

Federal Advisory Committee Act

Clean Air Act Advisory Committee: Meeting Summary

June 28, 2016
*William Jefferson Clinton East Building
1201 Constitution Ave. NW
Washington, D.C.*

June 29, 2016
*DoubleTree By Hilton Hotel
300 Army Navy Drive
Arlington, VA*

Meeting of Subcommittee on Permits, New Source Review and Toxics, June 28, 2016

Introduction

Mr. Bill Harnett called the meeting to order at approximately 1:30 pm on June 28, 2016.

All presentations and meeting materials are available online at:

<https://www.epa.gov/caaac/caaac-full-committee-meeting-and-permits-nsr-and-toxics-subcommittee-meeting-june-28-29-2016>

Presentation: Air Toxics Updates for CAAAC Input: The National Air Toxics Assessment (NATA)

Ms. Erika Sasser provided a briefing of the 2011 NATA, which the EPA released to the public on December 17, 2015. NATA is a screening-level characterization of air toxics across the nation with a resolution at the census tract level. The NATA provides ambient concentration estimates for 180 Hazardous Air Pollutants (HAPs) and diesel particulate matter (PM), as well as cancer and non-cancer risk estimates for 140 HAPs. Concentrations, exposures and risks are based on modeling of emissions from the 2011 National Emissions Inventory (NEI). The EPA uses NATA to identify locations of interest for further study, to prioritize pollutants and emission sources, and to inform monitoring programs. NATA emissions, concentrations, and exposures assume outdoor exposure only. Results are more uncertain at finer geographic scales and should not be used to compare risks among different areas of the country. In addition, previous NATA results should not be compared to the 2011 NATA results.

The EPA used the following analytical steps to develop the NATA: compiled the 2011 NEI, estimated ambient concentrations of air toxics, estimated population exposures, and characterized potential public health risks from inhalation. The 2011 NATA includes several updates and enhancements, including improved emissions estimates, improved dispersion modeling, improved exposure analysis, and a new web app Geographic Information Systems (GIS) tool. The EPA developed a new web app GIS tool to show estimated risks at the census tract level and to display risks, emissions sources, and monitoring data on a map. The EPA conducted a Lean event to improve efficiency and reduce waste. The EPA applied the Lean process to the NATA and presented improvements that will be made for the 2014 NATA based on the Lean process.

Based on the 2011 NATA results, the EPA estimated the average national cancer risk to be about 40-in-1 million. The top pollutants are formaldehyde and acetaldehyde from secondary formation and benzene from on-road mobile activity. There are approximately 120 census tracts with risks greater than 100-in-1 million. High risks in urban core centers are primarily from mobile sources. Point sources drive cancer risks in some local-scale areas.

Discussion

Mr. Robert Morehouse asked about the extent to which the EPA had used monitoring data to verify the modeling results. Ms. Sasser responded that the EPA thoroughly verified the modeling results and noted that they focused on verifying the results at locations with high or unexpected risk. Mr. Chet Wayland added that the EPA used ambient monitoring data to help verify results. He stated that air toxic monitoring data is local; however, the EPA investigated cases where there was disagreement between monitoring and modeling data.

Mr. Morehouse asked how the EPA is addressing cumulative risk and whether there were efforts for a broader modeling procedure to look at both criteria pollutants and air toxics. Ms. Sasser responded that the NATA explicitly aggregates risk; however, she stated that the focus for air toxics is on long-term health effects, whereas the focus for criteria pollutants is more short-term, so it is difficult to aggregate the two types. Ms. Sasser further stated the EPA is investigating new indices to quantify cumulative risk and noted that cumulative risk is not limited to the risk from different pollutants but can include other factors, such as social factors.

Ms. Julie Simpson suggested that the EPA should further investigate the secondary formation of formaldehyde. Ms. Sasser stated that the production of secondary formaldehyde primarily results from emissions from widespread sources, such as biogenic and mobile sources, rather than discrete point sources. She suggested that programs that address emissions on a nation-wide scale, such as the National Ambient Air Quality Standards (NAAQS), could be effective at reducing the secondary formation of formaldehyde. Mr. Wayland agreed that programs that help reduce criteria pollutants can also help reduce the secondary formation of formaldehyde. Ms. Simpson responded that some point sources may still contribute significantly to the formation of secondary formaldehyde and encouraged the EPA to investigate the issue further.

Mr. Howard Feldman suggested that the EPA should communicate NATA air toxic risk relative to total cancer risk or to other public health outcomes to give context and meaning to the risk values. Mr. Feldman asked if the NATA could show risk from a specific emissions source category, such as steel production. Ms. Sasser responded that such a feature is not included; however, the EPA would consider it. Ms. Sasser stated that during the Lean process, the NATA team engaged with stakeholders from states who expressed the need to aggregate risk between geographic areas. Ms. Joy Wiecks expressed support for the ability to aggregate risk between geographic areas. She stated that a recent study in Duluth, Minnesota showed that the average life expectancy of populations in low-income areas was 11 years lower than in higher income areas of the city. Dr. Lee Kindberg stated that EJSCREEN should be able to compare risk between geographic areas, which could enable some areas to be highlighted and prioritized for action, such as ports. Ms. Sasser responded that EJSCREEN and NATA are screening tools only,

and Dr. Kindberg emphasized the need for meaningful tools that can be used for funding prioritization.

Ms. Gillian Mittelstaedt asked if the model assumes that a person is outdoors for 10 percent of the time and indoors for the remainder, and if the model assumes that there is no indoor exposure. Ms. Sasser responded that the model replicates the typical pattern of exposure for large populations, and confirmed that the model assumes that there is no indoor exposure. Ms. Mittelstaedt responded that the assumption of zero indoor exposure is an important limitation of the model.

Ms. Mittelstaedt stated that exposure levels vary significantly between urban and rural areas due to the levels of PM_{2.5} in the atmosphere, which transports toxics. She suggested that the EPA should look at trends of PM_{2.5} in comparison to toxic exposures.

In reference to slide 10 of the presentation, Mr. Robert Kaufmann noted that point sources contribute only two percent to the total 2011 NATA cancer risk. He stated that the small contribution of point sources reflects the efficacy of the EPA's Maximum Achievable Control Technology (MACT) program for point sources. However, Mr. Kaufmann questioned how the contributions of biogenic sources could be four times as large as point sources.

Mr. Kaufman also stated that the risk values from the Integrated Risk Information System (IRIS) for certain chemical compounds, such as formaldehyde, have been challenged by the National Academy of Sciences for being too high, and he asked if the EPA would revise the NATA assessment if the values were changed. He suggested that the EPA could also include a caveat with the 2011 NATA results to warn that the risk of certain pollutants may be overstated. Ms. Sasser responded that it is difficult to determine which portion of secondary formation comes from which pollutant and that the EPA would not include caveats related to the IRIS values with the NATA results. However, Ms. Sasser stated that the NATA reflects the current IRIS values and that NATA results would change if the IRIS values were changed. Mr. Andrew Hoekzema suggested that the EPA could determine pollutant specific contributions to secondary formation. Mr. Wayland responded that it is possible to attribute secondary emissions to specific pollutants and that the EPA would consider doing so if there was significant support for such an analysis.

Mr. Hoekzema questioned why the EPA quantified risk from sources such as background, fire, and biogenics, considering that the EPA cannot reduce emissions from these sources in the same way as emissions from human activity.

Dr. Jalonnie White-Newsome asked if the EPA could use the NATA results with other EPA tools, such as EJSCREEN. Ms. Sasser responded that the EPA updated EJSCREEN with the 2011 NATA results, and the EPA's goal is to make other tools compatible and updated with the latest NATA release.

Dr. White-Newsome asked if areas of high risk have decreased from the 2005 to the 2011 NATA. Ms. Sasser responded that the 2011 NATA results include many fewer census tracts above the 100-in-1 million risk threshold and that the EPA verifies these findings to determine

whether the risk is actually decreasing or whether it is decreasing due differences in and updates to the EPA's modeling procedures and assumptions.

Dr. White-Newsome emphasized the importance of outreach to and communication with communities. She stated that the EPA could use tools such as EJSCREEN to provide a portal for public access to air quality information. Dr. White-Newsome emphasized the importance of EPA working with state agencies and other organizations to conduct workshops with community members.

Ms. Patricia Strabbing congratulated the EPA on finalizing the 2011 NATA assessment and asked if the EPA had started on the 2014 assessment. She asked about the steps the EPA might take to adhere to the timeline for completion of the 2014 assessment. Ms. Strabbing stated that the quality of the NATA results are dependent on the quality of the input data and asked if there were any opportunities to improve state emission inventory data. She suggested that the EPA could mitigate delays by making data reporting mandatory for states. Ms. Sasser stated that the EPA is planning vast improvements in data collection. She stated that the EPA is aware of the schedule and tries to release the NATA assessment every three years, noting that delays in the 2011 assessment could result in delays in the 2014 assessment. Ms. Sasser stated that in the upcoming weeks, the EPA will release the 2014 point source data to states, which will allow states more time to evaluate the data at an earlier stage in the process.

Mr. Daniel Nickey asked if the EPA plans to use risk data to inform its decisions. Ms. Sasser stated that for areas with high risk in the NATA, the EPA will engage with the state agency to investigate the risk, and may install monitors or take other action as appropriate. Ms. Sasser noted that the EPA uses NATA data in conjunction with other air pollution data.

Mr. Hoekzema stated that the EPA should evaluate risk across different pollutants, including criteria pollutants and air toxics, and across assessments and exposure models. He stated that the EPA should control for the 10 percent outdoor exposure assumption. Ms. Sasser stated that it is difficult to evaluate risk across criteria pollutants and air toxics.

Mr. Feldman asked how the 2011 NATA results compare to the 2005 results. Ms. Sasser stated that although the NATA is not intended for use in comparisons between assessments, the risk has declined. Mr. Wayland stated that the National Air Toxics Trends report also showed the same pattern of decline.

Presentation: NAAQS and Permitting Program Updates

Mr. Juan Santiago provided an update of the National Ambient Air Quality Standards (NAAQS) implementation for ozone, exceptional events, fine particulate matter (PM_{2.5}), sulfur dioxide (SO₂), and lead; final action on startup, shutdown, and malfunction (SSM) policy; interstate transport; and permitting. The presentation included information on the status of the NAAQS review and implementation and upcoming and anticipated milestones. A detailed update was presented on the status of the 2008 and 2015 ozone NAAQS, including implementation rules, guidance and tools. Anticipated timelines were presented for the 2015 Ozone NAAQS implementation as well as the 2015 Ozone NAAQS designation process.

An update was presented on the PM_{2.5} NAAQS implementation, including the 2006 moderate area attainment date, the June 2016 consent decree for EPA action on certain state plans, and the State Implementation Plan (SIP) Requirements proposed rule. Detailed information was presented on the status of the 2010 SO₂ NAAQS implementation including the EPA's schedule for completing the 2010 SO₂ NAAQS designations. A review of the SO₂ NAAQS Data Requirements Rule was also provided, along with an implementation timeline. The status of the EPA's efforts on the transport rule was presented, including the status of the Cross-State Air Pollution Rule (CSAPR), the proposed CSAPR Update Rule to address the 2008 Ozone NAAQS, and the EPA's considerations of how to help upwind states address the good neighbor provision for the 2015 Ozone NAAQS.

An overview was presented of EPA actions on the following topics: the exceptional events rule; SSM provisions; draft guidance on significant impact levels (SILs) for ozone and PM_{2.5}; the E-notice rule for new source review (NSR), Title V, and Outer Continental Shelf (OCS) permitting; 40 CFR Part 56 Amendments on regional consistency; the Source Determination Rule for the Oil and Natural Gas (ONG) sector; the Permit Rescission Rule; the removal of emergency provisions from Part 70 and 71; Title V permitting; and regulatory updates for greenhouse gas (GHG) permitting.

Discussion

Concerning the EPA's proposed rule to establish a significant emissions rate for GHGs under the Prevention of Significant Deterioration (PSD) program, Mr. Feldman asked if the EPA will address the issue of de minimis GHG emission levels. Mr. Santiago responded that the rule is currently undergoing review at the Office of Management and Budget (OMB); however, he noted that the courts gave the EPA direction to establish a de minimis threshold.

Mr. Hoekzema stated that the EPA presupposes that the 2015 ozone NAAQS will be implemented under Clean Air Act (CAA) Title 1 Part D Subpart 2 and that the proposed implementation rule should include an outline of how the rule could be implemented under Subpart 1. Mr. Hoekzema added that the courts have given the EPA the authority to implement the rule under Subpart 1. He also asked how the implementation of the 2015 Ozone NAAQS would relate to ozone transport and the Cross State Air Pollution Rule (CSAPR). Mr. Hoekzema stated that state agencies will need time for emissions controls to be in place and conduct modeling to comply with the 2015 NAAQS, and he urged the EPA to release draft emission reduction budgets for each state and as soon as possible.

Mr. Kaufmann asked when the EPA plans to publish the Appendix W final rule. He stated that some projects will be in attainment of the Ozone NAAQS but will have significant increases in NO_x or VOC. He stated that there were discussions of proposed revisions to the Mobile Emission Reduction Credits (MERCs) and that there is a need for guidance for large sources that are in attainment areas that are undergoing the New Source Review (NSR) permitting process. Mr. Wayland stated that the EPA plans to publish the Appendix W final rule in September 2016 and that MERCs guidance would be released at the same time.

CAAAC Meeting, June 29, 2016

Introduction

Mr. Jim DeMocker called the meeting to order at approximately 8:30 am on June 29, 2016. Mr. DeMocker welcomed everyone and asked everyone to introduce themselves. Following introductions, Mr. DeMocker introduced Ms. Janet McCabe, the acting assistant administrator for the EPA's Office of Air and Radiation (OAR), who provided an update on the on-going work within the EPA's air program.

All presentations and meeting materials are available online at:

<https://www.epa.gov/caaac/caaac-full-committee-meeting-and-permits-nsr-and-toxics-subcommittee-meeting-june-28-29-2016>

Air Program Update and Discussion

Ms. McCabe expressed her appreciation for everyone's attendance at the CAAAC meeting and at the previous day's Clean Air Act Excellence Awards. She thanked CAAAC members for their service and emphasized the importance of the CAAAC, which allows the EPA to receive insights from the diverse group of stakeholders on the committee. Ms. McCabe recognized three individuals who have recently departed the CAAAC: Thomas Huynh, Vince Hellwig, and Dan Johnson. She recognized Mary Uhl as the replacement for Dan Johnson. She also stated that Dr. Jalonne White-Newsome moved to a new organization – the Kresge Foundation. Ms. McCabe stated that Mr. Jim Ketcham-Colwill is retiring from the EPA, and she thanked and commended him for his service.

Ms. McCabe stated that the EPA will be soliciting for new CAAAC members through a *Federal Register* notice and encouraged current members to re-apply, if they are eligible to do so. She stated that the next appointments will occur in March 2017 when the current appointments expire. She also noted that the EPA typically appoints members to two-year terms.

Ms. McCabe thanked the Air Toxics Workgroup for their substantive recommendations and stated that the EPA has been actively considering the recommendations and has created cross-agency teams to consider them. Ms. McCabe provided the following overarching observations on the workgroup's recommendations:

- The EPA is already considering or already adheres to some of the recommendations; however, in some cases the recommendations have allowed the EPA to see issues differently.
- The EPA recognizes the importance of the federal role in supporting community actions to address air toxics issues and has tried to be available to the community in an appropriate way.
- Some of the recommendations would require substantial investments, programmatic changes, and shifts in priorities and the new administration may want to have input on these decisions.
- The EPA does not only consider what can be done within the agency, but also what can be done in collaboration with academia, environmental groups, etc.

- The EPA will seek clarification and feedback from the CAAAC and will provide written responses to the recommendations.

Concerning ports, Ms. McCabe acknowledged the draft recommendations report submitted by the Ports Workgroup of the Mobile Sources Technical Review Subcommittee (MSTRS), and stated that the EPA understands the importance of ports economically as well as the environmental impacts they have on surrounding communities.

Ms. McCabe provided an overview of the EPA's work under the President's Climate Action Plan. She stated that the Clean Power Plan (CPP) has been stayed while it is in litigation, however, the courts did not instruct the EPA to stop working on it. She stated that states and tribes can continue to develop plans on a voluntary basis, and the EPA can provide them with assistance, including tools. Ms. McCabe stated that the EPA believes that the CPP is legally defensible, and it is important that the CPP be implemented in a timely fashion. She stated that the Supreme Court did not address the CPP's compliance deadlines. Ms. McCabe stated that the EPA released a proposed rule for the Clean Energy Incentive Program to promote renewable and low emission energy sources for low-income communities. In addition, she stated that the EPA proposed model trading rules, is developing an emissions allowance tracking platform, and is drafting evaluation measurement and verification (EM&V) guidance for demand-side energy efficiency.

Ms. McCabe noted that President Obama and Canadian Prime Minister Trudeau recently agreed to new commitments to reduce methane from oil and natural gas (ONG) sources, and the United States agreed to regulate methane from existing ONG sources. The EPA released an information collection request (ICR) for public comment until August 2, 2016. The EPA is also working on finalizing regulations for new and existing solid waste landfills, and is seeking an amendment to the Montreal Protocol to phase down the use of hydrofluorocarbons (HFCs), which are chemicals that have a high global warming potential (GWP), and is also working on developing lists of available HFC substitutes.

Ms. McCabe stated that the EPA has finalized the cost analysis for the Mercury Air Toxics Standards (MATS) as directed by the Supreme Court. She stated that the EPA expects to release an update to the CSAPR, which is related to the 2008 Ozone NAAQS, and that the deadline for meeting the 2008 Ozone NAAQS is in 2018. Ms. McCabe stated that the EPA plans to finalize the Implementation Rule for the PM_{2.5} NAAQS in the summer of 2016. She stated that the EPA is also working on an update to the Exceptional Events Rule. Ms. McCabe stated that state agencies are currently working on the SIP call for SSM provisions, which requires state agencies to revise their SIPs to reflect the new provisions. She stated that the EPA is willing to work with states on revising their SIPs.

Concerning the Appendix W permit modeling guidance, Ms. McCabe stated that the EPA has engaged in productive partnerships with stakeholders and plans to finalize the proposed revisions to Appendix W in the summer of 2016. Ms. McCabe stated that the EPA is in round two of four of the SO₂ NAAQS designation process, and that the EPA will designate 60 areas in the current round. She stated that the EPA proposed amendments to extend the deadline of the Regional Haze Rule to July 2021 and will be finalizing revisions to the rule.

Ms. McCabe provided an overview of the EPA's current work on mobile source programs. She stated that the government reached a partial settlement with Volkswagen (VW), and a consent decree will be released for a 30-day public comment period. She stated that the settlement provides a way to get noncompliant vehicles off the road and provides for measures to mitigate the impact of the excess emissions released by noncompliant vehicles, including \$2.7 billion for use by states and tribes to implement NO_x reduction projects. Ms. McCabe stated that state agencies will be required to submit a plan for how they will use the funds and will be required to solicit input from the public.

Ms. McCabe stated that the EPA proposed the Phase 2 GHG Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles last year and will publish final standards in the summer of 2016. She also stated that the EPA is working on a draft technical assessment report for the Light-Duty Vehicle GHG Emissions Standards and expects to release the report in a few weeks. Ms. McCabe stated that the EPA will release a final endangerment finding for GHG emissions from aircraft in the summer of 2016. Lastly, she stated that the EPA proposed Renewable Fuel Standards in May and will finalize those standards in November of 2016.

Discussion

Several committee members congratulated the EPA on the VW settlement.

Mr. Daniel Greenbaum remarked on the passing of Senator George Voinovich, who played a key role in the Diesel Emissions Reduction Act (DERA), and noted that DERA is up for reauthorization. Mr. Greenbaum stated that it is more difficult for heavy-duty vehicles to cheat emissions tests due to in-use testing requirements, and suggested that the EPA should highlight the good compliance record for heavy-duty vehicles.

Ms. Nancy Kruger stated that the proposed VW settlement demonstrates the EPA's commitment to consumers and that the mitigation trust fund will help state agencies recoup emission reduction benefits.

Mr. Feldman asked when the EPA planned to upgrade ozone monitors with new technology, including interference-free monitors. Mr. Wayland stated that there are not adequate resources to replace all ozone monitors. However, he stated that as monitors exceed their useful life, the EPA will replace them with new technology.

In response to a question on the use of the mitigation trust fund money, Ms. McCabe stated that states could only use the money for NO_x reduction projects.

Ms. Margaret Gordon stated that the CAAAC discussion had not addressed the issue of how regulatory agencies interact with small communities and questioned how regulatory agencies would help these communities. Ms. Gordon further stated that public officials never visit communities and challenged the EPA to improve their outreach efforts. Ms. McCabe responded that community outreach is very important. She further stated that the issue is challenging

because the EPA cannot work with every community in the country but can set up a system to communicate with and build capacity in communities through partnerships with advocacy groups and others. She stated that the EPA is trying to improve the process and that the National Environmental Justice Advisory Council (NEJAC) provides advice on environmental justice (EJ) issues.

Ms. Simpson stated that the portion of the mitigation trust fund that is reserved for tribes is a great opportunity and emphasized the importance that EPA support tribal involvement in regional haze activities, including the upcoming revisions to the Regional Haze Rule. She also stated that tribes need resources to update the legacy fleet of monitors located in tribal areas.

Mr. Hoekzema commented on the proposed CSAPR Update rule to address the 2008 Ozone NAAQS. He stated that the rule only addresses NO_x reductions for electric generating units (EGUs) and asked how the EPA is addressing other emission sources that are affecting states' ability to meet the Ozone NAAQS. Ms. McCabe stated that in addressing the 2015 Ozone NAAQS, states would be able to address these remaining emission sources. Mr. Hoekzema suggested that the EPA should not wait until the attainment/nonattainment designation process is complete before issuing a proposed 2015 ozone transport rule considering the time that will be required for states and local agencies to develop SIPs.

Ms. Myra Reece stated that the VW settlement provides an opportunity for states to interact with communities and to prioritize projects that provide public health benefits to EJ communities. She suggested that the EPA create a workgroup to develop tools or methods to prioritize mitigation projects. Ms. McCabe stated that the mitigation fund is set up to be self-implementing and the trustees of the fund will approve state projects. She stated that the settlement includes provisions that require states to show how EJ communities will benefit from mitigation projects. However, Ms. McCabe stated that the EPA will consider Ms. Reece's suggestion.

Ms. Wiecks stated that three draft permits were issued with less stringent averaging times than required by the NAAQS. She stated that these permits were part of consent decrees that were not released for public comment. Ms. Wiecks also referenced a study of 200 tribal members in Duluth, Minnesota where an 11-year difference was observed in life expectancy between low- and high-income communities.

Ms. Mittelstaedt suggested that a percentage of the mitigation trust fund be reserved for outreach to EJ communities, noting that communities might choose to use the funds differently than the state agencies would. Ms. McCabe suggested that Ms. Mittelstaedt submit comments on the consent decree.

Presentation: EPA Consideration of CAAAC Recommendations on Air Toxics

Mr. Harnett gave a presentation on EPA's considerations of the 25 recommendations and additional comments provided in the CAAAC Air Toxics Workgroup report. The recommendations fall under nine themes: communications, mobile sources, community and urban air toxics, Supplemental Environmental Project (SEP) policy, funding, data gaps, best practices, recognition programs, and next steps. For most recommendations, the EPA has

developed initial responses and has work underway or is planning work that is responsive to the recommendations. Overall, the CAAAC recommendations are helping to inform ongoing and planned EPA activities and to prompt new activities.

The presentation included five general considerations for EPA review of the recommendations. The CAAAC recommendations can inform and influence current and planned EPA activities that are responsive to the recommendations. The EPA plans to seek clarifications and feedback from the CAAAC and to keep the committee informed about the outcomes. The EPA is considering what other parties, including state and local governments, industry, citizen groups, and academic institutions can do to address the recommendations. Some recommendations would require substantial investments or programmatic changes, and the EPA must consider these investments carefully in the context of the efforts that will be most useful to advance the goal of reducing toxic air pollution. Many of the recommendations call for expanded or improved data; the EPA recognizes the limits of existing data and encourages systematic efforts to collect additional information to improve air toxics programs.

The presentation included lists showing the recommendations for which EPA has work underway or is planning work, the recommendations still under review by EPA, and the recommendations needing involvement by other parties. The presentation highlighted several examples of ongoing or new EPA activities that will help respond to the CAAAC recommendations. The EPA plans to provide further responses to the 25 recommendations in the summer or fall of 2016.

Discussion

Dr. Kindberg stated that the Health Effects Institute has published a study on the health effects of diesel emissions. Mr. Greenbaum of the Health Effects Institute stated that their studies could be found at www.healtheffects.org.

Mr. Adrian Shelley suggested that SEP funds could be used for air toxic projects, including active multi-pollutant fence line monitoring, also noting that there are no SEPs in Texas. Mr. Harnett stated that Texas agencies used passive air toxic monitors, and this was only one of the air toxic monitoring projects.

Dr. White-Newsome stated that CAAAC meetings should allow for public comments by phone so the public can comment on air toxics and reinforce the Workgroup's recommendations on community interaction. She noted that the organization Neighbors for Clean Air submitted public comments to the CAAAC on the topic of air toxics and EJ issues in Oregon. These comments are available online at: <https://www.epa.gov/caaac/caaac-full-committee-meeting-and-permits-nsr-and-toxics-subcommittee-meeting-june-28-29-2016>.

Mr. Hoekzema stated that half of the cancer risk in the NATA is from formaldehyde, and he suggested the EPA could prioritize sensor technologies based on pollutant toxicity. Mr. Harnett stated that the EPA evaluates and tests technologies, such as sensors, in coordination with state departments but does not design or market them.

Mr. Feldman noted that several CAAAC members who worked on the Air Toxics Recommendations Report will be leaving the CAAAC, and in order to speed up the process of implementing the recommendations, he suggested that the EPA distribute their questions and clarifications prior to future conference calls about the report and the recommendations. Mr. Jim Ketcham-Colwill stated that the presentation included some questions for discussion on the last slide and welcomed CAAAC member's comments regarding the recommendations during this and future meetings.

Mr. Gary Jones asked if the EPA plans to publish the results of monitoring technology evaluations. Mr. Harnett responded that the EPA will provide documentation of the results of their evaluations and noted that there is a webpage for the results and preliminary findings.

Mr. Michael Buser stated that when emissions data is submitted, the turnaround time for developing emissions factors from that data can be as long as 18 months. Mr. Wayland stated that with the new Compliance and Emissions Data Reporting Interface (CEDRI), increased electronic reporting, and improvements to EPA's WebFire emission factor program, a much faster turnaround time can be expected in the near future. Ms. Shelley Schneider emphasized that the EPA needs to update emission factors in a timely fashion and asked how the EPA plans to perform quality assurance (QA) on emissions data reported through the CEDRI. Mr. Wayland responded that the EPA has built QA procedures into CEDRI and noted that the company submitting the data must certify that it is accurate.

Presentation: Short-term Air Quality Data from Air Sensors: Communicating with the Public

Ms. Kristen Benedict gave a presentation on the proliferation of sensors and real-time data and the EPA's efforts to communicate with the public on air monitoring issues. There is significant growth in the availability, use, and quality of air sensors. Sensor technology has the potential to empower people to understand local air quality, but communicating real-time data is complicated. Health studies do not support linking short-term (e.g. 1-minute O₃ or PM_{2.5}) exposures to adverse health effects. Many sensor developers are incorrectly using whatever information is currently available, such as the Air Quality Index (AQI) to try to link sensor readings with health effect information. However, sensor readings are not equivalent to the AQI. AQI data is quality assured and includes averaged (e.g., 8 or 24 hour) concentrations, while the quality of sensor data is unknown and provides short-term concentrations.

On May 6, 2016, the EPA launched a sensor scale pilot project to help the public understand 1-minute data from the EPA's Village Green air quality monitoring stations. The sensor scale is displayed on the Village Green data webpage. The EPA is testing the effectiveness of the scale during the pilot project. The sensor scale includes concentration breakpoints at which different messages are displayed that advise the user and provide additional information on the readings. Air quality analyses were conducted to link 1-minute to 8-hour ozone concentrations to inform sensor breakpoints without reinterpreting health evidence. The analytic approach for determining the breakpoints for PM_{2.5} was also presented. The EPA will continue piloting the sensor scale messaging and will update the scale and messages as appropriate based on feedback. The EPA's goal is to make the sensor scale available to developers later this year.

Discussion

Mr. Greenbaum asked if the EPA had considered developing guidance for mobile sensors and Ms. Benedict responded that the EPA had considered portable devices.

Ms. Mittelstaedt stated the message shown on the sensor scale when there is a spike in the ambient PM concentration provide instructions to check the AQI and adjust outdoor activities based on the AQI reading, which could imply that the person is not at risk. She stated that the person might not be able to move away from the PM hotspot, such as children at a day care facility. Ms. Mittelstaedt further stated that the EPA should consider populations with chronic obstructive pulmonary disease (COPD).

Mr. Hoekzema stated that the EPA should consider averted behavior in their studies, which means that people will move away from pollution when there is a high reading. He acknowledged the difference between 1-minute readings and 8-hour averages for ozone, but expressed concern that an additional air quality scale (i.e., in addition to the AQI) could cause confusion. Mr. Hoekzema suggested that the EPA communicate using the AQI as much as possible because the public is already familiar with it. He asked if the EPA was conducting studies on NO_x sensors, and Ms. Benedict responded that the EPA is considering it. Mr. Hoekzema further asked how interested parties could participate in the EPA's studies. Mr. Wayland responded that the EPA is looking for state/local partners to be part of study teams.

Mr. Kaufmann stated that some EPA departments like the Office of Enforcement and Compliance (OECA) are encouraging citizen science and are attempting to use data collected by citizens. He stated that the huge amount of data collected by the public could cause issues for states and asked how the EPA is handling requests to use citizen science data. Ms. Benedict stated that, as part of the E-Enterprise effort, the EPA is coordinating on communication issues involving citizen science data and is developing a third party verification program for such data. Mr. Wayland stated that the EPA must consider the meaning of the data and its limitations. He stated that the EPA is receiving feedback from states that are receiving citizen science data and is using that information to develop best practices.

Mr. Shelley stated that citizens are providing data to regulatory agencies, and it is important that the agencies develop a strategy for how to react. He stated that his organization communicates short time-scale data using the AQI, as there are no alternatives, and that they have asked the EPA for guidance. Mr. Wayland related that communicating short time-scale data is difficult because the EPA does not have data on the health effects of short-term exposure for all pollutants.

Mr. Jones suggested that the EPA install cameras on the Village Green monitors to provide information on what is causing spikes in air pollution near the monitors. He also suggested that the EPA measure wind speed and direction. Mr. Wayland stated that the EPA has basic meteorological data, including wind speed and direction, for the monitors.

Ms. Mary Uhl suggested that the EPA could consider including information on wildfires and smoke conditions in the sensor scale messages, and Ms. Wiecks stated that the EPA should consider sensor scale messaging for SO₂. Ms. Benedict responded that the EPA is in the beginning stages of considering NO_x, SO₂, and carbon monoxide (CO) sensors.

Ms. Simpson asked if the EPA is seeking feedback from tribal partners, and Ms. Benedict responded that the EPA is reaching out to tribes as part of the E-Enterprise effort. Ms. Simpson also asked if the EPA could use small-scale monitors for on-site monitoring, and Mr. Wayland responded that the EPA would not use these monitors for compliance purposes, such as for compliance with the NAAQS.

Ms. Gordon described an air monitoring program run by her organization where residents receive training and carry monitors to identify sources of emissions in their community.

Presentation: Combined Air Emissions Reporting (CAER)

Mr. Marc Houyoux gave a presentation on the EPA's CAER program. The goals of the CAER program are to reduce industry burden for point source reporting, improve the timelines and transparency of data, ensure consistent information across air emissions programs, improve data quality, improve data accessibility and usability, and support more timely decision making. The EPA is working with state, local, and tribal agencies and is actively using stakeholder input in this program.

CARE focuses on point sources, including four major air reporting programs: the Toxics Release Inventory (TRI), the Greenhouse Gas Reporting Program (GHGRP), the CEDRI, and the NEI. A chart was presented showing the proposed future state of emissions reporting. The chart showed the flow of air emissions and facility attributes data. Data will be entered through a portal and then distributed to the different air reporting programs that will allow for public access of unified data. Ongoing CAER activities were presented, including the Facility Registry System (FRS)-Risk and Technology Review (RTR) project, ongoing outreach, CAER implementation, WebFIRE search improvements, web-based service for source classification codes (SCCs), and the E-Enterprise Portal and facility widget. Charts were presented showing feedback from a March 2016 webinar on the CAER project, including whether stakeholders thought the CAER project could be beneficial and what benefits could be derived from the project.

Remarks by Designated CAAAC Members

Mr. Kaufmann stated that he supported the EPA's efforts to streamline data collection, which could reduce the industry's reporting burden and increase data accessibility and transparency. He stated that the EPA should develop guidance for what happens when emission factors are revised, including the effect on permit requirements and the potential for retroactive liability. Mr. Kaufmann stated that there are many barriers to success for EPA in these efforts and they will require many resources. He further stated that industry should be involved in the process and have a more formal role because they are submitting the emissions data. Mr. Kaufman stated that the data will require substantial upfront QA/QC. He stated that different companies have different IT platforms, and connecting with EPA's platform will be a major issue. He also

expressed concern over the protection of Confidential Business Information (CBI) and potential cyber security threats.

Mr. Kaufmann stated that there is no communication between the RTR and NEI programs and that the EPA should use RTR data in the NEI database. He stated that some states accept electronic reports while others do not and that these differences will cause issues in the implementation of the CAER project. Therefore, Mr. Kaufmann suggested that the EPA pilot the project in small pieces and delay a full release until it is ready. He stated that the EPA must be able to manage many different types of data, such as monitoring data, allowable emissions, TRI data, etc. Lastly, Mr. Kaufmann expressed concern that the CEDRI might not allow input of alternative test methods.

Mr. Morehouse supported the EPA's efforts to streamline data reporting and stated that a phase-in period is needed to test the reporting program. He stated that data understanding and characterization can be lost when data is transferred from a facility to the state, who then submits the data to the EPA, and cited inaccuracies in the latitude/longitude coordinates of emission points as an example. Mr. Morehouse cautioned that efficiencies at EPA and state agencies could result in inefficiencies at the facility. He also did not support any new regulatory requirements as part of the EPA data streamlining efforts. Mr. Morehouse stated that at large facilities, there might be a question of who should certify the data before submittal.

Ms. Schneider stated that the EPA will face many challenges in implementing the CAER program, including the differences between air reporting programs, the differences between state emission inventory programs, and the issue that some states require hard copy submittals.

General Discussion

Mr. Jones stated that there is no consistency between states in collecting emissions data. He stated that the SCC system needs improvements and that some SCCs have emission factors while others do not. He stated that these issues can result in the overstatement of emissions for certain source categories, such as the printing industry.

Ms. Wiecks asked if tribes were involved with the CAER project and Mr. Houyoux responded that the EPA had solicited input from tribes but had not received any.

Ms. Strabbing emphasized the importance that the EPA include industry in the CAER process, as the quality of the final data is dependent on the quality of the data submitted by industry. She asked Mr. Houyoux to expand on the return on investment (ROI) analysis conducted by the EPA for the CAER project. Mr. Houyoux stated the ROI estimates the cost to the government as \$14 million over 5 years with an estimated savings of \$28 million per year, which primarily includes industry savings but also includes government savings. He also noted that there will be a cost to the industry to implement the CAER project.

Presentation: The Impacts of Climate Change On Human Health in the United States: A Scientific Assessment

Ms. Rona Birnbaum and Ms. Allison Crimmins gave a presentation on the U.S. Global Change Research Program (USGCRP) Climate and Health Assessment. The purpose of the Climate and Health Assessment is to enhance understanding about the growing threat climate change poses to the health and well-being of Americans and to inform decisions made by public health officials, planners, decision makers, and stakeholders. A team of over 100 federal employees, contractors and grantees from eight U.S. federal agencies wrote the assessment, and the public and experts extensively reviewed it. The Climate and Health Assessment has been designated as a Highly Influential Scientific Assessment (HISA). The top messages of the report were presented along with a more specific overview of the findings within each chapter of the Assessment. The chapters include: 1. Climate Change and Human Health (Introduction), 2. Temperature-Related Death and Illness, 3. Air Quality Impacts, 4. Extreme Events, 5. Vectorborne Disease, 6. Water-Related Illnesses, 7. Food Safety, Nutrition, and Distribution, 8. Mental Health and Well-Being, and 9. Populations of Concern. Lastly, resources for accessing the report and associated data were presented.

Remarks by Designated CAAAC Members

Ms. Wanda Phipatanakul stated that she has conducted a lot of research on reducing harmful allergens in schools and in the area of climate change and has worked to educate the community. She referenced a white paper in the *Journal of Allergy and Clinical Immunology* on the health effects of air pollution on children¹. Ms. Phipatanakul stated that it is important to raise awareness of the problem of air pollution and health effects without causing alarm. She emphasized the importance of conducting research to understand health effects and to use that information to intervene.

Mr. John Busterud stated that his organization, the Pacific Gas & Electric Company, has a long history of combating climate change. He emphasized the importance of efforts to improve the resiliency of the community. Such efforts include near-term operational planning (e.g., planning for sea level rise and conducting risk assessments) and engaging with external organizations, including regional and local partnerships. He also emphasized the importance of communication and stated that Securities and Exchange Commission (SEC) disclosures include discussions of climate change risk. Mr. Busterud stated that his company has also participated in a carbon disclosure project, which is a partnership within the sector to advance climate change resiliency. He further stated that his company is engaged in a shareholder grant program to assist communities in planning efforts and communicating risk.

Ms. Uhl stated that there is a range of awareness and effort between states in communicating climate change to the public, noting that some states have released reports, including public health impacts, and have conducted inventories. She stated that the impacts are better understood than climate science. She also stated that states have collaborated with universities and have developed websites, including videos, blogs and forums to raise awareness of climate change. Ms. Uhl stated that state health officials have collaborated with state air agencies. She listed strategies that states are using to raise awareness, including through social media, by adding

¹ *Acute respiratory health effects of air pollution on children with asthma in US inner cities*, *Journal of Allergy and Clinical Immunology*. Volume 121, Issue 5, Pages 1133–1139.e1. May 2008.

climate change information to air quality alerts, and by focusing on local issues such as wildfires and draughts. Ms. Uhl suggested that the EPA could provide more easily accessible information for states on climate change issues and that more research is needed on the social cost of carbon.

Ms. Vicky Patton stated that climate change work must be anchored in science, which informs how we engage policy makers and the public. She gave examples of organizations that engage in climate change communication, including the Mom's Clean Air Force, which relies heavily on social media. She stated that Mom's Clean Air Force streams town halls on twitter. Ms. Patton stated that another organization is Defend Our Future, which targets a younger audience. She stated that these organizations communicate with different languages to reach a larger audience. Ms. Patton stated that leading scientists attribute air emissions to extreme weather and noted that a lot of work has been done on the democratization of data. She also referenced a project to install GPS devices on asthma inhalers.

Ms. Mittelstaedt stated that western tribes commonly use the term "clean room," which is a location where elderly people or individuals with COPD can go to avoid the health effects of wildfires and high PM events. Ms. Mittlestaedt stated that mental health, livelihood, and health effects are all interchangeable. She also stated that there is an extreme range of health effects on tribes and that tribal communities may be either rural or urban, or can be located in warm or cool climates. Ms. Mittelstaedt commented that small communities may not have any form of communication with the outside, so the impacts they are experiencing are unrecorded. She also noted that there are high rates of respiratory and cardiovascular disease in the tribal community. She further noted that the tribal community experiences a legacy of substandard and overcrowded housing, where structures are poorly maintained and ventilated, leading to high microbial contamination and the proliferation of mold. She stated that the EPA should communicate with the Department of Housing and Urban Development (HUD) and the Centers for Disease Control and Prevention (CDC) to ensure that assistance is provided to these communities. Ms. Mittelstaedt commented that the EPA's work on the NAAQS will help tribal communities. Lastly, she stated that air quality issues result in large health care costs to society.

General Discussion

Ms. Gordon stated that it does not appear that there was any community involvement in the development of the USGCRP Climate and Health Assessment and that the assessment is not a good illustration of justice in the community. Ms. Birnbaum stated that the assessment is scientific literature, which fuels all levels of discussion. Mr. DeMocker stated that the EPA recently released the EJ 2020 action agenda for public comment. Ms. White-Newsome stated that the creation of the assessment can serve as a starting point, but the findings should be communicated to various audiences, including the American Public Health Association, the Health & Environmental Funders Network and other funders, the medical community and doctors specifically, and pharmacies. Ms. Crimmins stated that she would consider speaking with pharmacies and named a few of the audiences that her organization already plans to speak to, including the American Public Health Association, hospitals, and caregivers. Ms. White-Newsome also stated that the USGCRP should consider the emotional impact of migration, and Ms. Crimmins stated that they had.

Mr. Nickey asked if the USGCRP had considered agriculture in the assessment, including food safety and the effects of climate change on food waste and lack of production. Ms. Crimmins stated that such issues were not included in the assessment because they were addressed in a United States Department of Agriculture (USDA) report published in 2015.

Ms. Kruger asked for additional information about the premature mortality graphic presented on slide 10 of the presentation. Ms. Crimmins responded that the graphic shows premature deaths in 2030 based on 8-hour summertime ozone levels and directed Ms. Kruger to the assessment for more information.

Ms. Simpson stated that community preparedness and response to the 2014 catastrophic wildfire events should be considered. She suggested that perhaps the National Weather Service could be used to inform the public when these events happen.

Mr. Feldman stated that the assessment should consider the impacts of cold weather, and referenced certain studies. Ms. Crimmins responded that these studies were considered and included in the report.

Mr. Morehouse asked whether the assumptions concerning baseline emissions were included in the report and asked for further clarification on how the assessment addresses uncertainty. Ms. Crimmins responded that the assessment references multiple studies that have different baselines, and the assumptions made in each study are identified in the assessment. She stated that the assessment includes likeliness and confidence levels and that the appendix contains additional information about probability and uncertainty.

Concerning discussion question number four on the agenda – “What would be an effective strategy for raising awareness of climate change science and health impacts within your organization or association?” – Mr. Hoekzema stated that climate change awareness should be conveyed in terms of risk mitigation and that the local impacts of climate change should be communicated. Mr. Hoekzema stated that organizations involved in climate change awareness should create partnerships with schools to develop education programs that raise the awareness of both children and their parents.

Concerning discussion question number three on the agenda – “Do state air environmental officials interact with state health officials? What are their respective roles in educating the public about climate change impacts?” – Ms. Reece stated that her organization, the South Carolina Department of Health and Environmental Control, is a joint health and environmental agency. However, she stated that more work could be done to foster collaboration between the health and environmental departments, and noted that the departments are starting to discuss issues related to community resiliency and EJ.

Presentation: U.S. Environmental Protection Agency: Update on Mobile Source and Port Programs

Mr. Karl Simon presented an update of the EPA’s Office of Transportation and Air Quality (OTAQ) mobile source and port programs. A chart was presented showing the air quality

benefits of mobile source programs for each pollutant by 2030. The presentation included an overview of the status and benefits of the Light-duty GHG Standards and Technical Assessment Report, the proposed Heavy-duty Phase Two GHG Standards, the Renewable Fuel Standard, the GHG Standards for Aircraft.

The EPA's Ports Initiative encourages environmental progress at ports and reducing climate risk, supports operational and technological improvements to increase efficiency, improves community health and air quality, and encourages sustainable economic development that supports our economy and jobs. The EPA is conducting a macro ports assessment that analyzes the role of cost-effective technologies and operating strategies in reducing air pollution from port sources and a micro ports assessment, in which the EPA is partnering with Port Everglades to create a refined emission baseline inventory of port-related activity and emissions. The EPA is also conducting a ports technology study and is working on community capacity building and engagement activities. The EPA asked the MSTRS for recommendations on development of an EPA-led port initiative to improve air quality in communities near ports. The MSTRS Ports Workgroup developed recommendations that will be presented to CAAAC through a webinar late in the summer of 2016.

Presentation: MSTRS Ports Workgroup Update to the Clean Air Act Advisory Committee

Ms. Sarah Froman and Dr. Lee Kindberg gave an update on the MSTRS Ports Workgroup. The charge to the workgroup was to develop recommendations for an EPA-led voluntary environmental port initiative and for recommendations in how to effectively measure the air quality and GHG performance of ports. A chart was presented showing the location of ports in relation to areas designated as nonattainment or maintenance of the NAAQS. Ports are complex legal and operation systems that include the port authority, other port operators, port facility visitors and users, and others that are impacted by port operations. Subgroups were created within the Ports Workgroup to assess specific needs and opportunities, including the definition/scope of a port, technology implementation and barriers, federal agency coordination, port inventory and metrics, strategies for community-port engagement, and program design/structure.

The overarching recommendation of the workgroup is that EPA should establish a voluntary ports environmental performance program. The recommendations are grouped into six categories, including emission reduction strategies, community-port engagement tools, coordination with relevant government programs, increasing and targeting funding, information clearinghouse and communications, and inventory and metrics. The ports workgroup provided a recommendations report to the MSTRS for review on June 2, 2016 and presented it on June 16, 2016. The MSTRS approved the report with minor edits and voted to send it forward to the CAAAC with a cover note emphasizing certain points. Next steps include finalizing the report and cover note for transmittal to the CAAAC. There will be a presentation to CAAAC on a call later in the summer (possibly August), and the workgroup plans to share the report with the CAAAC in advance of the call. The CAAAC will submit the final recommendations to the EPA Administrator.

Miscellaneous Business and Adjournment

A motion was submitted to approve the minutes for the CAAAC meeting on November 18, 2015 (approved).

Mr. DeMocker stated that the EPA will be soliciting membership for the CAAAC in August 2016, and the current charter will expire in October. He thanked CAAAC members for their service. Mr. DeMocker stated that the next round of CAAAC appointments is expected to take effect in March 2017 and noted that members are limited to six years of continuous service. He stated that the EPA will publish a federal register notice to solicit new members and will post the notice on the CAAAC website. Mr. DeMocker welcomed current members to reapply.

Mr. DeMocker stated that the CAAAC is a representation committee where members represent their organizations in addition to themselves, and that the committee is reaching out to new organizations. He stated that the selection and vetting process for membership approval could take six to nine months. He further stated that the member application deadline will be in mid- to late-September and asked CAAAC members to let others know if they would like to join.

Mr. DeMocker asked if CAAAC members had suggestions for topics of discussion for the next meeting. Dr. Kindberg responded that the next meeting could include a discussion of the studies by the Health Effects Institute on the toxicity of diesel emissions. Mr. Hoekzema stated that there are upcoming milestones concerning the 2008 and 2015 Ozone NAAQS and suggested that the next meeting could include an update on the Ozone NAAQS, as well as a discussion of the proposal for the new implementation rule.

Mr. DeMocker thanked everyone for their attendance and adjourned the meeting.

Attachment A

CAAAC Meeting Attendance List

Name	Affiliation	Attendance?
CAAAC Members and Presenters		
Beverly Banister	U.S. Environmental Protection Agency	Y
Kristen Benedict	U.S. Environmental Protection Agency	Y
Rona Birnbaum	U.S. Environmental Protection Agency	Y
Dr. Mark Bohan	Printing Industries of America	N
Michael Buser	Oklahoma State University	Y
John Busterud	Pacific Gas and Electric Co.	Y
Susan Collet	Toyota Motor Engineering & Manufacturing North America Inc.	Y
Allison Crimmins	U.S. Environmental Protection Agency	Y
Jim DeMocker	U.S. Environmental Protection Agency	Y
James Duffy	Clean Air Task Force	Y
Pamela Faggert	Dominion Resources Services Inc.	Y
Howard Feldman	American Petroleum Institute	Y
Ronald Fleming		N
Sarah Froman	U.S. Environmental Protection Agency	Y
Margaret Gordon	West Oakland Environmental Indicators Project	Y
Daniel Greenbaum	Health Effects Institute	Y
Bill Harnett	U.S. Environmental Protection Agency	Y
Mathew Hess	U.S. Environmental Protection Agency	Y
Robert Hilton	Robert Hilton Energy	Y
Andrew Hoekzema	Capital Area Council of Governments	Y
Marc Houyoux	U.S. Environmental Protection Agency	Y
Mark Hutson		N
Anthony Jacobs	International Brotherhood of Boilermakers	Y
Thomas Johnson		N
Gary Jones	Printing Industries of America	Y
Robert Kaufmann	Koch Companies Public Sector, LLC	Y
Jennifer Keller	U.S. Environmental Protection Agency	Y
Jim Ketcham-Colwill	U.S. Environmental Protection Agency	Y
Dr. Lee Kindberg	MAERSK, Inc.	Y
Mike Koerber	U.S. Environmental Protection Agency	Y
Cassady Kristensen	Rio Tinto Kennecott	N
Nancy Kruger	National Association of Clean Air Agencies	Y
Scott Marlene		N
Fran Marshall		Y
Janet McCabe	U.S. Environmental Protection Agency	Y

Wendy McQuikin	U.S. Environmental Protection Agency	Y
Gillian Mittelstaedt	Tribal Healthy Homes Network	Y
Robert Morehouse	Air Permitting Forum	Y
Brian Mormino	Cummins, Inc.	Y
Joseph Morris	U.S. Environmental Protection Agency	Y
Donald Neal, Jr.	Southern California Edison	Y - Phone
Daniel Nickey	University of Northern Iowa	Y
Robert O'Keefe		N
Peter Pagano	The Boeing Co.	Y
Vickie Patton	Environmental Defense Fund	Y
Dr. Wanda Phipatanakul	Boston Children's Hospital	Y - Phone
Lorraine Reddick	U.S. Environmental Protection Agency	Y
Myra Reece	SC DHEC	Y
Tamara Saltman	U.S. Environmental Protection Agency	Y
Erika Sasser	U.S. Environmental Protection Agency	Y
Shelley Schneider	Nebraska Department of Environmental Quality	Y - Phone
Dr. Nickey Sheats	Thomas Edison State College	N
Adrian Shelley, III	Air Alliance Houston	Y
John Shoaff	U.S. Environmental Protection Agency	Y
Karl Simon	U.S. Environmental Protection Agency	Y
Julie Simpson	Department of Natural Resources	Y
Geraldine Smith	Public Service Enterprise Group Inc.	Y
Patricia Strabbing	Chrysler Group, LLC	Y
Mary Uhl	Western States Air Resources Council	Y
Michael Villegas		N
John Walke	Natural Resources Defense Council	N
Jason Walker	Northwestern Band of the Shoshone Nation	Y
Chet Wayland	U.S. Environmental Protection Agency	Y
Ann Weeks	Clean Air Task Force	N
Dr. Jalonne White-Newsome	The Kresge Foundation	Y
Joy Wiecks	Fond du Lac Band	Y
Jacqueline Yeager	Cummins, Inc.	Y
Attendees		
Wilda Anagal	ITEP	Y
Rona Birnbaum	U.S. Environmental Protection Agency	Y
Rasto Brenzy	Manufacturers of Emission Controls Association	Y
Rebecca Chillrud	EESI	Y
Pam Giblin	Baker Botts	Y
Tim Hunt	AFPA/AWC	Y
John Kinsman	EEI	Y
Laura Kolb	U.S. Environmental Protection Agency	Y

Nate McMichael	U.S. Environmental Protection Agency	Y
Wendy McQuilkin	U.S. Environmental Protection Agency	Y
Jessica Mroz	U.S. Environmental Protection Agency	Y
Susan O'Keefe	U.S. Environmental Protection Agency	Y
Stuart Parker	IWP News	Y
Sean Reilly	EXE Publishing	Y
Alan Rush	U.S. Environmental Protection Agency	Y
Carolyn Slaughter	APPA	Y
Shanika Whitehurst	U.S. Environmental Protection Agency	Y