science around the health affects of particles, it concluded that EPA needed to strengthen the standards to somewhere between eight and ten micrograms per square meter. In D.C., at nine micrograms per square meter, my city might not be in attainment with a more protective standard. There are only 19 counties in the U.S. that are out of attainment with the current standards which is great.

But 230 counties have long-term particle pollution levels greater than eight, including my hometown. What this tells me is that there are hundreds of counties where people think they're breathing healthy air and they are not. Places where states ...

Scott Jenkins: One minute.

Molly Rauch: Places where states and cities should be doing more to protect people, places where industries should be held accountable for the tens of thousands of lives lost but they're not. Families have the right to know if the air they're breathing is safe, if the NAAQS standards are too lenient, it's as if someone is lying to us about our air quality.

And more importantly, if the standards are too lenient, thousands will die who do not need to die. Thousands will suffer from asthma flareups, lung infections, and other ailments who do not need to suffer from these. EPA needs to follow the science and strengthen the standards. I urge you to strengthen these standards to protect public health which is the mission of the agency. Thank you.

Kelley Raymond: Thank you very much. I'd like to pause in case the panelists have any clarifying questions for the speaker?

Male: No further questions.

Kelley Raymond: OK. Thank you. Operator, if you would now unmute the line for Patrice Tomcik.

Operator: One moment please. The line is open.

Patrice Tomcik: Hello, this is Patrice Tomcik, can you hear me?

Kelley Raymond: Yes. Patrice, would you mind spelling your name for the transcriber?

Patrice Tomcik: Sure. It's P-A-T-R-I-C-E. Last name is T-O-M-C-I-K.

Kelley Raymond: Thank you very much. You have five minutes.

Patrice Tomcik: Thank you for the opportunity to testify today. My name is Patrice Tomcik and I'm the Project Manager of State Campaigns for Moms Clean Air Force, an organization of over one million moms and dads united to protect our children's health from air pollution and climate change.

I live in (Dipsonia), Pennsylvania, about 30 minutes north of Pittsburgh with my husband and two young children. I'm dismayed that the EPA is ignoring science showing that current particle pollution standards are too weak to properly protect public health. I urge you to strengthen these standards to protect families whose health is put at risk from breathing harmful particulate matter pollution even below current standards.

I know firsthand about polluting industries because my community is completely surrounded by sources. Upwind to the west of our home is an interstate connector and to the north is a steel plant. To my south and east are a cluster of coal fired power plant that contribute to making Pennsylvania's power sector the fifth dirtiest in the nation. Surrounding my children's school are multiple, unconventional natural gas wells with the closest one a half mile

away. I'm very worried about what my children are breathing into their lungs every day.

My youngest son had cancer and I know his immune system is compromised. As a mother, I try to make his home environment as healthy as possible but I know that I can't control the air my son breathes and depend on Administrator Wheeler and the EPA to do their jobs and implement the most comprehensive and meaningful air pollution standards that fully protect his health.

Unfortunately, the county I live in in Butler does not have any particle monitors, so I don't know the quality of the air my children breathe. However, the American Lung Association's 2020 annual State of the Air gives the cities surrounding mine, Pittsburgh, New Castle, and Weirton a failing grade for annual particle pollution. I know that air pollution does not know borders and can travel long distances.

Children are especially impacted by pollution due to the fact that they breathe more air per unit of body weight than adults and therefore can receive higher doses of pollution. Children exercise more and spend more time outside than adults, which means they can breathe more outdoor air pollution. Both of my children play outdoor sports year round. Additionally, children's lungs and brains are still developing until early adulthood, so toxic air pollution exposures can have deleterious effects on – that can last a lifetime.

Another group that is vulnerable to air pollution are the elderly. My father who is 74 years old lives one and a half miles downwind from the coal fired Cheswick generating station and this is also the location of my elementary school where I grew up. As I drive to visit my father, I see the fumes from the stacks of the Cheswick plant float over the river towards the playground I played on as a child. I missed a lot of school due to chronic bronchitis and now as an adult have respiratory problems.

The front of my father's house and every other house on the block is covered with a thin layer of soot. My father has lived most of his adult life in this house and now has diabetes, COPD, and heart disease with a heart attack that

required quintuple bypass surgery. Just last week he was put on portable oxygen.

Scientists have known for decades that polluted air can cause health conditions that make people more vulnerable to disease and infection. Lowering the standards for our particulate matter base on science can improve public health by reducing asthma attacks, respiratory disease, diabetes, heart disease, and cancer. Pennsylvania has the third highest cancer incidence rate in all of the U.S. states.

Scott Jenkins: One minute.

Patrice Tomcik: As we pick up the pieces to put our society back together and recover from the coronavirus pandemic, we should not accept continuing on the same polluting path we had before. The cost of inaction has already put our family's health at risk.

This is the time for us to strengthen our pollution protections and clean up the air. I urge you to lower the particle pollution standards in order to protect public health. Thank you very much.

Kelley Raymond: Thank you. I'd like to pause in case the panelists have any clarifying questions.

Male: No questions. Thank you.

Kelley Raymond: OK. Thank you. Operator, our next two speakers will be Trisha Delloiacono and Diana Van Vleet. If you would please unmute the line for Trisha Delloiacono.

Operator: One moment please. And the line is open.

Trisha Delloiacono: Good morning. My name is Trisha Delloiacono. Spell it?

Kelley Raymond: Could you please spell it for the transcriber? Yes.

Trisha Delloiacono: Trisha, T-R-I-S-H-A, D-E-L-L-O-I-A-C-O-N-O. Thank you for the opportunity to testify this morning on the EPA's proposed particle pollution

standards. My name is Trisha Delloiacono and I am the National Field Manager for Moms Clean Air Force.

We are an organization of over one million moms and dads from across the country who are fighting to protect our children's health and safety from air pollution and climate change. I am also a mom of four young children and two stepchildren and I likely would have had at least two of my kids joining me to testify had this hearing happened in person, if it were not for the threats to corona – that the coronavirus poses on our health right now.

My children and I live in Southern New Jersey just outside of Philadelphia. The American Lung Association ranked year round particle pollution in my area 12 out of 200 metropolitan areas, meaning, my children play and go to school in the 12th most polluted area in our country when it comes to particle pollution.

This is not acceptable and I'm urging the EPA to follow the science and strengthen the particle pollution standard to protect the health of my family and community.

Coronavirus has drastically changed my family's life and the lives of so many American and this is especially so for my friends and our Moms Clean Air Force members from across the country whose children suffer from asthma or other upper respiratory diseases and live in areas with elevated levels of particle pollution.

Particle pollution consists of tiny particles that can pass directly into the bloodstream when breathed into the lungs, triggering serious health conditions. COVID-19 attacks the lungs and we are learning that anyone with underlying health conditions such as asthma are more vulnerable to health impacts from the coronavirus. For anyone who struggles with unhealthy levels of particle pollution on areas where they live, coronavirus is especially worrisome.

We also know that the virus disproportionally impacts environmental justice communities and communities of color. Refusing to strengthen the national standard for particulate pollution is also a major setback for environmental

justice. Not only are African-Americans exposed to higher levels of particle pollution, but they are more likely to become sicker as a result; by retaining the current too weak standards, EPA is prolonging these engrained health disparities.

Moms Clean Air Force members are passionate about speaking up to protect their communities and families from air pollution. Even as many of us are struggling with home schooling, working from home, and ensuring that our families are staying afloat during this stressful time, our mothers are showing up and speaking out because we know that clean air is vital to ensure health and safety during this frightening time.

This is why we have more than 70 members from across the country scheduled to testify at this hearing, speaking out in opposition to the proposed rule. Moms Clean Air Force and our more than one million members are urging the EPA to protect the health of our families by strengthening the standards for particulate pollution.

Over the course of the next two days, you will be hearing from many of our members, several of whose own children struggle with asthma and many mothers who, like myself, live in fear every day over their child contracting coronavirus. For families with children with asthma or other upper respiratory conditions, this anxiety is tenfold.

Our administration should be taking bold action to ensure health and safety is protected, especially during a global public health pandemic. However, Andrew Wheeler is doing the exact opposite and moving forward with sweeping actions that are unraveling life-saving pollution protections.

Instead of proposing to keep our current standards, standards of science have shown us woefully lacking in terms of any real health protections. This administration should be moving forward with a proposal that is the most protective to American families and looking at ways to lower pollution levels in every aspect of their capacity.

On behalf of our more than one million of Moms Clean Air Force, I implore you to protect public health and strengthen our national particle pollution

standards. At a time when our families are grappling with the global pandemic that attack our lungs, we need to know that this administration is taking bold action to protect our health and safety, not make it worse.

Scott Jenkins: One minute.

Trisha DelloIacono: Thank you for the opportunity to testify today. Thank you.

Kelley Raymond: Thank you. I'll pause in case there are any clarifying questions from the panelists.

Jason Sacks: No additional questions.

Kelley Raymond: OK. Thank you very much. Operator, if you would please unmute the line for Diana Van Vleet.

Operator: One moment, please.

The line is open.

Diana Van Vleet: Thanks very much.

Kelley Raymond. Diana? Thank you. Would you please spell your name for the transcriber?

Diana Van Vleet: Absolutely. Thank you. My name is Diana Van Vleet. That's D-I-A-N-A, last name V-A-N, space, V as in Victor, L-E-E-T.

Kelley Raymond: Thank you. You have five minutes.

Diana Van Vleet: Thanks. Hi. My name is Diana Van Vleet and I am the national director of the Outreach and Engagement for the American Lung Association's Healthy Air Campaign. I appreciate the opportunity to speak with you here today.

The current standards for particulate matter are not strong enough to protect public health. Simply saying these are good enough is not an option. We know that fine particulate matter pollution or PM2.5 is dangerous to health at levels even lower than the current standards and it is the responsibility of the

EPA to update the standard to best reflect what the latest science tells us is safe.

We know that car seats help protect children. Would you put a child in a car seat and not buckle the car seat? Would you say, "Well, at least they're not in the front seat," and stop before fastening the buckle? While this might seem like a far-fetched analogy, today we are literally talking about saving people's lives by choosing to adequately limit pollution that kills people. People can't control the pollution in the air they breathe but the standards you set make an enormous difference. EPA's proposal to maintain the current too weak PM limits violates the core purpose of these standards under the Clean Air Act to protect public health with an adequate margin of safety.

We know that particulate matter pollution causes an array of serious health issues and complications from triggering asthma attacks, to heart attacks and strokes, to early death. And it is clear from many recent rigorous studies that both the annual and the 24-hour particulate matter standard fails to protect public health.

Additionally, emerging evidence that points to a connection between exposure to particle pollution and health outcomes related to COVID-19. We know that air pollution exposure is linked to greater risk of respiratory infections. And now, some very early evidence suggests that exposure to PM_{2.5} may make people more vulnerable to COVID-19 infection and may increase the severity of the virus if they get sick. One recent preliminary study from Harvard School of Public Health found that an increase of only one microgram per cubic meter and long term exposure to PM_{2.5} is associated with an 8 percent increase in the COVID-19 death rate.

Beyond their purpose of limiting harmful particle pollution, the particulate matter standards also help to inform the public about what is safe for them to breathe. EPA establishes an air quality index to a five-meter air pollutants regulated by the Clean Air act, including particle pollution. The air quality index is based on the national air quality standards set by EPA and breaks down air pollution levels into simple colors ranging from green for good to

maroon for hazardous, so that daily air pollution levels can be easily understood by the public.

The air quality index is an extremely helpful tool when it comes to informing people about air pollution levels in their area, but if the standard that it is based on is not actually up to date and accurate, EPA could be telling people that the air outside is safe to breathe when it is not. Therefore, updating the particulate matter standards is also critical from a public education perspective.

For all of these reasons, EPA's proposal to keep the current inadequate fine particulate matter standards in place is unacceptable. The science clearly show that stronger limits are needed to protect public health from the range of health harms that particulate matter causes. The American Lung Association urges EPA to strengthen the annual PM2.5 standard to eight micrograms per cubic meter and the 24-hour standard to 25 micrograms per cubic meter.

Scott Jenkins: One minute.

Diana Van Vleet: Lastly, I also want to – thank you. I want to close with a request for an extension of at least 30 days on the comment period on this proposal, especially in light of the pandemic. More time is needed to adequately weigh in on this critical matter. Thank you.

Kelley Raymond: Thank you. I'll pause in case there are any clarifying questions.

Scott Jenkins: No questions. Thank you.

Kelley Raymond: OK. Thank you. Operator, if you would please, our next two speakers will be Heather Kaper followed by Christopher Frey. If you would please unmute the line for Heather Kaper.

Operator: All right. One moment, please. And the line is open for Heather.

Heather Kaper: OK. Thank you. Can you hear me?

Kelley Raymond: Yes, Heather. Would you be able to spell your name for the transcriber?

Heather Kaper: I certainly can. It's Heather, H-E-A-T-H-E-R. And then last name is Kaper, K-A-P-E-R.

Kelley Raymond: Thank you very much. You have five minutes.

Heather Kaper: OK. Thank you. Good morning. I would like to thank the EPA staff for listening to my testimony today. My name is Heather Kaper. I am a member of Moms Clean Air Force. I am a mother of two young boys, ages 10 and 8. My family and I reside in Ann Arbor, Michigan. I'm also a pediatric nurse who works at Mott Children's Hospital in Ann Arbor.

I am blessed to have two healthy children of my own. However, each day I go into work at Mott, I care for children less fortunate who suffer from significant respiratory issues such as asthma and cystic fibrosis. If the proposed particle pollution standards are passed, the lasting effects will be detrimental to this patient population.

The proposed particle pollution standards are too weak and they must be strengthened. The health and wellbeing of thousands of Americans, including children, is at stake if they continue to breathe these deadly particles at the current levels. Declining to strengthen these standards is a major setback for environmental justice.

The impact of particles pollution disproportionately harms poor communities and communities of color. By retaining the current weak standards, the EPA is encouraging these health disparities. For example, people who live in predominantly African-American communities have a higher risk of premature death from particle pollution than those who live in communities that are predominantly white. Not only are African-Americans exposed to higher levels of particle pollution, but they are more likely to become sicker as a result.

Currently, we are in the midst of a global respiratory pandemic. America is facing major health and economic impacts of a national public health emergency that has filled our hospitals, closed businesses and schools, and killed more than 90,000 in just over two months. Particle pollution causes heart disease, diabetes, and lung disease, and these are the exact underlying

health conditions that make people more vulnerable to COVID-19, which I can attest to from working in the front lines and caring for these patients.

COVID-19 is a horrific monster that will target anyone. If we have the power to control and improve Americans' health, then how can we not start with simply improving the particle pollution standards?

Particle pollution is a known killer even at levels below the current standards. In the past few years, the evidence to this has gotten even more convincing. The current proposal jeopardizes the health of my children, those with underlying health conditions, and my community. I urge you to strengthen the particle pollution standards in order to protect the public health. And again, I thank you for this opportunity to testify.

Kelley Raymond: Thank you very much. I'll pause in case there are clarifying questions.

Diana Van Vleet: OK.

Jason Sacks: No additional questions.

Diana Van Vleet: OK.

Kelley Raymond: Thank you very much. Operator, if you would please open the line for Christopher Frey.

Operator: All right. One moment. And the line is open.

Christopher Frey: OK. Yes. This is Chris Frey, F-R-E-Y.

Kelley Raymond: Thank you, Christopher. You have five minutes.

Christopher Frey: Thank you. The Clean Air Act directs EPA to set air quality standards based on an accurate and thorough review of the latest science. This function is performed by the Clean Air Scientific Advisory Committee which I chaired from 2012 to 2015. CASAC has seven members which is not enough to provide the breadth, depth, and diversity of expertise, experience, and perspective needed for these complex reviews.

Recognizing this, for four decades, EPA has augmented CASAC by convening expert review panels for each pollutant. The panels include scientists with extensive knowledge of epidemiology, toxicology, medicine, air quality, exposure, risk, statistics, and other fields. I served on the 20-member particulate matter review panel appointed in 2015 to help CASAC review the current fine particle standards.

Our panel was arbitrarily and capriciously dismissed in October 2018 by Administrator Wheeler. Shortly thereafter, we formed a non-governmental independent particulate matter review panel. During a two-day meeting conducted under the rules of an official meeting, we deliberated on the strengths and limitations of available scientific evidence. We reported our findings to the administrator in October 2019.

We unequivocally and unanimously found that the current fine particle standards do not adequately protect public health. Our conclusion is based on scientific evidence from epidemiologic controlled human and animal toxicological studies. We found coherent evidence from these multiple scientific disciplines consistent with a causal biologically plausible relationship with adverse effects at ambient concentrations below the current standards.

The epidemiologic evidence is robust across diverse study designs in different populations and locations using a variety of statistical approaches. New studies considering large populations report effects below the current annual standard and below the current daily standard. The inclusion of large populations is made possible by new air quality modeling tools. We found no evidence of an ambient concentration threshold for health effects at the lowest observed levels for either annual or 24-hour exposures.

An annual standard in the range of 10 to 8 micrograms per cubic meter would protect the general public and at risk groups. We advised the administrator that at risk populations and environmental justice need to be considered in choosing a margin of safety, yet Administrator Wheeler is largely silent on these issues.

EPA staff recommended retaining the 24-hour fine particle standard. However, we found that that standard does not adequately protect public health. The panel recommends a 24-hour standard between 30 and 25 micrograms per cubic meter. Administrator Wheeler continued a makeover of CASAC started by his predecessor Scott Pruitt that removed leading researchers from the committee. CASAC has no epidemiologist, a key discipline for assessing particle matter health effects.

Lacking the expertise embodied in our panel, CASAC is unqualified to give a holistic assessment of the particle matter air quality standards. However, even Wheeler's rigged CASAC noted the "exceptional nature" of the current review, including the dismissal of our panel. Arguments offered by CASAC and the administrator for retaining the current fine particle standards are not scientifically justified and are specious. Both CASAC and the administrator overemphasized uncertainties and individual pieces of evidence without taking into account robust findings based on multiple studies across multiple lines of evidence.

Scott Jenkins: One minute.

Christopher Frey: The – points to an illogical CASAC statement that the current review merely confirms what was assumed in the prior review. I served on CASAC during the prior review. We recommended ranges based on then available evidence. The now available evidence supports lower ranges. There are numerous other logical inconsistencies and unreasonable expectations. For example, the administrator bemoans lack of experimental evidence at the current standard, but apparently is unaware that it is not ethical to subject at risk persons to prolonged exposure in controlled studies.

Both CASAC and the administrator are opposing a burden of proof well beyond statute which requires EPA to account not just for known but also anticipated effects, thus the administrator proposal fails to follow the science.

Scott Jenkins: Your time is up.

Christopher Frey: Thank you.

Kelley Raymond: Thank you. I'll pause in case the panelists have any clarifying questions.

Scott Jenkins: No further questions. Thank you.

Kelley Raymond: All right. Thank you. Operator, our next two speakers will be Karin Stein and Matthew Mehalik. If you would please unmute the line of Karin Stein.

Operator: OK. One moment. The line is open.

Karin Stein: Good morning. I'm Karin Stein, K-A-R-I-N, S-T-E-I-N.

Kelley Raymond: Thank you.

Karin Stein: I am the Iowa State organizer for Moms Clean Air Force and as you've heard before, we're a national organization of over a million parents who work together to fight against pollution and change in climate.

I first of all want to thank you for giving me the chance to testify in what is a profoundly important issue to me and the communities I serve in Iowa. I'm speaking today in opposition to the EPA proposal to retain the current particle pollution standards. The current standards are too weak and they absolutely must be strengthened.

As a quick context to my remarks, I would like to mention that I am a nationally touring Latin American musician with a bachelor's degree in biology and a master's degree in agronomy and horticulture. My work as a performing artist puts me in touch with an unusual diversity of people in Iowa and around the country, including Spanish-speaking communities.

My background in the sciences allows me to understand various types of pollution and where they are an issue. Iowa is not usually the first place that comes to mind when people are talking about air pollution and yet we have serious problems with PM2.5 particle pollution in many places. Iowa is 16th in the nation in coal power generation with 72 operating coal fired power units at 28 locations around the state. And if you live in those locations, you're hit directly by the worst air quality standards.

You will hear this afternoon from one of our Iowa moms who lives in Muscatine, Iowa, one of our most polluted sites and how living there has had a devastating effect on her family and community. Iowa is moving further and further towards energy generated by wind turbines but until that process is complete, another generation of children and pregnant women, in many cases – and many places in Iowa will have inhaled high concentrations of particle pollution from coal plants.

Even if the coal plants are closed tomorrow, all of them, there is the issue of our agricultural economy and its role in particle pollution. Agriculture is very often overlooked as a key player in the generation of fine particulate matter which is driven by emissions of ammonia, a PM2.5 precursor that results from nitrogen fertilizer use. Reduced air quality from corn production is associated with about 4300 premature deaths annually in the United States with estimated damages in monetary terms in over \$39 billion. In Iowa alone, we have around 14 million of acres of corn that are heavily fertilized with nitrogen.

And then there is the issue of concentrated animal feeding operations which are very common in Iowa. Nitrogen in animal waste in an excess fertilizer can turn into gaseous ammonia. When this ammonia enters the atmosphere, it combines with air from nearby vehicles, power plants, and factories to form PM2.5 and that can travel long distances in the atmosphere, hundreds of miles. And if ammonia emissions in one part of Iowa are originated in one part of Iowa, it will impact the air quality in a downwind region both inside and outside the state.

I'm an immigrant from Latin America. Spanish is my native language. And through my music and my work with Moms Clean Air Force, I spend a lot of time connecting with Latinos around Iowa. As I connect, I listen. I won't repeat the details of how deadly particle pollution is, but I will tell you how I'm affected by what I hear in the communities. It devastates me to see Latino and other immigrant families in Iowa who live near these coal plants, factories, and animal feeding operations and often work in them. I hear stories of how kids are suddenly developing asthma since the family moved to Iowa.

Scott Jenkins: One minute.

Karin Stein: I see children play in their backyards and I wonder what their future looks like. Particle pollution standards must be tightened as soon as possible and I plead with Secretary Wheeler to do so now. And I want to thank you for the opportunity to speak.

And I'm going to go off script for just briefly to react to an earlier testimony. If I understood correctly the remarks included suggestions that data for deleterious effects can be accounted for by behavioral patterns, well, I hope everybody listening understands that we must protect everybody regardless of the preexisting conditions. It is not OK for my daughter who is overweight to be more prone to particular pollution or for my uncle who smokes.

And let's remember that most people who have preexisting conditions live and work under the same circumstances that exactly cause their conditions to worsen their susceptibility to PM2.5. Thank you very much and please strengthen those standards immediately.

Kelley Raymond: Thank you. I'd like to pause in case the panelists have any clarifying questions.

Jason Sacks: No further questions.

Kelley Raymond: OK. Operator, if you would please, open the line for Matthew Mehalik.

Operator: OK. One moment please. And the line is open. Matthew?

Matthew Mehalik: Good morning. Matthew Mehalik here, M-A-T-T-H-E-W, M-E-H-A-L-I-K.

Kelley Raymond: Thank you. You have five minutes.

Matthew Mehalik: Thank you for holding this hearing. I appreciate the opportunity to comment on the EPA's proposed action regarding the National Ambient Air Quality for Particulate Matter. The Breathe Project is a Southwestern Pennsylvania organization that constantly avails itself of top level health, epidemiological in air quality science and public health information. We're a collaboration of

over 42 regional organizations working to improve air quality, eliminate climate pollution and make our region a healthy and prosperous place to live.

We are public health professionals, academics, environmental advocates, and citizens. We use the best available science and technology to better understand the quality of the air we breathe and provide opportunities for citizens to engage and take action. The EPA administrator's decision to leave the particulate matter standards unchanged is a crystal clear mistake that will result in many tens of thousands of people being grievously harmed in our country overall and in Southwestern Pennsylvania in particular.

These harms will include early deaths, cardiac diseases, respiratory diseases, and cancers among other certain negative health endpoints. The EPA's own risk assessment which is and has been the method for determining the impacts of regulatory changes calculated that 17,000 long term PM2.5 exposure-related deaths from heart disease in a single year will occur by just meeting the current annual standard of 12 micrograms per cubic meter.

Instead if the standard matched the World Health Organization's annual standard of 10 microgram per cubic meter, these deaths can be reduced up to 18 percent or over 3,060 people per year. This number jumps to 27 percent or over 4590 people per year at an annual standard of 9 micrograms per cubic meter. These numbers are just from heart disease deaths. Overall, it's possible to prevent over 12,500 premature deaths per year by embracing a 9 microgram per cubic meter annual standard.

Moreover, the review of science literature affirms PM2.5 exposure levels in chronic health effects with no apparent lower bound and acute health effects with no apparent lower bound. This means that it's critical to reduce the PM standard in order to reduce negative health effects. The negative consequences for ignoring these crystal clear scientific findings will be particularly impactful in southwestern Pennsylvania.

Our region already suffers from some of the worse air pollution in the U.S. According to analysis of our region's pollution sources from the National Emissions Inventory, particle pollution from stationary industrial point source

pollution is the largest contributor to our region's pollution accounting for approximately two-thirds of our region's pollution. Air quality ranks not good, two-thirds of all days in our region.

And an analysis of data from one of our counties' monitors, the Liberty Monitor, which has a 2016, 2018 annual design value of 12.5 micrograms per cubic meter indicates measurements that rank worse than 97 percent of all data from all monitors throughout the United States and exceeds the current standard. Data from two other data monitors exceed the world health standards and rank worse than 95 percent of all monitors in the U.S.

Across Allegheny County, data from nine monitors have been in the worst 20 percent of all monitors nationally and the region has averaged only one monitor above the 50th percentile nationally. Allegheny County ranks in the top 2 percent of counties in the U.S. for cancer risk from point source air pollution. Our air poses significant threats to public health with an increased risk of heart and lung disease, asthma, diabetes, cancer, and premature death.

The American Lung Association's annual State of the Air report for 2020 again put our region on notice. Allegheny County received straight F's for daily particulate matter levels, long term particulate matter levels and ozone.

Scott Jenkins: One minute.

Matthew Mehalik: We rank eighth overall and retain the dubious distinction of being the only metropolitan region east of Mississippi ranked in the worst 25 percent. Our region's 2.6 million people are at risk if the current standard is maintained. This includes vulnerable populations who bear disproportionate risk from current levels of air pollution; 48,000 children with pediatric asthma, 214,000 people with adult asthma, 296,000 living with low incomes, 363,000 people who are non-white. The environmental justice concerns are clear, substantial, and should not be ignored. Ignoring the risk to vulnerable people will be a shame on our region and country.

Our region clearly needs a more health protected standard. The Breathe Project encourages EPA to set its standard at 8 micrograms per cubic meter,

the level which there's clear consensus of evidence suggesting benefits for reducing PM2.5 emissions.

Scott Jenkins: Your time is up.

Matthew Mehalik: Let's save thousands of lives, reduce burdens on vulnerable people, and take action that makes our country proud and our region proud. Thank you very much for your consideration.

Kelley Raymond: Thank you. I'll pause briefly for any clarifying questions from the panelists.

Scott Jenkins: Yes. This is Scott. Thank you, Mr. Mehalik. You mentioned some analysis of the Liberty Monitor in your area. If you could just make sure that the full analysis is available in the docket, that would be really helpful. Thank you.

Matthew Mehalik: Would be very happy to include it. Thank you very much.

Kelley Raymond: Thank you. Our next two speakers will be Shaina Oliver and (Frank Clavan). Operator, if you would please unmute the line for Shaina Oliver.

Operator: One moment please.

The line is open.

Shaina Oliver: Hello?

Kelley Raymond: Hi. Shaina? Would you please spell your name? Say your name and spell your name for the transcriber, please.

Shaina Oliver: Shaina Oliver, S-H-A-I-N-A. Oliver, O-L-I-V-E-R.

Kelley Raymond: Thank you. You have five minutes.

Shaina Oliver: Thank you for providing this opportunity for public comment, as well – not everybody has Internet connection or a stable phone line to participate, so this public comment should be extended.

My name is Shaina Oliver. I am a resident of Denver, Colorado, a mother of four children and a descendant of the genocide known as the Long Walk of

the Navajo. I am a field organizer for Moms Clean Air Force because I understand the importance of my personal story as an indigenous member of the community and it is the responsibility of Administrator Andrew Wheeler of the EPA to consider the latest available science on particulate pollution and toxin in communities.

Being a tribal member of the Navajo Nation as well as coming from generational trauma and displacement, indigenous Latinoa and Black people are systemically segregated into communities disproportionately impacted by air, water, and land pollution. The Navajo Nation has been battling the impacts of contamination contributed by coal, uranium, oil, and gas.

My grandfather was one of the – one of the Navajo uranium miners that worked without protective gear prior to the foundation of the EPA. He also worked at the coal plant – the coal power plant where he was forced into early retirement due to his frequent asthma attacks on the job site. Before my grandfather passed two years ago, many times he had to wear a face mask to cover his nose and mouth due to not being able to breathe the air in Four Corners New Mexico or Shiprock, New Mexico.

Indigenous communities have the highest rates of asthma, diabetes, heart disease, cancer, leukemia, mental illness, adverse birth outcomes, and premature deaths than the general population. I was born on the Navajo reservation prematurely, low birth weight, and with a birth defect, and I have been diagnosed with asthma since infancy.

Impacts of contaminants in our air, our water, and lands are real. And because of the negligence of foreign governments on indigenous lands we are forced to face the environmental impacts of pollution.

Presently I live 5.5 miles from Suncor Refinery, northeast Denver and I have friends that live just up the road of Suncor and I continue to see the impact of air pollution every day. My friends that live in Commerce City are suffering from health impacts of Suncor with constant nosebleeds, migraines and chest pains.

Coming from the Navajo reservation and seeing how close Suncor Refinery is to my family compelled me to protect communities from dirty air. Particle pollution is a dangerous pollutant that causes heart diseases, diabetes, and lung disease. The current standards of the National Ambient Air Quality Standards on particulate matter of 2.5 are too weak and need to be strengthened.

Scientists know air pollutions harms the developing and aging body and respiratory systems and reduces the body's ability to fight infections like the respiratory disease COVID-19 which is disproportionately impacting communities of color, black, Latino, indigenous and low-income.

The last two months it has been reported that 80,000 people have died from the coronavirus Disease in the United States. Even the recent study Harvard University reported and suggests that exposure to air pollution does increase the risk of death from COVID-19, especially communities of color and low income that lack access to clean air, water and lands, including those with underlying health conditions.

Again, I have asthma. I am a mother of four. I believe it's every child's right to breathe clean air, really strengthen the standards of the National Ambient Air Quality Standards on particulate pollution which PM2.5 are so small particles, are so small particles can pass through the lungs and into our children's bloodstream. Now is the time to act, protect all newborns and children from harmful air particulate pollution.

The EPA ...

Scott Jenkins: One minute.

Shaina Oliver: ... should strengthen particulate pollution standards to protect the health of children with people with asthma and those with underlying health conditions and older adults. Thank you for taking my statement.

Kelley Raymond: Thank you. Are there any clarifying questions from our panelists?

Male: No additional questions. Thank you.

Kelley Raymond: OK. Thank you very much. Operator, if you would please un-mute the line of (Frank Clavan)?

Operator: I don't see his line connected, ma'am.

Kelley Raymond: OK. We can move forward to the next speaker. I will make a note and hopefully that he joins at a later time.

Would you please un-mute next the line of Peter Schneider, who will be followed by Louis Baer.

Operator: One moment please. And the line is open for Peter.

Kelley Raymond: Peter, would you please state and spell your name for the transcriber?

Peter Schneider: Yes, Peter Schneider, P-E-T-E-R, Schneider, S-C-H-N-E-I-D-E-R.

Kelley Raymond: Thank you very much. You have five minutes.

Peter Schneider: Thank you for the opportunity to provide testimony this morning. My name is Peter Schneider and I am a field organizer with Environment Colorado. We are a statewide environmental advocacy non-profit that works to protect clean air, clean water, clean energy and open spaces.

I'm speaking today in support of strengthening the National Ambient Air Quality Standards for particulate matter because clean air is essential for human life and our current standards are not doing enough to protect American lives. Every year, tens of thousands of people have their lives cut short simply from breathing their air in their community. That's an unacceptable number. But we can prevent this by strengthening our air quality standards.

So I used to live in Saint Louis where I was an environmental educator. And I work with some of the most marginalized communities in the city and we would take students on trips hiking, canoeing and just to the local park. These are all experiences that were central for my childhood but I quickly realized that it wasn't the same for these kids. We'd go to the park and they'd run

around, play games, just to have fun as kids do, but every five or ten minutes one of the kids would stop running, bend over his hands would go to his knees and he'd just start wheezing, gasping for air. He couldn't breathe because he was having an asthma attack, and it was frequent.

Seemingly every one of those students had asthma. We struggled to keep track of whose inhaler was whose. This isn't a coincidence. St. Louis has one of the highest rates of asthma in the country and was recently given an F rating for ozone from the American Lung Association, but was given a passing rating for particulate matter.

If you look around the community and see that this clearly isn't a healthy environment for kids to grow up in, there's smoke stacks pumping pollution into the sky. There are highways running directly next to the schools we worked in with cars spewing exhaust into the air as kids played during recess.

For me it's heartbreaking to see kids eight or nine years old who just want to play outside but because of the neighborhood they are born in, because they don't have access to clean air they can't. That's an essential childhood experience that's been robbed from them and that's why we need to do everything that we can to provide clean air for everyone in this country.

Especially now in the midst of a pandemic caused by a respiratory illness, we should see this as an opportunity to strengthen our standards on air quality. Right now we are failing to protect the children of our country but it doesn't have to be that way. We can do better. We can implement stronger standards, clean up the air, clean up pollution and give kids an opportunity for a healthy childhood where they can breathe freely.

I hope that this administration and this agency keep that in mind and move forward to strengthen the National Ambient Air Quality Standards for Particulate Matter. Thank you.

Kelley Raymond: Thank you. I will pause in case there are any clarifying questions.

Male: No questions thank you.

Kelley Raymond: OK. Operator, if you would please un-mute the line for Louis Baer.

Operator: OK. One moment please. And the line is open.

Louis Baer: Thank you.

Kelley Raymond: Louis if you would please state and spell your name for the transcriber?

Louis Baer: Yes. Louis Baer, Louis, L-O-U-I-S, Baer, B-A-E-R.

Kelley Raymond: Thank you. You have five minutes.

Louis Baer: Thank you. Thank you all for the opportunity to speak today regarding the administrator's proposed decision for the review of the primary and secondary particulate matter, National Ambient Air Quality Standards.

My name is Louis Baer and I am speaking up on behalf of the Portland Cement Association or PCA. PCA founded in 1916 is a premier policy research education and market intelligence organization serving America's cement manufacturers.

PCA members represent 91 percent of U.S. cement production capacity and facilities in all 50 states. Cement and concrete product manufacturing directly or indirectly employs approximately 610,000 people in our country and our collective industries contribute over \$125 billion to our economy.

PCA members support air quality standards that protect public health, public welfare in the communities we work and live in. We are particularly proud of the industry's achievements in reducing air emissions over time. Between 2011 and 2016 the cement industry decreased its PM emissions by 10 percent while increasing production. And combined with the work of other sectors, the U.S. has already reduced the average PM2.5 concentrations by 39 percent between 2012 and '18.

If EPA moves forward with its review of the current PM NAAQS it is critical that EPA continue to use good science and data because the implications of overreach are severe. Our members are already implementing the best

available control technologies and other measures to attain and remain in attainment of current PM2.5 standards.

Implementing additional controls to further PM2.5 emissions for the industry is not technically or economically feasible, leaving our industry a few options while remaining operative. With this in mind PCA supports the administrator's decision to maintain the current primary and secondary particulate matter standards. The decision is consistent with the Clean Air Scientific Advisory Committee's or CACAC's consensus advice on maintaining the current primary 24 hour PM2.5 standard, the primary PM 10 standard and secondary standards, and CASAC's agreement on maintaining the current primary annual PM2.5 standard.

The proposal comes up after careful review and consideration of the most current available scientific evidence and risk and exposure information and with consultation and confirmation by the agency's independent science advisers. EPA's proposal is not only supported by sound science it's also grounded in good public policy. Unduly lowering the NAAQS would have severe directed, it's an indirect economic impacts on communities, jobs, and economies that can accompany more stringent NAAQS requirements.

NAAQS compliance has the potential to adversely affect jobs, business investment and permitting for the cement industry. As such PCA supports the EPA's proposed rules to retain the PM NAAQS as it stands. The proposed rule and supporting analyses provides strong scientific support, force determination with the current standard and sufficiently protective of human health and public welfare.

Thank you for the opportunity to provide comments today.

Kelley Raymond: Thank you. I will pause if there are any clarifying questions.

Male: No questions. Thank you.

Kelley Raymond: OK. Operator, do we now have (Frank Plavone) on the line?

Operator: Let me check one moment. I am not showing him in.

Kelley Raymond: OK. Thank you. I have a short announcement. I want to thank each of the speakers who have taken the time to share their comments with us today. At this time we are going to be changing to a new team of panelists. So if you would please give us a moment to bring these new people on board.

Rhea Jones, are you present?

Rhea Jones: Yes, Kelley, I am here.

Kelley Raymond: Great. The chairing is all yours.

Rhea Jones: OK. Thank you. My name is Rhea Jones and I want to check to see if my other two panelists are here, Fred Thompson and Nicole Hagan, are you here?

Fred Thompson: Fred Thompson is here. Thank you.

Rhea Jones: Nicole, are you with us? So perhaps we should check Nicole's line to make sure that she can ...

Operator: Nicole's line is open, ma'am. Thank you.

Nicole Hagan: Yes, Rhea, can you hear me?

Rhea Jones: Yes, I can, Nicole, great.

Nicole Hagan: Great, thank you.

Rhea Jones: OK, well then let's proceed with our session. Good morning, everyone, my name is Rhea Jones and I am the associate director of the Health and Environmental Impacts Division in EPA's Office of Air and Radiation. I will be chairing the continuation of this session of today's public hearing on the EPA's proposed rule review of the National Ambient Air Quality Standards for Particulate Matter. Welcome and thank you for joining today.

Joining me on the panel as I mentioned is Fred Thompson and Nicole Hagan of EPA's Office of Air Quality Planning and Standards.

Fred, would you please introduce yourself?

Fred Thompson: Hi, I am Fred Thompson, associate director in EPA's Office of Air Quality Planning and Standards.

Rhea Jones: Thank you, Fred. And, Nicole, can you introduce yourself, please?

Nicole Hagan: Good morning my name is Nicole Hagan, I am a health scientist at EPA's Office of Air Quality Planning and Standards.

Rhea Jones: Thank you, Nicole. Fred Thompson will be our timekeeper for this session. Just a reminder, each speaker will have five minutes to provide testimony. When you are approaching one minute remaining, Fred will remind you and he will also let you know when your time is up. We ask that you please respect the time limits so that we can ensure that all registered speakers have the chance to speak.

With that let's get started. Our first two speakers for this part of this session are Vijay Limaye and Crystal Vega.

Operator, would you please un-mute the line for Vijay Limaye?

Operator: One moment please? And the line is open.

Vijay Limaye: Good morning, can you hear me?

Rhea Jones: Yes we can hear you. Would you please say and spell your name for the record?

Vijay Limaye: Sure this is Vijay Limaye, first name V-I-J-A-Y, last name L-I-M-A-Y-E.

Rhea Jones: Thank you. You may proceed with your testimony.

Vijay Limaye: Good morning, my name is Vijay Limaye and I want to thank EPA for organizing this public hearing on the agency's proposal to retain the PM2.5 NAAQS. I am trained as a PhD environmental epidemiologist and I'm also a former EPA scientist myself. My work focuses on better understanding the harmful effects of air pollution and climate change on human health.

At EPA I worked on air pollution and health science data and policy. I now work as a scientist at the Natural Resources Defense Council.

The most important thing to remember today is that despite what some people might tell you, there is no safe level of air pollution, that's why EPA should propose a stronger more protective PM_{2.5} standard. Doing so would save tens of thousands of lives according to EPA's own analysis. The Clean Air Act is the proven tool to make those stronger limits a reality because it relies on proven science, not fringe opinions. And a new report released by our organization NRDC this month highlights the landmark achievements of the Clean Air Act to protect our health.

Since its passage by Congress 50 years ago, the law has delivered on its intent to reduce air pollution, improve health and extend lifespan for people all around the country. Our analysis finds that pollution reductions from the Clean Air Act have prevented 370,000 premature deaths in 2020, growing up to 457,000 avoided premature deaths by 2030. But the American public's continued enjoyment of those air quality and health benefits estimated to outweigh costs by a factor of more than 30 to 1, is now imperiled due to the Trump Administration's aggressive assault on the scientific underpinnings of this law, including the proposal to retain the PM_{2.5} standards that you are receiving comments on today.

Despite President Trump's claim that the U.S. has the, quote, "cleanest air in the world," and the dangerous fringe belief from some on EPA's Clean Air Scientific Advisory Committee and the Science Advisory Board that air pollution does not harm our health, the alarming truth is that many people in this country are still breathing in unhealthy levels of air pollution day after day. And it's causing significant damage.

EPA estimates that huge swaths of the U.S. population live, work and play in non-attainment areas where PM_{2.5} levels exceed the NAAQS. For example EPA's green book shows that more than 20 million people reside in counties with annual PM_{2.5} levels above the legal limit. The true number of people living in areas with unhealthy levels of air pollution is undoubtedly higher

because of the documented adverse health effects from this type of exposure to air pollution at substantially lower levels.

As worrying as that number is, things seem to be getting even worse, air pollution levels around the country have risen under the Trump Administration for a number of reasons including reduced vigilance and enforcement against polluters and deadly smoke generated by unprecedented climate change fueled wildfires in the American West.

EPA's recent rollbacks on common sense clean air protections from vehicles and coal fires powered plants threaten to make things even worse. The science evidence detailed in the Integrated Science Assessment demonstrates ongoing harm to people's health in both current non-attainment and attainment areas.

I've been following the science on air pollution and health for the last decade and it is clear, cleaner air saves lives. It also contributes to economic prosperity by reducing healthcare costs and boosting American worker productivity.

In the seven years since the last PM_{2.5} NAAQS review was finalized scientists in the U.S. and around the world have learned even more about the links between short and long-term exposure to PM_{2.5} air pollution and health problems including at levels well below the current NAAQS limits.

The evidence presented in the recent policy assessment clearly indicates that the current PM_{2.5} standard is not requisite to protect public health within an adequate margin of safety. EPA's policy assessment rightly prioritizes recent reviews conducted in the U.S. cities with annual average PM_{2.5} levels well below current standards. Evidence indicates that relatively low levels of exposure to air pollution may actually confer greater incremental risk than even the current EPA dose response approach assumes.

Rather than take stronger limits to limit air pollution and fight the climate crisis the Trump Administration is waging an all-out assault on the Clean Air Act. In the proposal you are considering here the administrator has distorted the level of uncertainty about air pollution related health effects. He and some

members of the CASAC, a committee that lacks any epidemiologists, have leaned heavily on the uncertainty argument by relying on unprecedented equivocal language embedded in a policy assessment, language that is not supported by the science. The truth is there is plenty of evidence that air pollution levels considered acceptable by this EPA are dangerous and deadly.

Instead of allowing harmful levels of pollution to persist around the country EPA should do its job, follow the science and propose tighter limits and ...

Fred Thompson: Time is up.

Vijay Limaye: Thank you.

Rhea Jones: OK, thank you for your testimony. I will pause now to see if there are any clarifying questions from the panel. OK, hearing none let's move to our next speaker. Operator, would you please un-mute the line for Crystal Vega.

Operator: One moment please. And the line is open, Crystal.

Crystal Vega: Hello?

Rhea Jones: Hi, Crystal, can you please say and spell your name for the record?

Crystal Vega: My name is Crystal Vega. First name, C-R-Y-S-T-A-L, last name V-E-G-A.

Rhea Jones: Thank you. You can begin your testimony.

Crystal Vega: OK. Hello and thank you for the opportunity to provide a comment in opposition to the proposed rule, to retain the National Ambient Air Quality Standards for Particulate Matter.

My name is Crystal Vega. I am 14 years old. I am a volunteer with Chispa Arizona, a Latino organizing program for the League of Conservation Voters. My mom and I have been volunteering at Chispa Arizona for years now. My mom first started organizing other moms around asthma. I've struggled with asthma my entire life. It's something I've had to deal with for 14 years now. As a kid it kept me from riding my bike for too long, going outside and now as a teenager I struggle to keep up with sports.

I'm from Phoenix, Arizona where there are millions of people living in low-income communities that are impacted by unhealthy levels of pollution like mine. In my neighborhood alone, there are more concrete pathways than there are parks. I am surrounded by industrial machines and big factories, yet I am a young person and I want to hike, play sports and enjoy the outdoors. But when I do spend time outside I can clearly see the pollution around me.

As an asthmatic I am already at great risk because of my age, because of where I live and where I go to school. In Phoenix alone there are almost 100,000 children living with asthma, which makes me sad. I think of the little ones who are going through what I had to go through, late night respiratory therapies, early morning of medication and inhaling exercises, but I hope that someday we can all breathe healthier and cleaner air.

Last year I had the opportunity to speak at the Youth Climate Strike in front of hundreds of other youths like me. I felt seen and heard. I saw hope because we were all in the same fight together and that's the hope that I have again today.

The Clean Air Act requires that the federal government, EPA protect our health, plus this proposal doesn't do that. Instead the proposed rule ignores science while we are suffering from this pandemic. I hope that you can listen to the future generations, to people who look like me, people like my mom, people that have no choice of where they can live or not. Please save our lives and help us breathe better air. Thank you.

Rhea Jones: Thank you, Crystal, for your comments and for participating today. I am going to pause now to see if there are any comments or clarifying questions from the panel.

Crystal Vega: OK.

Rhea Jones: OK. Hearing none I am going to move on to our next two speakers who are Elizabeth Hauptman and Steve Milloy.

Operator, can you please un-mute the line for Elizabeth Hauptman, please?

Operator: One moment please, and the line is open.

Elizabeth Hauptman: Thank you. I am Elizabeth Hoffman, spelled E-L-I-Z-A-B-E-T-H, last name Hauptman, H-A-U-P as in Peter, T as in Tom, M-A-N.

Hello, I am Elizabeth Hauptman a field consultant with Moms Clean Air Force. I live in Brighton, Michigan and our group of over one million moms and dads fighting for air and climate for the sake of our children's health in the future. Moms Clean Air Force Michigan has over 29,000 members dedicated to the health and safety of our children here in our state.

First, I'd like to thank the EPA for taking my testimony today. There is strong scientific evidence that particle pollution is dangerous to little lungs, even at the level below the current standards. The EPA plan ignores data and science and keep the current standards. This is a betrayal to moms and their children in Michigan. The fact is particle pollution causes asthma attacks and sends children like my son (Ennis) to the ER.

As a mom of a son (Ennis) who has asthma I can say this proposal would put the health of Michigan's 254,583 kids with asthma at risk. Not to mention thousands of others who suffer health quality issues because of the air quality they breathe. This proposal means more asthma attacks, missed school days, missed family outdoor activities and increased burdens on our already strained healthcare system.

EPA's refusal to protect children from particle pollution makes them more vulnerable to severe illness especially during a respiratory pandemic is just deeply troubling. I want to tell you a little more about our family, our routine to protect our son. It has become a routine to check the air quality index on mornings do outdoor activities. Sadly, in days when the air quality index is poor we know it's going to be a tough day for our son. We need to remember to bring his inhaler wherever we go and when his inhaler is not effective we need to use his nebulizer or as we call it, his Darth Vader mask.

After summer camp, outdoor basketball games and family barbecues in the past two years starting from the hottest and worst air quality days we had to

rush home for his nebulizer treatments. My son misses out on sporting events, camps, barbecues and other fun activities on hot summer days when air quality is poor. The idea that the current standards may not be protecting him and that Administrator Wheeler is basically shrugging his shoulders at that is unacceptable to me as a mom.

Declining to strengthen these standards is a major setback for asthmatic children and other vulnerable populations. I urge the Environmental Protection Agency to strengthen the particle pollution standards in order to protect public health. Our children's health and future depend on it. Thank you again for taking the opportunity for me to testify. Thank you.

Rhea Jones: Thank you, Elizabeth. I will pause now to see if there's any clarifying questions from the panel. OK, hearing none let's move to our next speaker.

Operator, please un-mute the line for Steve Milloy.

Operator: One moment please.

Steve Milloy: Can you hear me?

Rhea Jones: Yes, I can hear you. Please say your name and spell it for the record.

Steve Milloy: Steve Milloy, S-T-E-V-E, M-I-L-L-O-Y.

Rhea Jones: Thank you. You can proceed with your testimony.

Steve Milloy: Good morning. I am Steve Milloy. I publish JunkScience.com. I commend EPA for leaving the PM2.5 NAAQS where they are, although they really should be rolled back entirely.

The PM standards were conceived and executed by EPA staff and EPA funded researchers who committed large-scale far-reaching scientific fraud. EPA's CASAC has acknowledged as much in its letter reviewing the EPA staff's draft PM assessment. CASAC stated that the EPA staff's PM assessment, quote, "does not provide a sufficiently comprehensive systematic assessment of the available science due largely to a lack of a comprehensive, systematic review of relevant scientific literature."

CASAC said there was, quote, “inadequate evidence and rationale for altered causal determinations and a need for clear discussion of causality and causal biological mechanisms and pathways,” end quote.

That was a polite way of saying the standards are entirely fraudulent. First, the EPA epidemiology is not science, it's just statistics. And statistical associations by themselves are not science. EPA has admitted in federal litigation with me that epidemiology alone is inadequate for determining causality. This is no surprise, it's basic epidemiology.

Additionally the data used in the PM epidemiology are garbage. The exposure data are poorly guesstimated and often overwhelmed by other PM exposures like smoking. It's no wonder that EPA staff allows agency grantees to hide their data from public scrutiny. And let's not forget that the EPA staff ignored all the PM epidemiology studies that report no association between PM and death and other health effects.

Let's look at the PM toxicology. There is no lab animal experiment that has produced deaths in animals despite intense PM exposures. There is no human clinical experiment that has produced health effects, let alone deaths, despite exposing the elderly and sick to intense PM levels. None of this is surprising since there are no real-world examples where PM has killed anyone ever. Studies that show smokers who quit by age 40 will have inhaled thousands of times more PM than non-smokers, yet they have the same life expectancy.

PM levels in Chinese and Indian cities can be a hundred times greater than U.S. outdoor air, but there are no reports of actual deaths from inhaling Chinese or Indian air. Historic incidents of deadly air pollution were caused by city gases concentrated in the air by weather phenomena, they were not caused by PM.

Coal miners and diesel workers have large exposures to PM but they had greater life expectancy than workers not occupationally exposed to PM. And guess what, when PM levels are reduced deaths don't go down, yet EPA staff ignores this real-world data, doubles down on fraudulent science and secret science and raves that PM is more dangerous than ever. Harvard fraudsters

have now even attempted to link COVID-19 deaths with PM2.5. It's a shameless con. And the fraud is not just about deaths, PM in the air doesn't cause or exacerbate asthma or any other health effect whatsoever, all the foregoing is indisputable, so how did all this fraud take hold in the first place?

Since 1996, the last time CASAC told EPA that there is no evidence PM kills EPA staff has funneled at least \$600 million to university researchers willing to commit scientific fraud in order to invent and maintain the lie that PM kills. After the 1996 CASAC review EPA staff saw to it that future CASAC review boards were staffed and controlled by the same researchers funded to commit the PM science fraud.

The current CASAC board is the first one in more than 20 years not to be run by the fraudsters. And I would be remiss if I omitted mention of the Health Effects Institute, HEI is funded by EPA and car, truck and engine manufacturers. The industry guys want more stringent PM standards so they can sell ever more pointlessly expensive vehicles and engines. HEI is hardly an objective forum. Others and myself have asked HEI to sponsor debate on PM, but HEI has repeatedly dodged these requests, apparently since the last thing it wants to do is have the PM fraud exposed.

So where does all these leave us? Well for now CASAC has advised PM ...

Fred Thompson: One minute.

Steve Milloy: That's great, but the future we'll undoubtedly see more desperate PM science fraud come out of places like the Harvard T.H. Chan School of Public Health which in case you didn't know is funded by Communist China.

None of the PM fraudsters can reputationally afford to walk back their junk signs nor would their Chinese overlords want them to. China is more than happy to fund research calling for insanely stringent PM rules to sabotage the American economy, in short PM fraudsters got to lie until they die.

Finally if you don't believe what I have said you just ask the HEI's Dan Greenbaum to sponsor a public forum where these issues are openly and

honestly debated. Just don't hold your breath waiting for them to do it.
Thank you for listening.

Rhea Jones: Thank you for your testimony. Let me pause and just see if there's any comments or questions from the panel.

OK. Thank you, Mr. Milloy. Let's move on to our next two speakers who are Liz Mueller and Tracy Sabetta.

Operator, would you please open the line for Liz Mueller?

Operator: One moment please. And it's open.

Rhea Jones: Hello, Liz, are you with us?

Liz Mueller: I am here.

Rhea Jones: OK. Please say and spell your name for the record.

Liz Mueller: Absolutely. L, L-I-Z, Muller, M-U-E-L-L-E-R.

Rhea Jones: Thank you. You can proceed with your testimony.

Liz Mueller: Thank you. As I said, my name is Liz Mueller and I am the national director of Advocacy for the American Lung Association Healthy Air Campaign. Thank you for the opportunity to speak on this very important topic and I hope that you listen carefully to all of the comments provided during this hearing.

I am here today to ask the EPA to listen to the science and set a stronger National Ambient Air Quality Standard for fine particle pollution.

The American Lung Association recommends strengthening the annual standard to 8 micrograms per cubic meter because a more protective limit will lessen the health impacts associated with particle pollution and will help save lives. I am also joining some of my colleagues in asking for at least a 30-day extension of the comment period.

I wanted to utilize my time today to call attention to some key findings that were reported in the American Lung Association's 2020 State of the Air Report released last month to help emphasize the need to implement stronger standards for particulate matter pollution.

The Clean Air Act has helped shepherd strong improvement in air quality over the last 50 years but that progress is being threatened by climate change which is already wreaking havoc on public health. Particle pollution is smaller than the diameter of a human hair but is a lethal air pollutant. It can penetrate deep into the lungs, trigger asthma attacks, damage tissues and cause cancer and cardiovascular problems.

It is released mainly from the combustion of carbon-based fuels and factories, power plants, and vehicles but can also form during wildfires. Therefore, places with high-power plant emission, large numbers of polluting vehicles, high use of wood stoves for home heating or higher prevalence of smoke due to wildfires tend to see more dangerous levels of air pollution but it is important to note that this pollution is not confined to the geographical areas of one city. When particle pollution exist in the atmosphere no one is entirely safe.

The State of the Air report found that 21.2 million people live in counties with unhealthy levels of particle pollution or soot but that number only capture people living in the areas where levels exceeded the current standard which science has shown is too weak and leads to thousands of unnecessary deaths. The more accurate number of individuals at risk for unhealthy air due to particle pollution is likely far greater because even at levels below the current standards health complications can occur.

This is an issue of great importance to me not only because of my affiliation with the American Lung Association, but because I myself have been shut inside on days when the air quality is particularly poor. As a severe allergy sufferer, spending time outside when pollution levels are high can worsen my symptoms and cause them to linger long past when I come indoors. On multiple occasions I've been rendered nearly incapacitated by the symptoms and they aren't tied to the commonly referred to allergy season. It is a year-

round personal challenge. If I feel this as an allergy sufferer imagine how the 24.8 million Americans with asthma must feel.

Such a monumental proposal that would have serious health risk including premature death deserves enough time for the health and medical community to comment as they juggle responding to the COVID-19 crisis and caring for their families. We are asking for at least a 30-day comment period extension to give doctors, physicians, and the medical professionals who are the ones responsible for responding to the health impacts of particle pollution the chance to make their voices heard.

I will end my testimony today by again asking that EPA listen to the strong science that shows the current standards are too weak to adequately protect public health and to instead propose to strengthen the standard to a more protective one that will lessen the impact to lung, developmental and cardiovascular health and save lives. Thank you for your time.

Rhea Jones: OK. And thank you for your testimony. Are there any clarifying questions from the panel? OK, then, thank you, Ms. Mueller.

Let's move on to our next speaker. Operator, would you please open the line for Tracy Sabetta?

Operator: One moment please. And the line is open.

Tracy Sabetta: Good morning.

Rhea Jones: Hi. Could you please say and spell your name for the record?

Tracy Sabetta: Sure. My name is Tracy, T-R-A-C-Y, Sabetta, S as in Sam, A-B-E-T-T-A.

Rhea Jones: Thank you. You can proceed with your testimony.

Tracy Sabetta: Thank you. Good morning and thank you so much for the opportunity to testify today on the current particulate matter standards. My name is Tracy Sabetta and I am a member of Moms Clean Air Force from Pickerington, Ohio just outside of Columbus. I am a mom, a daughter, and someone who

spent decades advocating for public health protections, both personally and professionally.

While it's beginning to sound like a worn-out cliché after just a few months, it is certainly appropriate to say that we are living in unprecedented and challenging times. Everyone is facing different struggles to the current crisis but we have all had to take a step back, process what the disruption of the pandemic means for how we do our work, educate our children and perform our daily routines.

We've had no choice but to rely on data and the best available science to advise us on how to adapt and change the way we live our lives to ensure our families stay safe, and healthy and to protect our future. But on April 14th the EPA announced that it would not be choosing that same path of change and revision, but instead would be proposing to retain the current particulate pollution standards designed to protect public health rather than taking this opportunity to strengthen them.

Even in the face of a robust body of scientific research showing that particle pollution still kills tens of thousands of Americans each year, the current standards may not be considered for improvement.

I've spent years working with the American Lung Association and others in Ohio to release their annual State of the Air report that outlines whether or not counties make the grade for ozone or particle pollution and reports the number of adult and pediatric asthma cases, COPD cases and other information critical to help make decisions on how to protect public health.

While we have seen some progress in Ohio, we continue to see pediatric asthma cases top 200,000 children in our state. I am fortunate that my daughter was not born with a respiratory illness, but many of her friends were not so lucky. As a parent volunteer for my daughter's high school marching band, it was not uncommon to see student after student dropping from the ranks on bad air quality days to use an inhaler and struggle to catch their breath before returning to their practice.

This is suffering that could be eased through a steadfast commitment to revising air quality standards to reflect sound science and technology. I don't have the authority to make those decisions and those who do are turning their backs on our kids. As parents, we consider it our moral obligation to protect our children's health and future even those of us with now grown children are concerned about the health of the planet we're leaving our grandchildren in future generations.

This proposed embrace of the status quo demonstrates that the EPA and the current administration are prepared to continue turning their backs on scientific consensus in our children's well-being. They are aware that they can do better. They understand how to do better and yet they're refusing to do better for Americans.

Even at levels below the current standards, particle pollution is known to increase premature deaths and caused devastating health impacts. The current EPA proposal willingly jeopardizes the health of the Ohioans that I care about. Well, we can't know for sure what tomorrow will look like for our work or our world, but often the remedy for uncertainty is action. And because we can be sure, we will need to deepen our focus on public health here at home and we can be sure that we will need to come out of this current prices more united around the need for common sense, effective solutions.

So I urge you to take action and embrace those solutions and strengthen the particle pollution standards in order to protect public health. Thank you again for the opportunity to testify and please be safe.

Rhea Jones: Thank you. I will pause to see if there are any questions from the panel.

Fred Thompson: Ms. Sabetta, this is Fred Thompson. You referenced the state of the annual air report, is that a document that you could provide for the record?

Tracy Sabetta: Sure, it has been referenced, it's the 2020 State of Air Report, so that can be provided, yes.

Fred Thompson: Thank you.

Rhea Jones: OK, thank you, Tracy for your testimony. Now moving on to the next two speakers, Elizabeth Brandt and George Allen. Operator, can you please unmute the line for Elizabeth Brandt.

Operator: One moment please. And the line is open.

Rhea Jones: Hello,

Elizabeth Brandt: This is Elizabeth Brandt. It's E-L-I-Z-A-B-E-T-H my last name is Brandt, B as in Boy, R as in Rain, A-N-D as in Dog and T as in Tree. Thank you.

Rhea Jones: OK, you can proceed with your testimony.

Elizabeth Brandt: OK, hello and thank you so much for listening to my testimony today. My name is Elizabeth Brandt and I'm a social worker and regional sales manager for Moms Clean Air Force. I'm a mom to Valencia age seven and Natalia age four. Moms Clean Air Force is an organization of more than one million parents across America who are taking action against air pollution and climate change. We are motivated by our love for our children and we are asking EPA to stand strong in protecting their health.

I insist that the EPA always keep in mind that the health of American kids is at stake in your decisions. I grew up next to a copper smelting site in Tacoma, Washington that has impacted my family's health. What I've learned from our family's experience is that American families must have a voice in decision making about environmental policies that impact our health. I lived most in my life in the Seattle Tacoma area, but now I live in Maryland. When I had my first child, I was living close to the port of Seattle and air quality was a challenge at times.

It was even a more obvious problem at my office. I was working in adoptions and foster licensing at the Office of Indian Child Welfare. Our office was a stone's throw from one of the port's truck entrances. I supposed that this office space is affordable, but as a pregnant woman in this office, I was aware that the air quality in the city as a whole and particularly in our office wasn't good for the baby I was carrying. At times, I had headaches that seemed to be related to an industrial chemical smell in the air.

I since learned that particulate matter doesn't just exacerbate asthma, it interferes with healthy lung development and causes increased rates of premature birth. As I prepared to this hearing, I decided to see how the air quality has changed in the Seattle Tacoma area. I was pleased to see that all of Washington State has considered to be in compliance for the Particulate Matter Act, however, the American Lung Association gave Seattle an F for short-term PM pollution events, Tacoma as well. What relevance does an act passed when a city can experience such a high level of pollution that impacts our health and still be considered to be in compliance?

My friends and family in Seattle had face masks well before the coronavirus erupted because at times, the air was so polluted that you can't go out without one. The NAAQS need to be strengthened to reflect the actual health harms that Americans experience due to particle pollution.

Trump's EPA is ignoring current science on particle pollution that could save thousands of lives each year. The EPA should protect our families by strengthening national standards for this deadly pollutant. As a social worker in the Seattle area, I worked with kids and families who struggled with some of the worst burdens of our society. Every child I worked with had experienced significant trauma and many have health issues. Why should they have to be exposed to air pollution on top of this ills?

Particulate matter pollution increases asthma, pre-term birth and low birth rate and these challenges are more likely to pile on to the lives of children who have African-American, indigenous and Latin background. All children deserve clean air, but when we make a choice not to mandate cleaner air, that choice disproportionately impacts children of color and low-income families.

The reasons for these disproportionate impact overlap with my office, at the Office of Indian Child Welfare who was located next to a steel recycling plant at a port entrance, in an expensive city, an undesirable location next to pollution is more affordable. An affordable housing in Seattle lands you right next to freeway or next to port operations.

Research shows that these disproportionate impacts aren't just a social worker's hunch. People who live in predominantly African-American communities have a higher risk of premature death from particle pollution than those who live in communities that are predominantly white. The current proposal jeopardizes the health of my children, but even more so, the health of children experiencing hardships who are served by America's massively overstretched child welfare system.

Our American children are our greatest resource.

Fred Thompson: Speaker has one minute.

Elizabeth Brandt: As a parent, I have one simple request for the EPA, please consider their health first in all of your decisions. Thank you.

Rhea Jones: Thank you for your testimony. Are there any clarifying questions from the panel? OK, thank you.

Operator, would you please open the line for George Allen.

Operator: One moment, please. And the line is open.

George Allen: Good morning.

Rhea Jones: Good morning. Can you please say and spell your name for the record?

George Allen: Sure. George, G-E-O-R-G-E, Allen, A-L-L-E-N.

Rhea Jones: Thank you. You can proceed with your testimony.

George Allen: Thank you. I'm a former member of CASAC and the disbanded CASAC PM review panel and a member of the independent PM review panel. My comments today do not necessarily represent the views of my employer NESCOM or those of NESCOM member states.

I want to thank the EPA staff for their efforts on the PM NAAQS review documents under difficult circumstances. EPA's proposal to retain the current annual PM2.5 NAAQS, although consistent with the majority of CASAC

members is counter to a large body of evidence for substantial mortality from exposures to annual PM_{2.5} concentrations that are well below the current standing.

Retaining the annual standard is also counter to the conclusions of the independent PM review panel's experts who are all members of the CASAC PM panel that was disbanded in 2018 and recommended a revised annual NAAQS between 8 and 10 microgram per cubic meter. This range is consistent with EPA staff recommendations in the policy assessment which says that to leave the standard unchanged, the administrator would have to "place little weight on the broad body of epidemiologic evidence reporting generally positive and statistically significant health effect associations," place greater weight on uncertainties and limitations in the evidence and analysis.

This emphasis on uncertainty that the administrator chose is consistent with the majority of CASAC members who determined that the causal linkage between PM and the observed adverse health outcomes is too weak to justify a change in the PM NAAQS and is consistent with industry's anti-regulatory playbook over the last several decades of sowing doubt on established science.

The seven member CASAC is not qualified to provide this advice to the administrator, the wide range of complex, subject areas that make up a review of the PM NAAQS cannot be adequately covered by any seven member review body. In a politically motivated move, EPA replaced the entire CASAC membership prior to this review and then counter to decades of precedent decided that a panel of experts to augment the CASAC was unnecessary.

To their credit, this CASAC requested that "the EPA reappoint the previous CASAC PM panel or appoint a panel with similar expertise." This did not happen.

When the CASAC met last month to review the secondary NAAQS and CAAQS-NAAQS, the panel of experts to augment the CASAC was still in place. Apparently, EPA is not threatened by having sufficient expertise for a

NAAQS review when the secondary standard in question does not have any chance of being promulgated separate from the primary NAAQS.

In pursuit of this administration's deregulatory agenda, EPA has been very effective in corrupting the review process. The 2016 integrated review plan approved by CASAC was mostly ignored. In addition to CASAC purging, this review was performed on an accelerated timeline where the draft policy assessment was issued before the ISA was finalized. In normal review cycles, there's almost always a second and sometimes a third draft of these key documents. CASAC's request for a second draft to the ISA was ignored and no time was allowed for a second draft of the policy assessment.

There is substantial literature out since the January 2018 ISA cut-off date that specifically addresses the issue of causality. Normally, EPA conducts a professional assessment of relevant literature published after the ISA cut-off date. This was done for the last three PM NAAQS reviews. The proposed rule does not include this professional assessment.

I have submitted a list of recent literature on PM mortality causality to the docket and encourage EPA to listen to the mainstream evidence and its robust weight of evidence for PM health effects, not to the few who rely on elevating uncertainty and doubt to an art form, an approach often used by industry to block attempts to improve public health.

Finally, disparities in health risks borne by minority communities must be taken into consideration ...

Fred Thompson: Speaker has one minute.

George Allen: ... in setting a PM NAAQS with an adequate margin of safety. The DNL 2017 NEGM analysis showed that blacks have a PM mortality risk that is three times higher than the general population. The current NAAQS is clearly not protective for this vulnerable sub-group.

It is important to note for the record how dysfunctional this review cycle was. For more detail on process and scientific recommendations, please see the

written comments submitted to the docket by the independent PM review panel. Thank you for the opportunity to comment today.

Rhea Jones: And thank you for your testimony. Are there any clarifying questions from the panel? OK, thank you. Let's move on to our next two speakers who are Lucia Urreta and Emily Wolf. Operator, would you please unmute the lines for Lucia Urreta.

Operator, do we have Lucia Urreta on the line?

Operator: One moment. OK, Lucia Urreta, your line is open.

Lucia Urreta: Thank you.

Rhea Jones: Hi, Lucia. Could you please say and spell your name for the record?

Lucia Urreta: So I am Lucia Urreta, L-U-C-I-A U-R-R-E-T-A.

Rhea Jones: OK, thank you. You can begin your testimony.

Lucia Urreta: Thank you. Thank you very much members of the EPA staff for letting me have this time to speak. Hello, my name is Lucia Urreta and I'm a high school student from Houston. I'm also a climate activist since Houston is one of the areas that is most affected by climate change and environmental hazard.

The proposed (inaudible) the needs of the American people. As a nation, we are facing a health crisis and we must do everything in our power to protect the people most affected by this virus. Yet the guidelines for the amount of particle pollution in the air are not being tightened.

Particle pollution results in respiratory diseases which increases the chance of serious hospitalization and death from COVID-19. In order to lessen deaths due to Coronavirus, we must also keep in mind the environmental factors that facilitate this virus to kill more people, actually the middle class and poor. Poor people are in more risk for illnesses due to particle pollution since one, many lower class people work in factories and (inaudible) particle pollution damaging their bodies. The lack of money for healthcare is also a factor and it

is impossible to treat a respiratory disease if you cannot afford to go to the hospital.

Interestingly, according to the American Lung Association, a report (inaudible) risk for results in respiratory conditions such as air quality with resources (inaudible) non-white people even though they make up 43 percent of the population. We are in this together, all of us need to be included no matter the colors of skin, no matter the economic status, all Americans should be able to breathe clean air that will not make them sick.

It is part of the government's job to protect the people and this includes making sure that we can all breathe without increasing our risk of getting a respiratory disease and premature death from the coronavirus. Although I am young, I have a solid 50 years, possibly even 60 years ahead of me and I do not want my life to be cut short because of unclean air that could possibly make me have a disease plus with my peers. Thank you for your time and opportunity to testify.

Rhea Jones: Thank you, Lucia. Are there any – I'm sorry, yes, thank you, Lucia. Are there any comments or questions from the panel? OK, hearing none, thank you for your testimony. We'll move on to our next speaker who is Emily Wolf. Operator, would you please unmute the line for Emily Wolf?

Operator: Emily Wolf, your line is open.

Emily Wolf: Hi, can you hear me?

Rhea Jones: Yes, Emily. Thank you. Can you please say your name and spell it for the record?

Emily Wolf: Yes, Emily Wolf, E-M-I-L-Y W-O-L-F.

Rhea Jones: Thanks. You can proceed with your testimony.

Emily Wolf: Thank you. Thank you for your time today. I'm speaking on behalf of the National Parks Conservation Association as New Mexico Program Coordinator. The San Juan Basin in northwestern New Mexico and Permian

Basin in Southeast New Mexico have seen oil and gas lease sales quadruple in the last four years, oil and gas production on public lands across the U.S. has ramped up significantly since the Trump Administration has opened up millions of acres for oil and gas leasing and increased the frequency with which lease sales are held.

Oil and gas production result in significant air pollution including fine particulates. These emissions in turn have had a drastic adverse impact on community health, air and water quality and greatly threaten the geologic, cultural and environmental resources protected by Carlsbad Caverns National Park in the Permian, Chaco Culture National Historical Park in northwestern New Mexico and countless others.

This rampant increase in drilling has resulted in spiking emissions of criteria air pollutants, the public health effects of which are born by the communities near this industrialized development. High emissions of NOX from oil and gas drilling leads to the formation of PM2.5 and the impacts this has had on the quality of air for residents of the communities in the Permian is reflected in higher rates of asthma, respiratory diseases, risk to pregnant women and children, lung and heart disease among other impacts.

Air quality in both Chaco and Carlsbad has been degraded and NOX impedes visibility at the parks and it impacts the region's unique flora and fauna. The disproportionate and unjust impact PM2.5 has had on community health and our natural environment calls for the urgent need for EPA to set robust primary and secondary standards for this pollutant and take into full consideration the expert opinions in scientific data available to consider when establishing our national air standards which are especially critical to mitigate the impacts of industrialized oil and gas development on public health and welfare in my region.

EPA has been moving full steam ahead on a variety of rulemakings. In this case, not only are they moving forward with a process that harms human health, they're doing so in a way which suppresses public input from those who it would affect the most. The New Mexico Department of Health has noted that low income populations and communities of color face not only

disproportionate asthma risk, but also significant difficulty managing their asthma in part due to lack of access to healthcare.

Eddy County near Carlsbad, other counties near the San Juan Basin have some of the highest rates of asthma emergency department visits in New Mexico. In 2017, over 40 percent of San Juan County residents near Chaco stated they have difficulty accessing healthcare often due to geographic concerns, but also for economic reasons. Cumulative health effects results throughout the course of a life of a person suffering from air pollution related asthma, children with asthma are much more likely to miss school hurting their educational prospects as well as their health with some adverse health effects enduring into adulthood and resulting in significant funding losses for local schools.

Communities in the greater Chaco region of northwestern New Mexico has been subjected to worsening air quality caused by oil and gas development. A recent study found that exposure has possibly increased the risk COVID-19 poses to Navaho families living amidst oil and gas development. Air quality concerns, particularly health impacts resulting from PM2.5 plagued the eastern chapter houses of the Navaho Nation for decades, but demands for mitigation have fallen on deaf ears.

The lack of air quality monitoring equipment also leads to gaps in our understanding of the full and cumulative impact that particulate matter and other pollutants resulting from these industrial practices have on community health and ecosystems. EPA has not updated the 24-hour standard for PM2.5 since 2006 and has not updated the annual standards since 2012 and updates to both annual and 24-hour is sorely needed.

In addition, secondary standards need to be set based on appropriate averaging times to protect public welfare. These welfare standards are fundamental to protecting the resources that are to be safeguarded in our national parks like Carlsbad Caverns. EPA must thoroughly review all recent science pertaining to the effects of fine particulate ...

Fred Thompson: Speaker has one minute.

Emily Wolf: ... pollution on the public welfare and considering response to all evidence submitted for secondary standards. EPA did not do this in its proposed secondary standards.

More stringent standards have been recommended by scientists. Numerous studies show that harms of fine particles to wildlife, water, soils, plants, visibility and other resources but they've been ignored by decision makers. We urge EPA to fully consider the wealth of scientific information it appears the agency has bypassed and revise downward the proposed primary and secondary standards.

Given the exponential increases in industrial activity especially in the Permian and the ground ecosystem and health impacts to residents, stronger standards have never been more important. Thank you very much for your time today.

Rhea Jones: Thank you, Emily. Are there any clarifying questions from the panel? OK, thank you for your testimony. We should move on to our next two speakers who are Todd Larsen and Matthew David. Operator, could you please open the line for Todd Larsen.

Operator: And Todd Larsen's line is open.

Todd Larsen: Thank you. Yes, my name is Todd Larsen, T-O-D-D L-A-R-S-E-N. Thank you for the opportunity to speak today. I'm an Executive, Co-Director at Green America which is located in Washington, D.C. Green America is a national non-profit organization that works to create a green economy that works for all people on the planet. We represent over 200,000 individuals and 2,500 businesses nationwide that work to create a more sustainable and socially just economy and country.

And important part of a well-functioning economy that benefits all people is clean air. When people breathe air that is high in particulate or ozone pollution, it has negative impacts on their health and can lead to premature deaths of thousands of people nationwide. This is tragic for the people involved and their families and it also harms us as a nation, since we are losing out on the contributions of thousands of people each year who are too sick to work or who have died prematurely.

It also causes billions of dollars in healthcare expenses and lost time from work. For both human health and economic reasons, it's very concerning to Green America that the EPA is proposing to keep the current, inadequate particulate matter standards in place. Green America has members across the country and many of our members, both individuals and businesses, live and work in states like Texas, California and Midwestern states that suffer from high particulate pollution all year long.

For members who have pre-existing conditions like COPD or asthma, particulate pollution can land them in the hospital which is particularly scary during this time of a pandemic. Communities of color and frontline communities are going to bear the worst burden of EPA's misguided actions. These communities are suffering from air pollution and experiencing chronic conditions. The novel coronavirus is hitting these communities much harder with disproportionately higher rates of death in part due to these pre-existing conditions.

The purpose of the Clean Air Act is to protect the American public. In order to do so, the EPA must follow the science and research clearly shows the standards for particulate matter need to be strengthened. The current annual limit on particulate matter of 12 micrograms per cubic meter is not sufficient to protect the health of Americans.

Recent U.S. and Canadian studies find evidence of premature deaths even when levels are at or below 8 micrograms per cubic meter and EPA's own expert analysts found that meeting an annual fine particulate matter standard of 9 micrograms per cubic meter would prevent up to 12,500 premature deaths each year in 30 metro areas.

However, that science is nowhere reflected in the EPA's current proposal. The entire process was flawed. The EPA Administrator, Andrew Wheeler pursued a rushed timeline, disbanded an expert panel of scientists who were reviewing the evidence and restricted the review of scientific studies. The process was designed to disregard the science and calls into question the EPA's proposal to keep the current particulate matter standards in place.

Doing so will clearly harm Americans' health nationwide and further damage our economy at a time when we can afford neither. That is why Green America instead supports the recommendations of the American Lung Association to strengthen the annual particulate matter standard to 8 micrograms per cubic meter and a 24-hour standard for 25 micrograms per cubic meter.

Instituting these standards would fulfill the EPA's mission of protecting human health and the environment. Thank you.

Rhea Jones: Thank you. Are there any clarifying questions from the panel? OK, let's move on to our next speaker. Thank you for your testimony. Operator, could you please open the line for Matthew David?

Operator: One moment, searching. I'm not showing Matthew David.

Rhea Jones: OK, we'll come back to him. We are just a couple of minutes ahead, so we'll move forward and then come back and check for Matthew. Our next two speakers are Jennifer Cantley and Barbara Gottlieb. Operator, could you please open the line for Jennifer Cantley?

Operator: One moment, searching. No Jennifer.

Rhea Jones: OK. Can you please open the line for Barbara Gottlieb?

Operator: One moment please. No Barbara.

Rhea Jones: OK. We can try our next two speakers and then perhaps we'll take a pause because we are starting to get just a little ahead. So our next two speakers then would be Susan Noble and Weston Wilson. Could you please open the line for Susan Noble?

Operator: One moment. I can't find Susan.

Rhea Jones: OK, let's try Weston Wilson. Can you open the line for Weston Wilson?

Operator: One moment. We do not have Weston either.

Rhea Jones: OK, well why don't we take a moment to check our listener line to see if there's any listeners who want to provide testimony at this time.

Operator: All right. And participants, if you have a question at this time, just press star then one on your telephone keypad to get in the queue. Again, if you have a question at this time, press star one. And I'm not showing any questions at this time.

Rhea Jones: OK. Well, at this point, I don't want to get too far ahead of our speakers who have registered for a specific time, so let's try a 10-minute break and then we'll come back and check the line. So, we'll start back at 12:10 Eastern Time. No need to disconnect the line.

(Break)

Rhea Jones: OK, everyone, this is Rhea Jones and that concludes our 10-minute break. Thank you for entertaining that break to help us keep on schedule with our registered speakers. At this time, I'd like to check the line to see if Matthew Davis is with us.

Operator, can you unmute the line for Matthew Davis?

Operator: One moment, please. The line is open.

Rhea Jones: Hello, Matthew. Can you please say and spell your name for the record?

Operator: Matthew, check your mute button, please.

Matthew Davis: Sorry about that. This is Matthew Davis. My name is spelled M-A-T-T-H-E-W and last name is D-A-V-I-S. Matthew Davis.

Rhea Jones: Thank you. You can go on with your testimony, please.

Matthew Davis. Hi. Thank you. And thank you for the opportunity to provide comment and opposition to the proposed rule to not strengthen or retain the National Ambient Air Quality Standards for Particulate Matter or PM NAAQS.

My name, again, is Matthew Davis and I'm Legislative Director of the League of Conservation Voters or LCV. I'm also a former EPA staffer and health scientist and worked on the 2012 Particulate Matter Standards.

I would like to say on behalf of LCV's network of more than 2 million members, our (Lanex) community organizing project, (TISPA) and our network of 30 state partner organizations around the country, this proposal is unacceptable. This would have been a bad policy decision even before we were facing a pandemic. That early research indicates it's exacerbated exactly by this kind of air pollution and now it is simply unthinkable.

The science have advanced in the near decade since I worked on the 2012 PM NAAQS and clearly shows that stronger limits are needed to protect public health with an adequate margin of safety. The EPA must follow the science and statutory requirements and set stronger NAAQS. The PM2.5 annual standard should be lowered to eight micrograms per meter cubed and the 24-hour standard she be lowered to 25 micrograms per meter cubed.

In the midst of a pandemic that is exacerbated by air pollution, the last thing that EPA should be doing is making it harder to breath and maintaining inadequate protection from pollution. Study show that air pollution exposure is linked to a greater risk of respiratory infections and early evidence suggest that exposure to air pollution may make people more vulnerable to COVID-19 infection and may increase the severity of the disease or risk of dying if they get sick.

To make matters tragically worse, these high pollution areas are far more likely to be in communities of color and low wealth communities. Scientists suspect that the disproportionate number of cases and deaths in communities of color around the country from Detroit to New Orleans to Prince George's County are likely in part because of this environmental injustice created and compounded by structural racism and other cumulative impacts.

The science has shown time and again that particle pollution is deadly especially (crime) PM called PM2.5. These particles come from coal-fired power plants, wildfires, refineries, industrial facilities, wood-burning heaters

and diesel vehicles among others. I also know that – we also know that the current limits do not sufficiently protect Americans especially children with developing lung and brains and adults with lung and heart disease.

EPA's own scientists and policy experts, some of my former colleagues have pointed out that over 12,000 fewer people would die each year if the annual PM_{2.5} standard were strengthened to nine micrograms per meter cubed. In addition to causing premature death, PM is associated with many other health effects from asthma and respiratory problems to stroke and cardiovascular disease to neurodevelopmental problems and dementia to low birth rate and preterm births.

Despite what some industry or with other financial interest in the outcome of this rule may try to claim, science has found no threshold below which there aren't health effects. The fact is our bodies don't respond well to having microscopic particles from the combustion of fossil fuels getting into our lungs and our bloodstream. There's nothing good about soot any level.

This refusal to make the air cleaner with a stronger PM NAAQS comes on the heels of recent announcements that the EPA suspended enforcement, rolled back clean air standard for cars, standards for air pollution from waste, coal-fired power plants and deadlines for requiring cleaner wood-burning heaters. The rollback for waste, coal-fired power plants primary located in coal country in West Virginia and Pennsylvania will allow them to emit more pollution which could lead to increased PM in the area which already contains counties with soot pollution levels above the current and past standards.

And delaying the requirement for cleaner wood-burning heaters will mean that places like Idaho, Northern California ...

Fred Thompson: The speaker has one minute.

Matthew Davis: ... Montana and Colorado will have a harder time attaining and maintaining the standards. I challenge the administration to legitimately show how the increased pollution from these rollbacks won't make it harder for these counties to attain or maintain compliance with the already inadequate 2012 PM NAAQS.

The Trump administration's disregard for science and scientists advice in the middle of a public health crisis is shameful and especially so given these are favors for polluting industries at great risk to public health.

The EPA's proposed rule fails to meet its core requirement under the Clean Air Act, to protect public health with an adequate margin of safety. Now is the time especially amid an unprecedented respiratory pandemic to strengthen this PM standards and safeguard families' health. Thank you.

Rhea Jones: Thank you for your testimony.

Are there any clarifying questions from the panel? OK. Hearing none, thank you. We'll move on to our next registered speakers who are Jennifer Cantley and Barbara Gottlieb.

Operator, could you please unmute the line for Jennifer Cantley.

Operator: We have no Jennifer.

Rhea Jones: OK. Well, can we check for Barbara Gottlieb, please?

Operator: One moment, please. No Barbara, ma'am.

Rhea Jones: OK. Our next two registered speakers are Susan Noble and Weston Wilson. Could you please unmute the line for Susan Noble?

Operator: We have no Susan.

Rhea Jones: OK. Can you please check the line for Weston Wilson?

Operator: No Weston Wilson.

Rhea Jones: OK. Our next two registered speakers then would be Ulla Reeves and Leah Barbor. Could you please check the line for Ulla Reeves?

Operator: Thank you. Ulla Reeves, your line is open.

Ulla Reeves: Hello. Can you hear me?

Rhea Jones: Yes, I can. Thank you. Would you please say and spell your name for the record?

Ulla Reeves: Yes. My name is Ulla Reeves. First name is spelled U-L-L-A. Last name is R-E-E-V as in Victor-E-S.

Rhea Jones: OK. You can proceed with your testimony.

Ulla Reeves: Great. Thank you. I'm the Senior Advocacy Manager with National Parks Conservation Association on our clean air team and I appreciate the opportunity to speak today.

NPCA and our 1.4 million members and supporters care deeply about the health and wellbeing of our nation's most revered natural areas and historic resources as well as the health of all people and those who recreate work in our national parks. From the Great Smoky Mountains to Yosemite National Parks and Harriet Tubman to César Chávez National Historic Parks and Monuments, these are all national treasures that deserve clean, healthy air.

First, to echo our request submitted on May 11, we asked EPA to suspend the deadline for public comments considering the COVID-19 national public health emergency. Sixty days is insufficient for the public to be fully engaged on such a critical issue even in normal times and these are not normal times. EPA needs to allow for public comment on this proposal until the crisis abates. Ninety days should be the minimum time for this comment period once the suspension is lifted.

The NAAQS are foundational public health and ecosystem safeguards and fine particulate matter is one of the most dangerous and lethal of our criteria pollutants with no known safe level of exposure for humans. EPA's proposal to keep the current PM2.5 standards in place is inadequate and simply unacceptable.

NPCA stands with our allies in the medical and public health communities in calling for EPA to strengthen the annual primary standards to eight micrograms per cubic meter and the 24-hours standard to 25. This is in

accordance with science which clearly shows that stronger limits are needed to protect public health with an adequate margin of safety.

Likewise, the secondary standards which are intended to protect the ecosystems and natural resources as the Clean Air Act mandates also ought to be independently and adequately evaluated and possibly even set lower than the strongest level for human health. EPA must thoroughly review all recent science pertaining to the effects of fine particle pollution on the public welfare and consider and respond to all evidence submitted for the secondary standards.

Furthermore, the secondary PM_{2.5} standard should be revised based on averaging times that are consistent with the Clean Air Act's welfare requirements.

Fine particulate matter is a primary driver of haze and visibility impairment and negatively affects many ecosystem functions. Regional haze obscures the stunning views in many of our prized national parks and wilderness areas. In the Grand Canyon, 33 percent of the haze pollution found there originated from particle pollution generated in California.

And if we're seeing it, we're breathing it. When people are outdoors exercising, working and taking in the vistas, they are more vulnerable to the negative effects of PM_{2.5}.

To expound on the specific ecosystem harm fine particle pollution is made of many different compounds which are all independently harmful and PM_{2.5} can be directly deposited on land and in the water causing damage from acidification, eutrophication and challenges in soil and water chemistry. When deposited on plants, PM_{2.5} can affect their ability to metabolize and photosensitize correctly.

Fine particles entering aquatic ecosystems can affect all organisms both directly and through bioaccumulation. Similar to mercury, PM can be absorbed by fish, frogs, snails and other aquatic life. These critters are consumed and the particulate matter travels up the food chain increasing in

concentration with each step ultimately to fish-eating predators including eagles, osprey, otters, pelicans and grizzly bears.

Those concentrations of PM have untold health effects on our wildlife. Fine PM is also ...

Fred Thompson: The speaker has one minute.

Ulla Reeves: ... a significant component of acid rain which is comprised of nitrogen and sulfur gases that become acids but they are also – but they also become secondary particles through chemical transformation. And we know the devastating effects of acid rain on our ecosystems particularly in the eastern U.S. and Rocky Mountains.

There are numerous ecosystem effects of acid deposition. The collective effects of fine particulate matter on our ecosystems are extensive and deeply problematic for the health of our national parks, places that bring enormous economic benefits to surrounding communities. Many of these places are afforded the highest level of protection by Congress for the protection of their air quality through the regional haze program. Stronger primary and secondary standards would go a long way toward assisting these places in achieving clean air goals while better protecting public health and the precious ecosystems within their boundaries.

Thank you for your time and consideration to strengthen the PM2.5 NAAQS.

Rhea Jones: Thank you for your testimony.

Are there any clarifying questions from the panel? OK. Thank you. Let's check for Leah Barbor.

Operator, could you please open the line for Leah Barbor?

Operator: Yes, ma'am. Let's see, Leah, your line is open.

Leah Barbor: Good afternoon. Hello.

Rhea Jones: Hi. Can you please say and spell your name for the record?

Leah Barbor: Sure. My first name is Leah – L-E-A-H. Last name Barbor – B-A-R-B-O-R.

Rhea Jones: OK. Thank you. You can proceed with your testimony.

Leah Barbor: Good afternoon. My name is Leah Barbor and I'm the West Virginia field organizer for Moms Clean Air Force.

I would like to begin today by telling you why I chose to participate in this hearing. I'm a mother raising two children ages one and a half and four in Upshur County, West Virginia. Our family chose to live in West Virginia so that our children can grow up close to and learn from their natural environment.

Our family lives in an off-grid home. A majority of our diet is from food we grow for subsistence. We drink (inaudible) spring water and promote and implement design systems that allow us to possibly live off the earth's natural resources while actively engaging in its beauty. You have to excuse me, I'm a little out of breath, I ran in to see if the line was open. I was outside playing with my children so my apologies for that.

Rhea Jones: No worries. No worries at all.

Leah Barbor: Thank you. There are many benefits to living this lifestyle and possibly one of the most beneficial is often what feels like the purity of our air and water. This is really important to me because my children's lungs are still developing and what they are breathing now will most certainly affect their ability to fight off and remain resilient to respiratory diseases like the novel coronavirus in the future.

My experience during the time of novel coronavirus has amplified on major sentiment in particular, one that I believe is projecting loudly off the soundboards of all people in all places during this time and that is the emphasis on protecting the integrity of our health as individuals and within our communities so that we are better prepared to biologically measure up against a phenomena like COVID-19.

With that said, the proposition to retain current standards on PM2.5 is deeply concerning to me for many reasons. First and foremost, if there are nearly 90,000 U.S. deaths a year attributed to PM2.5 pollution and according to the 2019 report released by United Health Foundation, the values in microns per cubic meter in most U.S. states are below the primary exposure limits that are currently set by EPA. It is clear that the standards are not strong enough as they are.

(Confounding) scientific evidence has shown very clearly that the standards must be strengthened in order to protect public health and by unavoidable connection, the future our children will inherit with regard to both environment and health. Promoting the health and diversity of our natural environment by abating the impacts of pollution will only help our world be more resilient to changing climate.

While we are striving in many ways here in West Virginia, a majority of our residents in our state are populations with high vulnerability to the adverse health effects of air pollution like heart disease, premature death and asthma especially by particle pollution and especially children and elderly people. Although the choices we make in our daily lives (rely) greatly upon the outcome of our life experiences, you are the experts and there is only so much a mother can do to ensure her children have clean air to breathe.

I urge you to make a responsible choice that will ensure a safe and healthy future for all Americans. Take heed to the science. Strengthen the particle pollution standards and help keep our children healthy, in school and able to thrive in their natural environment. Thank you for your time.

Rhea Jones: OK. Thank you.

Are there any clarifying questions from the panel? OK. Thank you. Let's look forward to our next two speakers who are Stephanie Klein and Lucy Molina.

Operator, could you please open the line for Stephanie Klein?

Operator: One moment. And the line is open.

Stephanie Klein: Thank you. Hi.

Rhea Jones: Stephanie, can you say and spell your name for the record, please?

Stephanie Klein: Yes. Stephanie, last name is Klein – K-L-E-I-N.

Rhea Jones: Thank you. You can proceed with your testimony.

Stephanie Klein: OK. Thank you. And thanks for the opportunity to testify today.

My name is Stephanie Klein and I'm an environmental advocate with Moms Clean Air Force. I'm a mom of two daughters ages three and five and a resident of the District of Columbia. I'm also a former career employee of the Environmental Protection Agency, having worked under Presidents George W. Bush and Barack Obama.

I have firsthand knowledge of EPA's rigorous standards for including science in its decision-making along with the fact that this agency has for many years been considered a leader among several agencies in its transparency and public engagement.

In deciding to uphold current particulate pollution standard, EPA is (passing) its usual scientific rigor along with the health of millions of Americans in communities across the country by the wayside. Available science shows that current particulate standards are not protective enough, they need to be strengthened.

Studies of millions of people whose exposure never exceeded the current standard shows that breathing particle pollution even at levels below the current standard increases mortality rate. For example a study of 61 million Medicare beneficiaries in America found higher particle pollution was associated with higher mortality even among those never exposed to levels above the current standard.

A Canadian study of over 2 million people where the average exposure was well below the current standard found that air pollution even at this level was associated with premature death. EPA is choosing to ignore the science and in

so doing failing to fulfill its mission of protecting human health and the environment.

I believe that everyone has the right to breathe clean air. And as a parent, I believe this is especially important for children. But that is not the case for millions of American children today. And while air pollution is bad for everyone's health, we know that children are especially susceptible to its effect.

Particle pollution doesn't simply aggregate asthma, it also interferes with normal lung development in children leading to long term reductions in lung function. It is, therefore, vital for our children's health that EPA strengthen the current particle pollution standards. EPA's requirement to evaluate and regulate particulate pollution in the air we all breathe is a heavy responsibility and should not be taken lightly. The health of millions of Americans including all those vulnerable populations is at stake. Available science can guide the agency to make the right decision.

And so, today, I respectfully ask EPA to take all available science into consideration and strengthen the particulate pollution standard. Thank you.

Rhea Jones: Thank you for your testimony.

Any clarifying questions from the panel? OK. Thank you. Our next speaker is Lucy Molina.

Operator, could you please open her line?

Operator: One moment, please. And the line is open.

Lucy Molina: Thank you. Buenos dias, buenas tardes. Good afternoon. God bless you. This is Lucy Molina. Thank you for this opportunity to speak. My name is Lucy Molina.

Rhea Jones: Could you please spell your name for the record, please?

Lucy Molina: Yes. My name is Lucy Molina. That's L-U-C-Y M-O-L-I-N-A.

Rhea Jones: Thank you. Please proceed with your testimony.

Lucy Molina: OK. My name is Lucy Molina. I am from Commerce City, Colorado. I'm a single mother of two. And I also care for my own mother. I live less than two miles from one of the longest running oil refineries here, Suncor, which emits 850 tons of cyanide, talk about particulate matter, right?

I live in Adams County mostly all my life here in Colorado and I also went to college in Hawaii which was a beautiful environment, protected island, right? So, I would like to speak as a parent today and as a concerned citizen.

We've already had a lot of the experts so I would like to say listen to the science. As a parent, our most treasure is our children. So, the nature of a mother is to protect the offspring. So then, as a parent, I've also had many health impacts for my family and my neighbors. We have faced – in this community, we faced cancer, I lost my grandmother two years ago from leukemia, my children have bloody noses, skin problems, eczema. My daughter has chronic headaches which is migraine and my mother has developed vertigo.

So, in this, we have – we live in a low income community that faces environmental racism and not only in Colorado, this is throughout the whole nation. So, I do urge the EPA to listen to the science. This is not time to be lenient on our regulations. This is a time to strengthen regulations and protect our community.

As we hear the science, this causes asthma, cancers, leukemia, so many health impacts which has pushed me as a parent to try to bring solutions to my community. Now, I proudly have joined the PSR Colorado which is Physicians for Social responsibility so we could acknowledge and bring light to the health impacts that particulate matters causes our communities.

So, again, I ask the EPA to listen to the science. This is a time where we need to strengthen our regulations. We have industries like Suncore in oil and gas that are self-regulated. Eight hundred and fifty tons of cyanide is very concerning to a parent.

So, again, this is (Lucy Molina) from Commerce City, Colorado. We are an environmentally stricken city not only we don't have drinkable water, but we are being poisoned in our community. So, again, please strengthen this regulations, listen to the science, and, again, I thank you for this platform. God bless you.

Rhea Jones: Thank you for your testimony. Are there any clarifying questions from the panel? OK, hearing none, thank you. We'll move on to our next two speakers who are Sparsh Khandeshi and Bonnie Holmes-Gen. Operator, could you please open the line for Sparsh Khandeshi.

Operator: One moment please. And the line is open, Sparsh.

Sparsh Khandeshi: Good afternoon. My name is Sparsh Khandeshi. I appreciate this opportunity to provide testimony on behalf of the Office of California Attorney General.

Rhea Jones: Thank you. Could you ...

Sparsh Khandeshi: Would you like me to spell my name for you?

Rhea Jones: Spell your name for the – could you please say and spell your name for the record?

Sparsh Khandeshi: Yes. My name is Sparsh, it's spelled, S-P-A-R-S-H. My last name is Khandeshi and that's K-H-A-N-D-E-S-H-I.

Rhea Jones: Thank you. Please proceed with your testimony.

Sparsh Khandeshi: Thank you. I appreciate this opportunity. Last week, my office, the Office of the California Attorney General, submitted a request for EPA to extend the comment period on EPA's proposal to retain the PM NAAQS standard.

I would like to reiterate that request today to ensure that California as well as the other State Attorneys General that signed the letter and the public have sufficient time to review EPA's proposal and providing meaningful comment.

As I will explain, additional time is critical because EPA's process for reviewing the current NAAQS was flawed and as the result, EPA's proposal requires a more searching and to review by the public, than would normally be the case.

The Clean Air Act is designed to protect and enhance the nation's air quality and to promote public health. The cornerstone of the Clean Air Act are the National Ambient Air Quality Standards. These standards are designed to protect the public from pollutants that endanger public health and must be set at a level that protects the public with an adequate margin of safety.

EPA based on the overwhelming evidence of PM's impact on public health first set standards for PM in 1971. And pursuant to the statute, EPA has reviewed and revised these standards downwards four times since 1971. Over the decades, EPA has developed a thorough and searching review process for complying with the statutory duty to review and revise the NAAQS once every five years. Pursuant to statute, EPA has sought guidance from an independent science advisory board known as the Clean Air Act Scientific Advisory Council.

In addition, EPA has supplemented what is required by statute by forming an in – sorry, a separate review panel made of a larger body of scientists that are necessary to provide guidance to the CASAC because of the wide breath of scientific knowledge needed to adequately review the NAAQS. Finally, EPA has historically built in multiple opportunities for public review and comment on its review of the NAAQS and this has included multiple opportunities for the CASAC and the public to provide EPA with feedback on its interim documents developed for the review process including the integrated science assessment and EPA's policy assessment documents.

However, this time around for this review cycle, EPA has severely departed from its established process for reviewing the NAAQS. First, in 2017, Administrator Pruitt issued the back to basics directive. This directive has prohibited scientists, the best qualified scientists that have received funding from EPA from serving on the CASAC. EPA had previously allowed these very scientists to serve on scientific advisory boards because EPA had

determined that these were the best experts in their fields and would provide EPA with the necessary scientific guidance to adequately review the NAAQS.

Second, EPA disbanded the PM NAAQS review panel, the additional working group that EPA formed because the seven-member CASAC did not have a sufficient breadth of knowledge to adequately review the NAAQS. EPA's CASAC this time around noted this deficiency in their knowledge and requested that EPA reform the PM review panel. However, EPA declined to do so.

Finally, EPA fail to provide adequate opportunity for public review in comment ...

Fred Thompson: Speaker has one minute.

Sparsh Khandeshi: ... adequate review and public comments on the interim documents such as the integrated science assessment and the policy assessment. For example, this time around, EPA issued the policy assessment for public comment before it even finalized the integrated science assessment.

Meaning, the public and the CASAC were required to evaluate EPA's policy conclusions before even knowing the agency's final analysis of the science. Because EPA's review of the PM NAAQS did not comport with the process established through multiple decades of experience with the NAAQS review process. The agency has failed to adequately review the science. As initial matter, the agency's departure from the established process requires a more searching and thorough review by the public. More substantively, as a result of the flawed process, the agency has failed to acknowledge that the science shows that current PM NAAQS do not adequately protect public health and welfare. Currently, California ...

Fred Thompson: The speaker's time has expired.

Sparsh Khandeshi: ... request that EPA provide more time for public comment on a proposed rule and ultimately follow the science that mandates lowering the PM NAAQS. Thank you.

Rhea Jones: Thank you for your testimony. Is there any – are there any questions from the panel? OK, hearing none, thank you. We'll move on to our next speaker.
Operator, could you please open the line for Bonnie Holmes-Gen.

Operator: One moment please. And the line is open.

Bonnie Holmes-Gen: Hi, this is Bonnie Holmes-Gen. Should I spell my name?

Rhea Jones: Yes, please do.

Bonnie Holmes-Gen: Bonnie Holmes-Gen, B-O-N-N-I-E and then H-O-L-M-E-S-G-E-N.

Rhea Jones: Thank you. You may proceed with your testimony.

Bonnie Holmes-Gen: Thank you. Good afternoon. I'm the Branch Chief of the Health and Exposure Assessment Branch in the California Air Resources Board. Thank you for the opportunity to testify today on behalf of CARB regarding EPA's responsibility to protect public health through the PM NAAQS decision.

We will be providing written comments in addition to our comments today detailing our concerns with EPA's decision not to strengthen the PM NAAQS. Despite strong and effective leadership by CARB and the local Air Districts to control air pollution levels, Californians continue to suffer from unacceptable numbers of pollution-related illnesses and deaths. The health harm of particle pollution includes approximately 5,400 premature deaths every year in California and thousands of hospitalizations for heart and lung diseases and emergency room visits for asthma.

California's pollution control rules and programs driven by the Federal Clean Air Act and State Law have made substantial progress in reducing public exposure to pollution and improving health, but there's much more work to do and CARB is talking every day together with local districts to protect the public from the harmful effects of pollution.

The current COVID-19 pandemic is raising new concerns about the far reaching effects of air pollution and increasing vulnerability to infectious illnesses. Recent studies have linked chronic exposure to elevated PM_{2.5}

levels specifically to increases of premature death and illness from COVID. While there is still researcher needed in this area, the findings to-date further evidence of the need to set the standards of the most health protective level.

CARB takes very seriously its responsibility to assess the science surrounding air pollution standards, our experienced and well respected staff experts have reviewed the U.S. EPA proposal. We have strong objections to the EPA's NAAQS recommendation and to the current process of NAAQS review.

As we have clearly outlined in previous letters, CARB strongly condemns a number of U.S. EPA's to recent changes to the NAAQS review process that have undercut long-held agency and scientific procedures and eroded the ability of the U.S. EPA to adequately weigh scientific evidence and draw sound scientific conclusions. The PM NAAQS review short circuited participation by recognized experts and ignored significant scientific evidence submitted to the agency.

As an example, the current makeup of the Clean Air Scientific Advisory Committee is clearly inadequate, without any epidemiologist on the CASAC. It is not qualified to reach valid conclusions about the health risks of PM air pollution. CARB strong objects to the proposed retention of the PM2.5 annual and 24 hour standards. There have been research studies demonstrating health effects below the level of the current national standards and California's unique air quality and health challenges underscore the importance of strengthening the PM NAAQS.

The proposed standards ignore robust peer-reviewed multicity epidemiological studies demonstrating health and respiratory outcomes from PM2.5 exposures below the level of the current standards. This body of evidence included in both the ISA and the policy assessment and supported by results from controlled human exposure studies clearly demonstrate that the current PM2.5 standards are inadequate to protect health. U.S. EPA's own estimate show that reducing the annual standard from the current level of 12 to 10 micrograms per cubic meter would reduce the number of premature deaths naturally revved to 8,630 each year.

Epidemiological studies demonstrate a consistent association between PM2.5 exposure and asthma, COPD exacerbation and mortality outcomes. In addition, epidemiological studies and the ISA demonstrate associations between PM2.5 exposure and birth outcomes with the strongest evidence for birth weight and fetal birth.

Fred Thompson: Speaker has one minute.

Bonnie Holmes-Gen: And in conclusion, based on the scientific evidence, CARB recommends that U.S. EPA adopt stronger standards to protect Californians and all U.S. residents. Retaining the current level of the PM standards is contrary to the best interest of public health, we recommend strongly the EPA should strengthen the annual standard to at least 10 micrograms and the most protective annual standard would be at 8 micrograms or cubic meter. EPA should strengthen 24 hour PM2.5 standard to at least 30 micrograms and the most protective 24 hour standard would be at 20 micrograms.

EPA's own conclusion I would note is that the 24 hour standard is controlling in California San Joaquin Valley and this underscores the importance of strengthening both the annual and the 24 hour standard. Thank you very much for this opportunity to comment. And, again, we will be providing a written comment. Thank you.

Rhea Jones: Thank you for your testimony. Panel, do you have any clarifying questions? Hearing none, let's move forward with our next registered speaker who is Catherine Flowers. Operator, could you please open Catherine's line?

Operator: One moment please. And the line is open.

Catherine Flowers: Good morning.

Rhea Jones: Catherine, can you please say and spell your name for the record?

Catherine Flowers: Catherine, C-A-T-H-E-R-I-N-E. Flowers, F-L-O-W-E-R-S.

Rhea Jones: Thank you. You can proceed with your testimony.

Catherine Flowers: Thank you for taking the time to listen to my prepared – to my prepared testimony. I want to open my remarks by acknowledging those on the frontlines of the fight against COVID-19 as well as those suffering directly and indirectly from this deadly respiratory disease, I hope you and your families are safe.

My name is Catherine Garcia Flowers, I am a mother of three college students, an aunt to a dozen nieces and nephews, I am a community leader and a Texas field organizer for the Moms Clean Air Force. We have more than 60,000 members across this state. Moms Clean Air Force is a nationwide community of more than one million members who work to fight climate change, air pollution, and protect the health and future of our children.

I'm here to testify an opposition to the proposal to retain the National Ambient Air Quality Standards for Particulate Matter. Ever since I evacuated to Houston because of Hurricane Katrina some 15 years ago, I've made it my mission to improve health outcomes for residents in Houston with low socioeconomic status. I take seriously my role in lifting up the voices of those who often do not have a voice. That's why I'm compelled to speak out against the EPA's proposal to retain the National Ambient Air Quality Standards for Particulate Matter.

In short, the EPA has proposed to retain the current too weak standards for particulate pollution, a deadly threat. This misguided proposal is poised to harm the very people who can least afford it. Communities of color and low income communities – in low income communities in Houston need an EPA that will follow the current science on particulate pollution that could save thousands of lives each year. And given that preliminary research indicates that long-term exposure to particulate pollution may increase the risk of death from COVID-19, the time for the discussion is now. It's no exaggeration to say this is a life – a matter of life or death.

So let's consider the facts, vulnerable populations in particular need more protection against the daily pollutants than ever, not less. In Houston, more than 40 percent of Houston area children are living in poverty according to Children at Risk, a research and advocacy nonprofit. This factor is

unacceptable. Worse, children living in economically and socially disadvantage neighborhoods tend to have higher asthma rate. Asthma is the number one reason why our kids in this school nationwide.

The children with allergies and asthma exposure to PM – exposure to PM2.5 pollutant can exacerbate existing illnesses. COVID-19 has shown us how unprotected low income and people of color suffer from the wrath of this respiratory disease because of unjust health inequities. In Houston, unnatural disasters are becoming a way of life. I would know. I spent a good part of my career focused on disaster response and relief here in Texas, but there's more. Texas also is home to cement batch plants that cause health concerns, elevated ozone levels, chemical virus, climate change, COVID-19, and PM2.5 and so much more.

All these factors conspire to make living in Texas a hazard to one's health. And for vulnerable populations with limited access to healthcare, the future is even bleaker. Let's get back to particulate pollution, Houston ranks number 22 for the worst in the nation according to the American Lung Association. We know it is the result of burning fossil fuels and other organic material. It comes from many sources including the tailpipe of cars and trucks. As the energy capital of the world, Houston burns a lot of fossil fuels.

Not saying more – not – to say nothing more than our 6,200 miles of roads in diesel and gasoline powered vehicles. In other words, Houston is home to a dangerous amount of particulate pollution. Nearly all of Houston is exposed to fine particulate matter above 10 micrograms. And large portions of the city are above the current annual average level for particulate pollution set at 12 micrograms. To make matters worse, there are no PM2.5 monitors where the concentrations are believed to be the highest. The annual average level for particulate pollution is set at 12 micrograms.

Fred Thompson: Speaker has one minute.

Catherine Holmes-Gen: The latest science suggests that in order to protect public health with an adequate margin of safety, the level should be set somewhere between eight and ten. Here's the bottom line, the current standards are not strong

enough to protect us in Houston from the health harms of particulate pollution.

If the EPA is to live up to its mission to protect human health and the environment, the agency has an obligation to strengthen the annual fine particulate pollution in accordance with what science tells us to do. To retain the standards is tantamount to saying that we should accept Houston's 500 – 5,000 premature deaths annually as a result of PM2.5.

As a woman of color, woman of faith, a believer in science, I know that we can – we can and must do better. The status quo is unacceptable to the moral being. We cannot accept these premature deaths, we cannot accept the disproportionate health harms placed on black and brown residents and we will not accept the EPA's callous disregard for life in the name of deregulation.

In closing, we all know how precious our health is especially if COVID hovers.

Fred Thompson: Speaker's time is expired.

Catherine Holmes-Gen: Thank you.

Rhea Jones: Thank you for your testimony. Are there any clarifying questions from the panel? Hearing none, thank you. I'm going to circle back now to some speakers who are registered but weren't available at their earlier times.

Operator, could please check the lines for Susan Noble.

Operator: One moment. And the line is open.

Rhea Jones: Hello Susan. Could you please say and spell your name for the record.

Susan Noble: Thank you. Susan, S-U-S-A-N. Noble, N-O-B-L-E.

Rhea Jones: Thank you. You can proceed with your testimony.

Susan Noble: Yes. I live in Commerce City, Colorado. May I ask who is on the panel?

Rhea Jones: Certainly. My name is Rhea Jones and I am the Associate Director for the Health and Environmental Impacts Division in EPA's Office of Air and Radiation. And I have with me Fred Thompson and (Nicole Hagen), both at the Office of Air Quality Planning and Standards. And Fred Thompson is your timekeeper. You'll have five minutes and he'll let you know when you have one minute remaining.

Susan Noble: Thank you very much. I can't – I'm not a scientist and I can't provide the kind of information that the scientists have provided to you that demonstrates the need for stricter particle pollution standards, nor am I a mother who can speak from the depth of their hearts as they have about concern for their families.

But I am a concerned citizen and I have witnessed the impact directly of particles, the – on residents in my city. I am a city council person but I am not speaking on behalf of my city today. COVID has shown us how critical essential workers are to this nation and to our economy. And unfortunately, most essential workers have to live in other areas where they might be subjected to more pollution because we don't honor the work that they do by paying them incomes that actually allow them to move away from freeways and refineries and any other heavy producers of pollution, that's regrettable.

But it's important that we take care of everyone nevertheless. I wish I had faith in this process and I appreciate the opportunity to speak to you today, but thus far, the EPA has shown that it is deregulating at a dreadful concerning speed that will do us harm not just today, but more importantly for future generations. Please, do the right thing always. That's all I ask, do the right thing. And if it means that we're going to have a new administration in November, then anyone who is on this call needs to do that for certain because we need to save this country and the world. Thank you very much.

Rhea Jones: Thank you Susan for your testimony. Any clarifying questions from the panel? OK, thank you. Operator, could you just – could you please check the line for (Jennifer Cantley).

Operator: Sure, one moment please. No, (Jennifer Cantley).

Rhea Jones: OK. Could you please check the line for (Barbara Gottlieb)?

Operator: No (Barbara Gottlieb).

Rhea Jones: OK. Could you please check the line for (Weston Wilson).

Operator: And we do not have (Weston).

Rhea Jones: OK. And we have – that concludes the list of registered speakers who were not available at their registered time. And we have completed our list of registered speakers for this entire session.

There was one speaker from the previous session that did not – who was not available, (Frank Laban), could you check the line for (Frank Laban)?

Operator: OK, one moment. please. No (Frank).

Rhea Jones: OK, thank you.

Everyone, my name is Rhea Jones and I am the Associate Director for the Health and Environmental Impacts Division in EPA's Office of Air and Radiation. I have been chairing this hearing session today.

I want to thank my fellow panelists and to thank everyone who offered testimony today regarding the proposed rule, review of the National Ambient Air Quality Standards for Particulate Matter. Remember, you can continue to submit comments on this proposal through June 29th of this year.

With that said, this hearing is now adjourned. Thank you.

Operator: Thank you all for participating. You may now disconnect.

END