

Clean Air Act Advisory Committee

Crystal Gateway Marriott
1700 Richmond Highway
Arlington, Virginia 22202
November 7, 2019

Introduction, Opening Session

Mr. Larry Weinstock opened the meeting at 8:45 am on November 7, 2019 and welcomed the Clean Air Act Advisory Committee (CAAAC) members. Mr. Weinstock then reviewed the meeting agenda (see Table 1).

Table 1. CAAAC Meeting Agenda: November 7, 2019

Time	Topic
8:45 – 9:00	Opening Session
9:00 – 9:45	OAR Overview & Update on Priorities
9:45 – 10:30	Ethylene Oxide
10:30 – 10:45	Break
10:45 – 11:30	Transboundary Air Pollution Analysis
11:30 – 12:45	Lunch
12:45 – 1:30	Woodstoves
1:30 – 2:30	Oil and Gas NSPS Update
2:30 – 2:45	Break
2:45 – 3:30	Regulatory Update from the Office of Transportation and Air Quality
3:30 – 4:30	OTAQ Partnership Programs
4:30 – 5:00	Public Comments

Mr. John Shoaff, Director of the EPA’s Office of Air Policy and Program Support, also welcomed everyone to the meeting and began introductions of meeting participants. A list of meeting attendees is provided in the Appendix. Presentations are posted online at the CAAAC website: <https://www.epa.gov/caaac/2019-epa-clean-air-act-advisory-committee-meeting>.

OAR Overview & Update on Priorities

Ms. Anne Idsal welcomed the meeting participants. She stated that she appreciated the input, participation, and expertise the CAAAC members bring to the Committee and that she looks forward to their assistance in identifying future topics of interest. She began by giving an example of the useful work that has been produced as a result of CAAAC input, which is the Agency's progress in coordinating with state, local, and tribal agencies on the use of remote air quality sensor data. She then provided an overview of the Office of Air and Radiation's (OAR) current priorities and recent successes.

Ms. Idsal began by discussing the finalization of the Affordable Clean Energy (ACE) rule, noting that EPA set the best system of emissions reductions (or, BSER) for existing coal-fired power plants and states set standards of performance since they are best positioned to understand the particular circumstances within their borders. Under this rule, States will develop plans that fall within the EPA's guidelines, and power-producing facilities will comply with the state plans. Secondly, she stated OAR's desire to finalize the rule on mercury and air toxics standards (MATS) by the end of the year. She elaborated that the proposal aims to correct flaws in the 2016 supplemental proposal and to confirm that no changes are needed to the proposed emission limits, emphasizing that there are no proposed changes to the existing emission limits. In terms of the New Source Performance Standards (NSPS), Ms. Idsal stated that there are proposed changes for the oil and gas NSPS consisting of two actions to remove duplication of the EPA and state requirements, with the goal of reducing burden on the regulated industry and streamlining the process. She noted that the public comment period remains open until November 25, and the EPA hopes to receive substantive comments to strengthen the rule. The EPA aims to issue a final rulemaking on this topic within the coming months.

The current priorities for vehicles and fuels, as discussed by Ms. Idsal, include the Safer Affordable Fuel Efficient (SAFE) Vehicles Rule, which the EPA is working on with the National Highway Traffic Safety Administration (NHTSA). The Cleaner Trucks Initiative (CTI) and Renewable Fuel Standards (RFS) also remain priorities. Ms. Idsal noted the opportunity for the EPA to receive input on revisiting the heavy-duty NO_x standards, and that they are looking for opportunities to reduce idling times in places where there are high levels of ozone and NO_x. She anticipated that an Advanced Notice of Proposed Rulemaking (ANPRM) would be released on these topics soon.

With regards to the National Ambient Air Quality Standards (NAAQS), Ms. Idsal stated that the EPA is looking towards significant regulatory reform for how several of the NAAQS are implemented, and that the EPA is reviewing the current ozone and particulate matter NAAQS and plans to meet the five-year statutory deadline. She also noted that the EPA is working diligently alongside states to reduce nonattainment areas across the country from 166 areas to 101 areas by 2022.

Ms. Idsal discussed the EPA's current directive to improve the efficiency of the New Source Review (NSR) program. She also discussed ethylene oxide (EtO), noting that there are two rules in process – one is a rule for commercial sterilization facilities and the other is for facilities subject to the Miscellaneous Organic National Emissions Standards for Hazardous Air Pollutants (MON), to determine whether stricter emissions limits are needed for industries that emit EtO. She mentioned that the EPA is also working on how to best communicate risk with communities and plans to engage with regional, state, and local health agencies to help promote broader understanding and awareness of the state of the science on EtO exposure.

To conclude her overview, Ms. Idsal relayed to the group that the next CAAAC meeting is planned for late spring 2020, and then she welcomed questions from meeting attendees.

Comments and Discussion

Rev. Mitchell Hescocx asked how the EPA plans to reach attainment for ozone in Pennsylvania, Texas and California, when the Agency is deregulating methane emissions from oil and natural gas production. He registered his concern about eliminating the regulations on methane emissions overall as well as the complications this would pose for ozone attainment. Ms. Idsal responded that, because methane is already reduced by rules that control volatile organic compounds (VOC), the EPA does not believe deregulating methane will lead to an increase in those emissions. She continued by saying that the EPA welcomes data, comments, and thoughts on the impact of the proposed requirements on methane emissions. Ms. Idsal also noted that the EPA has engaged with the oil and gas industry, and as methane is a marketable commodity, oil and gas operators share the goal of reducing methane and VOC emissions.

Rev. Hescocx mentioned that the Bureau of Land Management has plainly stated that it will not be considering public comments on its actions regarding methane, and he hopes the EPA will not take this position regarding public comments. Ms. Idsal replied that the Clean Air Act (CAA) requires the EPA to consider comments on its proposed actions, the Agency has a long track record of doing so, and it plans to continue to do so for its proposed actions.

Mr. Frank Prager stated that he represents a public utility that is currently undergoing a sizeable transition in their energy mix. He asked how the utility industry should handle coal units that are retiring, noting that there is confusion about which retrofits will be necessary under the ACE rule. He also noted that there are differences in state timelines that go beyond the ACE timeline. Ms. Idsal responded that the final rule recognizes that there are some timeline differences, and she encourages states and industries to inform the EPA about where the timelines differ so the EPA can work with the states, where possible, in implementing the rule.

Mr. Dan Greenbaum commented that, even recognizing the Clean Air Act requirements, EPA's plan of staying on a five-year timeline to update the PM and ozone standards may make it impossible to have a thoughtful review of the science, and the EPA should consider ensuring the standards are based on scientific review that will stand up to scrutiny, even if that might mean a timeline is not met.

Ms. Kimberly Scarborough asked if Ms. Idsal could provide any updates on the Cross-State Air Pollution Rule (CSAPR). Ms. Idsal responded that the EPA Office of Air and Radiation (OAR) is working closely with the Office of General Counsel (OGC) on the status of CSAPR. She noted the disjointed nature of the rule but elaborated that the EPA is trying to be very strategic moving forward.

Ms. Vickie Sullivan noted, regarding the ACE rule, that substantial latitude is granted to the states and asked if the EPA plans to issue any guidance for states. Ms. Idsal responded that she is unsure of whether the EPA will issue guidance, explaining that the EPA is planning to watch and see where there are common regulatory themes among states and then look for opportunities to develop tools to address those common themes.

Mr. Bob Wyman also asked about the ACE rule, stating that the Agency has chosen to be restrictive in its statute, which puts an enormous premium on the EPA taking a fresh look at how states choose to achieve reductions. He continued by saying that it is critically important that the EPA allows states and regions the flexibility to decide what works best for them. He also commented that he looks forward to working with the EPA on the CTI. In terms of the SAFE rule, he urged the EPA to meet with stakeholders and create one national standard that will allow for innovation.

Mr. Tim Hunt commented that industry welcomes the common sense approach the EPA is bringing to the NSR permitting program for the manufacturing sector. He noted that the complex nature of the program creates difficulties for getting projects permitted and further EPA actions to streamline the program would be welcome.

Mr. Donald Peters He stated that concentrated animal feeding operations (CAFOs) emit ammonia and hydrogen sulfide and that in 2005, the EPA published a finalized consent agreement that required agricultural industries to collect and analyze emissions data for the purpose of regulatory development. He asked what the EPA's plans are for including the results of this data gathering in the establishment of standards related to animal feeding operations. Ms. Idsal responded that she invites Mr. Peters to join EPA staff for a briefing on the evolution of this issue and how the EPA hopes to work with states moving forward on these standards.

Mr. Andrew Hoekzema commended EPA for their commitment to reaching their goal of a five-year timeframe for the NAAQS standards, even if they are unable to complete a thorough review. He then asked about the designation process, whether the EPA will be revising designations in the Austin, Texas area, and whether the EPA will be issuing guidance around designations. He also commented that the closure of coal plants in rural areas has shifted some of that energy production to older, cheaper peaker plants in urban areas. He encouraged the EPA to spend time examining this issue.

Ms. Nancy Kruger agreed with previous comments made by Mr. Greenbaum regarding the NAAQS.

Ms. Gillian Mittelstaedt noted her support for replicating the cook stove policy for wood heating, citing the negative health impacts of wood smoke that are now being compounded by exposure to forest fire smoke in some parts of the country.

Ethylene Oxide Presentation

Mr. Mike Koerber gave a presentation about the air issues associated with the pollutant ethylene oxide (EtO). He stated that EtO is one of the 187 pollutants known as “air toxics” that the EPA regulates under the CAA, noting that it is both an extremely toxic chemical and a very important chemical in our society (e.g., it is used to sterilize about half of all medical devices that need to be sterilized). In reference to the most recent National Air Toxics Assessment (NATA) issued in August 2018, he said that the EPA identified several geographical areas as potentially having elevated cancer risks from long-term exposure to EtO. Sources of EtO include chemical manufacturing and commercial sterilization. To respond to this public health threat, the EPA designed a two-pronged strategy. Mr. Koerber described the first prong as a review of CAA regulations for facilities that emit EtO to ensure they protect the public from significant risk, and he described the second prong as an information gathering operation on EtO emissions for areas with higher risk. Currently, there are two reviews in progress for the first prong – review of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Miscellaneous Organic Chemical Manufacturing (the “MON”) and the NESHAP for Commercial Sterilizers. In terms of national rulemaking efforts, Mr. Koerber noted that there is (or soon will be) a Notice of Proposed Rulemaking (NPRM) out for the MON and an ANPRM for commercial sterilizers. Additionally, he stated that state and local agencies have reviewed emissions, reduced emissions, conducted ambient monitoring, and/or engaged local communities in higher risk areas. The EPA is working alongside other federal agencies to arrive at a safe and sensible solution for addressing EtO emissions.

Comments and Discussion

Mr. Hoekzema noted that he did not see the Occupational Safety and Health Administration (OSHA) listed as one of the agencies the EPA is working with on EtO and asked if the EPA was working with the labor community, since they are exposed to EtO while working. Mr. Koerber responded that the EPA’s authority under the CAA is to regulate outdoor air and has so far worked with other agencies with jurisdiction over outdoor air, but he acknowledged that this issue needs to be addressed, and OSHA will be included at some point.

Mr. Jason Howanitz cautioned that due to the inherent errors in NATA that it sometimes overstates risks and therefore can unnecessarily cause alarm in a community when the EPA tries to communicate risk. Instead, EPA should use NATA as it is intended as a screening tool and then verify the risk with monitoring which in many cases reflects a much different risk. Mr. Howanitz stated that NATA is a screening tool but is not reliable when assessing a specific risk past a regional scale. Mr. Howanitz emphasized the concern with not relying on actual ambient air data to categorize actual risk for air toxics. Mr. Howanitz stated he understood the desire to quickly inform the public and agrees with its importance while also emphasizing it is more important to give them the most accurate data because most may only listen to the first

information given in his experience with risk communication. Mr. Koerber responded that NATA provides a valuable screening tool but does not necessarily provide actionable information. He noted that the EPA uses a more refined assessment before engaging and informing communities. However, this process takes time, and the EPA does not want communities to feel as though information is being kept from them, so they are attempting to deliver this information faster.

Ms. Kruger commented that the National Association of Clean Air Agencies (NACAA) members commend the EPA for their work on EtO. She reiterated that some stakeholders are advocating for replacing the EPA's Integrated Risk Information System (IRIS) value for EtO with another value, but NACAA urges the EPA to continue to use the IRIS value it is using now. Mr. Koerber responded that when the proposed actions regarding EtO are published, the EPA expects to have a thoughtful conversation on risk assessments, including the dose response value for EtO and IRIS.

Mr. Ted Steichen encouraged the EPA to involve OSHA and the Department of Labor as soon as possible, given the massive human health implications for workers in plants that use EtO. Mr. Koerber agreed that this issue touches many agencies, and it is important for agencies across the federal government to collaborate and speak with one voice.

Mr. Bob Hodanbosi asked if Mr. Koerber could spend more time discussing ambient monitoring, given that his state, Ohio, said they would rather not spend the time and money on monitoring this pollutant. Mr. Koerber responded that though many communities want EtO to be monitored, and the EPA tries to do thorough air monitoring across the country, this is a particularly challenging chemical to monitor. He noted that the EPA is working to develop new test instruments to monitor EtO and to identify other potentially harmful chemicals.

Mr. William Spratlin urged the EPA to work internally with other parts of the Agency regarding developing better risk communication. He cited an example where a Superfund site was located next to an EtO emitting plant, and the EPA was ill-prepared to communicate risk to the public.

Transboundary Air Pollution Analysis Presentation

Dr. Barron Henderson began his presentation by stating that the aim of the presentation is to provide context for state and local air agencies on the international transport of air pollutants. He noted that the presentation would focus heavily on "background," which refers to pollutant concentration that exist in the absence of a particular source of pollution. He noted that while airborne particulate matter (PM) is a predominately local issue from an annual NAAQS perspective, ozone transports efficiently and has relevant background contributions that include international transport. Dr. Henderson described how ozone has natural and anthropogenic sources outside of the U.S. that arrive through long-range transport, and the EPA uses photochemical models to estimate the amount of international ozone transport, since even the most remote monitors include U.S. anthropogenic contributions.

Dr. Henderson then described the mechanisms for long-range transport, saying that different transport pathways include low altitude, which is slower with more losses, and high altitude, which has faster winds and fewer removal mechanisms. Plotting trends of ozone over the U.S., Dr. Henderson showed that the Eastern U.S. has little international contribution, while the Intermountain West has more long-range international transport, and select border areas have more short-range international transport. Dr. Henderson returned to discussing PM, saying that its shorter atmospheric lifetime means it is generally more localized, and therefore international transport is primarily a concern for near-border areas. Most background PM contributions in the United States come from natural sources, including fires or wind-blown dust events.

To address background emissions in the NAAQS reviews and implementation, Dr. Henderson stated that the EPA conducts an Integrated Science Assessment and Policy Assessment for each review, which include a summary of the latest literature on U.S. background concentrations. Additionally, Dr. Henderson added that the EPA continues to improve its modeling capabilities to better measure the contribution of international transport in overall emissions.

Comments and Discussion

Rev. Hescox commented that he does not believe wildfires can be considered an anthropogenic source, given the impact of climate change on their frequency and intensity. Mr. Henderson responded that, in many cases, it is difficult to assess whether wildfires are caused by humans or not.

Mr. Greenbaum commented that China has been extremely successful in reducing PM, and the EPA has provided them with technical assistance to do so. However, he noted that ozone is increasing in China and asked whether the EPA could work with China to reduce ozone. He also asked if there were opportunities to collaborate with Mexico to reduce ozone. Mr. Henderson replied that there have been many collaborations with the Mexican government, and the EPA hopes to reinvigorate those collaborations. He also noted that the EPA continues to collaborate with researchers in China, and in doing so, was able to get an accurate emission inventory for the 2016 simulations.

Mr. Steichen commented that he disagreed with some of the data and trends in the presentation and asked whether the data are available for review. Mr. Henderson responded that a study with information on how the EPA arrived at these conclusions, as well as technical documents, will be available soon.

Mr. Clay Pope inquired as to when guidance issued on how to provide a demonstration pursuant to CAA section 179B would be released. Mr. Koerber responded that it is close to being released, and the EPA hopes to send it to states to review later in November.

Mr. Hoekzema asked how the modeling works in conjunction with the NAAQS and inquired about the timing of these analyses. He went on to encourage the EPA to do their modeling and include in-U.S. transport in areas to ensure that proper action can be taken at the state and local level to comply with the NAAQS. He also noted that the policy assessments the EPA publishes

should be consistent with the NAAQS and the modeling. Lastly, he stated that he believes the modeling should be paired with the NAAQS review process.

Mr. Howanitz commented that some early adopters of Photochemical Assessment Monitoring Stations (PAMS) have seen significant reductions in ozone levels and the PAMS research is an effort by EPA to better understand other chemicals involved in photochemical ozone formation and help with adjustments in models used to predict ozone formation for forecasting ozone. He noted that PM_{2.5} concentrations for a majority of the southeastern areas continue to decrease and also stay in attainment with the NAAQS. Dr. Henderson responded that there is continually newer and better information, and monitoring data, like PAMS, provide insights on what the model is getting correct and incorrect. He also noted that the EPA has more satellite and remote sensing data available, and they are constantly trying to utilize that data to improve the model.

Residential Wood Heat Appliance Certification Presentation

Mr. Stef Johnson began his presentation by explaining the importance of the Wood Heater NSPS for public health. He stated that experience with the 1988 test methods for assessing whether wood heaters comply with the emissions standard shows that crib fuel testing is not well suited for wood heater compliance determinations or emissions factor development. Therefore, in the 2015 NSPS revisions, the test methods for wood heaters retained the 1988 crib fuel test but added a cord-wood compliance option. In addition, an ASTM method that was not final in time for inclusion in the 2015 NSPS is now allowed to be used through the EPA Alternate Test Method provisions. Mr. Johnson noted that the EPA has heard concerns from states that the cord wood test method does not provide appropriate data for compliance determinations and is not useful for State Implementation Plan (SIP) purposes. In terms of rulemakings, the EPA published an ANPRM in November 2018 requesting comment on various aspects of the existing wood burning appliance compliance test program. Mr. Johnson said that the EPA has reviewed the comments from the ANPRM and will be convening a meeting of state and industry experts to discuss the best path forward. He elaborated that the EPA anticipates modifications to the existing test methods and/or validation testing of new test methodology to begin in the spring of 2020, with likely finalization of new test methods in late 2022.

Mr. Johnson continued by saying that the EPA will host a round table meeting in Research Triangle Park on January 15, 2020 and hopes meeting attendees will bring a knowledgeable discussion of cord wood test issues to the table. Based on this technical discussion, the EPA will select a path forward for cord-wood test method improvement to better support the EPA's program needs. Mr. Johnson envisions that this round table will lead to further meetings of the same group to work on improving test methods and procedures. Mr. Johnson concluded by saying that the new and revised test methods will undergo notice and comment and that promulgation of a new emissions standard would also follow notice and comment rulemaking, with the test method used to support the standard.

Comments and Discussion

Mr. Dan Nickey commented that this rule will impact many small businesses and recommended that the EPA collaborate with their small business office and other small business assistance groups across the country.

Ms. Kruger commented that NACAA has been following this issue and looks forward to the round table meeting. She noted NACAA's hope that the new cordwood test method will be ready for the 2023 NSPS. She also stated that NACAA has looked at the ASTM and Integrated Duty Cycle test methods and asked what the EPA hopes to gain from these test methods. Mr. Johnson replied that the needs of the program are to reduce overall variability from one test on one appliance to another and also to reduce the potential for gaming of the test method. He said he looked forward to hearing more about the Integrated Duty Cycle at the meeting.

Ms. Mittelstaedt commented that wood stoves decline in performance over time and that moisture content and user-based issues are the biggest variables in in performance, and these variables are not factored into the testing program. She also noted that the Burn Wise program is not heavily funded, and wildfires are compounding the problems associated with emissions from wood stoves. She asked if the EPA could test in a way that assesses how a device operates over time. She also asked what can be done about uncertified wood stoves in operation. Mr. Johnson responded that the EPA had not considered appliance aging in the certification testing, but this is something they would think about. He also noted that the EPA has supported wood stove changeout programs.

Mr. Peters asked about the certification test methods and how they are applied to a manufacturer's production program. Mr., Johnson responded that existing regulations require that manufacturers have at least one of each model tested, and when a model passes, the manufacturers receive approval from the EPA to make and sell as many of that model as they want, as long as the combustion parameters remain unchanged. He added that the EPA hopes the testing data can also be used by state and local governments to estimate potential emissions decreases in their areas and understand the emission reduction potential of stove changeout programs.

Mr. Howanitz commented that the EPA is assuming that individuals will change out older wood stoves for newer models and asked about the turnover rate and cost per emissions decrease. Mr. Johnson responded that there was an extensive economic analysis done in 2015 to suggest these emissions standards make economic sense, however he is uncertain about the assumed appliance turnover rate.

Mr. Robert Meyers asked about whether the EPA had thought about using the authority under CAA section 111(b) to regulate existing wood stoves. Mr. Koerber clarified that the EPA has focused on new sources and is not considering regulating existing stoves.

Mr. Tomas Carbonell commented that wood stoves are a serious concern in communities across the country and inquired about the effectiveness of the hydronic heaters standards, noting that some manufacturers starting marketing them as commercial appliances to circumvent the standards. Mr. Johnson responded that he also has heard anecdotally that wood-burning appliances that are not in compliance are being marketed for other purposes.

Ms. Natalene Cummings commented that a changeout program in Idaho found that using a certified wood stove versus an uncertified wood stove did not significantly change emissions because individuals were operating the wood stoves incorrectly. She commented that funding for the Burn Wise program and for education is critical.

Oil and Gas NSPS Update

Mr. David Cozzie gave a presentation on the proposed policy amendments to the 2012 and 2016 NSPS for oil and gas sources. He began by explaining that CAA section 111 directs the EPA to establish standards for stationary sources of air pollution that may endanger public health. Oil and gas facilities are one type of source category that the EPA is required to set NSPS for under section 111. Mr. Cozzie went on to say that the EPA's original source category listing for oil and natural gas in 1979 only included the production and processing segments; the 2012 and 2016 rules interpreted the source category to also include the transmission and storage segments.

Mr. Cozzie noted that on August 28, 2019, the EPA proposed amendments to the 2012 and 2016 NSPS in response to the Executive Order on Promoting Energy Independence and Economic Growth. The primary proposal was to remove the transmission and storage segment from the source category and rescind methane standards from production and processing. An alternative proposal was also made to rescind methane standards from all sources without revising the source category. Mr. Cozzie clarified that both proposals state that because the existing (2012 and 2016) controls to reduce VOCs emissions will also reduce methane emissions, separate methane limitations for the industry are redundant.

Considering the proposed amendments, Mr. Cozzie outlined the areas which the EPA is seeking comment. These areas include whether CAA section 111 requires the EPA to make a source category, pollutant-specific significant contribution finding for greenhouse gas (GHG) emissions, the appropriate criteria to use when determining whether a pollutant emitted from a particular source category significantly contributes to air pollution that would be anticipated to endanger public health and the environment, and all other aspects of the proposed amendments.

Mr. Cozzie went on to state that the proposed amendments would, if finalized, also remove the obligation to regulate methane from existing sources, but the EPA expects the number of existing sources to decline over time. He also noted that sources already have incentives to control methane due to economic incentives, existing state regulatory programs, and voluntary programs. Finally, Mr. Cozzie related the impacts of the proposed amendments on industry costs, emissions, and the climate, stating that the estimates are a \$17-\$19 million/year savings to industry; an increase of 370,000 tons of methane, 10,000 tons of VOC and 300 tons of HAP; and climate-related costs of \$2.3-\$8.1 million/year.

Comments and Discussion

Rev. Hescox commented that by changing this to a VOC rule, sources with low VOCs would no longer have the methane reductions that would otherwise be achieved. He also commented that removing the ability to regulate methane and VOCs from existing sources takes away support for states that already have or are developing their own methane standards. Mr. Cozzie replied that

he appreciated the comment regarding existing sources and support for state programs. In response to the first comment, he noted that there is no threshold quantity of emissions that determines the applicability of the rule to a source, so a low quantity of VOC emissions does not impact whether VOC (and thereby methane) emissions reductions would occur.

Mr. Hoekzema stated his general dissatisfaction with the EPA's posture of upending every regulation put into place by the previous administration, arguing that there is a business case for reducing uncertainty and leaving regulations that are working in place. He then said that from a stakeholder perspective, he is not sure what to make of these rules changing and believes they are built on disingenuous economic reasoning.

Ms. Cummings commented that these proposed amendments have direct health impacts on tribes, and tribal impacts were not properly considered in the proposed rule. She went on to say that by statute, tribal communities are supposed to be consulted, but they were not, and they already face much higher public health threats, such as asthma. She also noted that tribes believe GHG emissions will increase, which will impact them in many ways, such as needing to move away from their ancestral lands. Mr. Cozzie stated that the EPA did offer tribal consultation.

Ms. Shannon Broome commented the preamble contained an understandable and thorough rationale, and she hopes the EPA continues to utilize the analysis presented in the proposal for the final rule. She also encouraged the EPA to consider how this approach translates to other pollutants with local impacts, such as ozone, compared to pollutants with global impacts, such as GHG. Additionally, she hopes the EPA will clarify how it interprets CAA section 111 overall, so that everyone can understand and predict the EPA's actions.

Mr. Eric Massey commented that there is an emphasis globally on reaching carbon neutrality in the utility sector, and one of the ways to do that is through carbon offsets. He continued by saying that the EPA should look at other policy mechanisms beyond command and control for reducing emissions. He also requested that the EPA provide best practices for the utility industry. Mr. Cozzie responded that the EPA does not have a best practices guide but does have institutional knowledge of best practices that have been applied to previous projects.

Mr. Frank Prager asked about the EPA's confidence in the numbers presented in the regulatory impact analysis (RIA), particularly for methane. He also asked if the social cost of carbon was used and whether the EPA would still have authority to require methane emissions reporting. Mr. Cozzie replied that the NSPS only applies to sources going forward, so there is a lot of softness in the numbers because assumptions must be made regarding the number of new sources coming online. He responded that the domestic cost of methane was used, which is about \$120/ton. He also replied that methane reporting requirements would not be affected because those requirements are part of a different rule.

Ms. Mittelstaedt commented that her understanding is that the U.S. has aging oil and gas industry infrastructure, and a large contributor of methane emissions is leaks. She asked why the EPA would enact these rules when we are on a precipice of new infrastructure. Mr. Cozzie replied that not all leaks are covered by the rule, like those from malfunctions and pigging operations, so changes to the rule do not impact all leaks from the sector.

Mr. Carbonell echoed the key concerns of others in terms of increased methane emissions, VOC and HAP emissions, and a lack of meaningful analysis. He stated that the NSPS is an extremely common sense, cost effective standard that should be maintained and extended to existing sources. He asked about Mr. Cozzie's statements regarding the effectiveness of state regulations, voluntary programs, and industry turnover in helping to reduce emissions. He stated that his understanding is that those are not meaningful replacements for the emissions standards and asked whether the EPA had quantified the emissions reductions foregone by changing the standard. Mr. Cozzie responded that the EPA sees some trends to suggest that state regulations, voluntary programs, and industry turnover are helping to reduce emissions, but the EPA is not able to fully quantify that.

Regulatory Update from the Office of Transportation and Air Quality

Mr. Ben Hengst presented on the Office of Transportation and Air Quality's (OTAQ) regulatory outlook. He began by relating the upcoming regulatory actions affecting on-road vehicles. The first action he described is the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule which revises model year 2021 to model year 2026 vehicle GHG standards and makes changes to California's vehicle waiver. The next actions he discussed are the CTI, which revises the EPA's emission standards for highway heavy-duty engines and vehicles and the vehicle test procedure adjustments for tier 3 test fuel, which accounts for changes to tier 3 gasoline certification test fuel in testing procedures. Lastly, he covered light-duty vehicle GHG program technical amendments, which is an action to correct errors in the EPA regulations from the program promulgated in 2012.

Mr. Hengst continued by presenting the current regulatory actions for non-road vehicles and fuels. The first action he discussed is amendments related to marine diesel engine emission standards, which considers amending the regulatory schedule for the smallest power category of tier 4 marine standards to provide additional lead time. Next, he explained the amendments related to global marine fuel, which would amend diesel fuel regulations to allow the distribution of 5,000 ppm S distillate marine fuel in the U.S., which is consistent with the International Maritime Organization's 2020 standard. Lastly, Mr. Hengst spoke about advancing clean aircraft engines and reforming test procedures for aircraft PM, which is a rulemaking that follows the International Civil Aviation Organization's agreement on the first-ever international PM emissions standards for commercial aircraft engines.

Mr. Hengst next described regulatory actions taking place in fuels. He discussed the E15 (gasoline blended with up to 15% ethanol) and renewable identification number (RIN) market reform action, which is a rulemaking to extend a Reid Vapor Pressure (RVP) waiver to E15 and modify RIN market regulations. He then went over the Renewable Fuel Standards (RFS), beginning with the 2020 Renewable Fuel Volume Annual Standards Rule, which is a rulemaking to be put in place by the renewable fuel obligations for the 2020 calendar year. The other RFS rule is the renewable fuel standard program modification of applicable volume, or the Reset Rule, which aims to revise the renewable fuel volumes specified in the statute for 2020 through 2022. Mr. Hengst also explained the Fuel Regulatory Streamlining Rule, which is a rulemaking to rewrite and streamline the non-RFS Part 80 fuel regulations, and the Renewables

Enhancement and Growth Support (REGS) Rule, which allows biointermediates under RFS, puts standards in place for higher level ethanol blends, adds new RFS pathways and seeks comment on regulations to allow the generation of RINs for renewable electricity.

Following this high-level overview of regulatory actions, Mr. Hengst discussed two major studies the EPA is undertaking – the Coastal Marine Mode Shift Study and the RFS Air Quality Anti-Backsliding Study. Mr. Hengst went on to provide a more in-depth explanation of the CTI. He stated that the main objective of the CTI is to achieve lower NO_x emissions nationwide and identify cost-effective means of ensuring real-world compliance, including exploring opportunities to streamline existing requirements. He noted that the motivation for this initiative is to modernize requirements to better reflect the capability of available emissions control technologies. He went on to say that the EPA's current emission standards have lowered overall NO_x emissions but have not resulted in effective emission control under low-load conditions. Mr. Hengst provided key program elements that are being explored, which include nationwide emissions reductions, ensuring in-use emissions reductions, streamlining and modernizing requirements, and effective EPA compliance and enforcement. He said the EPA is targeting an ANPRM by the end of 2019 and targeting 2020 for a NPRM, though they are currently in the information gathering stage of the process. Early CTI stakeholder engagement has included the user community; clean air and environmental non-governmental organizations; state, local, and tribal governments; original equipment manufacturers; and suppliers and labor. He stated that the CTI rulemakings will utilize new data on activity, vehicle miles traveled (VMT), vehicle populations, glider vehicles, and heavy-duty emission rates to inform the emissions inventories, and the CTI proposal will include a full air quality analysis, benefits calculations, and proposed program benefit-cost analysis.

Mr. Hengst acknowledged that California's Air Resources Board (CARB) is also developing major heavy-duty diesel program revisions, including lower NO_x standards. However, he noted that CARB's timeline enables faster implementation than the EPA's timeline and stated that EPA staff will continue to coordinate with CARB on technical issues. They are also exploring approaches with CARB and industry to maintain the EPA-CARB coordinated 50-state program approach.

Comments and Discussion

Ms. Broome commented that in the mobile source arena, requirements are ill-defined in the regulations and are often based on EPA enforcement interpretations. Mr. Shoaff responded that the EPA is aware of this issue and is in the process of examining the guidance that has been used for compliance matters. Mr. Hengst added that the EPA is trying to make it easier for businesses to comply, which they are doing now with the fuels streamlining action.

Mr. Hoekzema noted that for tier 3 fuel standards, there is an important milestone at the end of the year with compliance credits. He added that many of the EPA's planning assumptions are based on modeling of the effects of the fuel standards, but in Texas, they are still getting 30-35 ppm fuel sulfur downstream, which does not support the EPA's assumptions. He urged the EPA to consider an ongoing sampling program downstream to verify the modeling assumptions and

added that the EPA should consider having a downstream annual standard. Mr. Hengst responded that he is not aware of anything downstream being examined, but that the sampling and testing protocols will be examined as part of the rule streamlining.

Mr. John Booher asked about the increased availability of E15 in the market and whether the EPA sees an opportunity or a need to warn consumers about using higher ethanol fuels when not appropriate. Mr. Hengst replied that when the EPA modified regulations to allow E15 to be sold, provisions were added to require a label at the pump that explains the fuel is not appropriate for older vehicles and smaller engines, like those in motorcycles and boats.

Mr. Myers asked whether the heavy-duty technical amendment still existed and inquired as to the 2020 RFS supplemental rule timeframe. Mr. Hengst responded that there is a heavy-duty technical amendment that the EPA is working on and said there is no timeframe yet for that amendment. For the RFS supplemental rule, Mr. Hengst stated that the final rule should be issued by the end of the year.

Mr. Hoekzema suggested including short-term idling off network in the next iteration of MOVES. He also noted that some local fleet operators use fleet management software and saw behavior change after informing their operators about the software. He asked if the EPA could examine a compliance option or regulatory tool to get improved deployment of fleet management software down to the user level. Mr. Hengst responded that the EPA is interested in improving data and management approaches, and new technologies could be a component of that.

Mr. Greenbaum commented that there is data to suggest that MOVES does not fully capture the improvements in NOx emissions that have happened in the fleets and also asked for a status update on gliders. Mr. Hengst replied that there is a technical subcommittee focused on improving MOVES that is working on the NOx issue. He stated that there is a proposed rule out for gliders, and the Administrator and OTAQ are considering next steps.

Dr. Adrienne Hollis suggested that, based on her work and conversations, the EPA should involve community groups that work on emissions and idling as a stakeholder category that should be engaged in the EPA's rulemakings. Mr. Hengst responded that community groups may already be engaged, but he will also share that feedback with the EPA team.

Mr. Meyers asked about timing issues between the California rules and the EPA CTI rule. Mr. Hengst responded that the EPA is aware of the timing issues, in that the California rules will likely be issued before the EPA rule.

Ms. Kruger commented that certain areas around the country, such as areas in nonattainment and areas struggling to stay in attainment, need reductions in NOx emissions. She then requested that EPA provide a 90-day comment period on the CTI proposal, rather than only 30 or 45 days.

Mr. Hoekzema commented that the EPA is moving to strip California of its ability to set its own light-duty vehicle emissions standards and asked if the EPA is also trying to prevent California from setting its own heavy-duty vehicle emissions standards. Mr. Hengst responded that the EPA is working with California and industry on heavy-duty NOx standards, with the goal of a 50-state

solution. Mr. Hengst replied that the administration has been clear on its position regarding California setting its own standards for light-duty vehicles.

OTAQ Partnership Programs

Mr. Karl Simon presented an overview of OTAQ's partnership programs, which complement its regulatory programs. The first partnership that Mr. Simon covered is the EPA's Ports Initiative, which was launched in 2014 in response to determining that 40 percent of the largest 150 ports are in NAAQS nonattainment or maintenance areas. The EPA, Mr. Simon stated, received recommendations from the CAAAC on ports in September 2016 that included providing funding, technical resources, and expertise to enable and encourage environmental improvements. The EPA is working to raise port industry standard practices to accelerate the adoption of clean air planning practices and clean technologies and other strategies through tools and assistance. Mr. Simon also discussed a recent effort to promote community-port collaboration for effective planning by completing pilot projects in Savannah, Georgia; New Orleans, Louisiana; Seattle, Washington; and Providence, Rhode Island.

The next partnership that Mr. Simon discussed is the Diesel Emissions Reduction Act (DERA) program. He noted that the purpose of DERA is to incentivize faster fleet turnover to reduce the number of legacy diesel engines, which emit significant amounts of PM and NOx. Mr. Simon stated that DERA yielded between \$7 and \$19 billion in health benefits and prevented between 1,000 and 2,300 premature deaths between 2008 and 2016. He noted that DERA is unique in its specific purpose of reducing mobile source diesel emissions, and the program consistently receives bipartisan support and is always oversubscribed. Mr. Simon discussed that future steps of DERA include continuing to emphasize ports and goods movement and continuing to emphasize environmental justice areas with populations disproportionately affected by diesel exhaust. He noted that the next funding opportunity is in December 2019.

Mr. Simon emphasized that goods movement is essential to businesses and communities, that freight activity is growing, and the technology used for goods movement is changing. He acknowledged that partnerships enable more efficient, greener freight choices. Mr. Simon elaborated that the EPA's SmartWay program allows partners to voluntarily submit freight activity information using EPA's assessment and tracking tools, and the results let companies readily see which carriers are the greener choices. This program has seen positive results, with companies improving the efficiency of moving goods, while reducing emissions and saving money. Mr. Simon also described the Travel Efficiency Assessment Method (TEAM) partnership, noting its deployment in a group of case study cities across the U.S. He defined travel efficiency strategies as falling under travel demand management, changes to public transit, travel pricing, and changes to land use. He stated that TEAM itself is a method to rapidly assess multi-pollutant emission reductions from hypothetical travel efficiency strategies and scenarios at the local, state, and national levels. Major findings so far include that pricing strategies have the biggest potential to reduce light-duty VMT and emissions and that smart growth and land use strategies can also have a large impact. Lastly, Mr. Simon described the EPA's Green Racing Partnership with the International Motor Sports Association (IMSA).

Comments and Discussion

Mr. Nickey asked if the EPA plans to coordinate DERA with the Volkswagen settlement. Mr. Simon replied that the Volkswagen settlement money goes almost exclusively to states, but there is a DERA option that allows states to use this money for projects that are not specifically listed, which is what many states are choosing to do.

Mr. Greenbaum commented that the Health Effects Institute has been funding accountability tests and just funded a national program to assess school bus changeouts and the impact on public health. He went on to say that school buses are a potential application for DERA. He also asked if the EPA has interacted with the FIA Foundation in their green racing partnership. Mr. Simon responded that they have interacted with the FIA, but they would like to engage more organizations. In terms of the effects of school bus changeouts, Mr. Simon noted that the EPA has seen preliminary research but would like to see more.

Mr. Jeremy Fincher asked about programs that cannot meet the cost matching requirements of DERA and whether there is a provision to eliminate the cost share requirement for small tribes or communities. Mr. Simon stated that the EPA could discuss that, but also suggested that small tribes and communities might be able to use Volkswagen settlement funding to help meet the DERA cost share requirements.

Mr. Timothy Hunt stated that transportation costs are significant for the paper products industry, and they have advocated for allowing increased truck weights, which would reduce truck VMT. He asked if the EPA is working with the Department of Transportation to increase truck weights to have fewer trucks arriving at facilities. Mr. Simon replied that truck weights are a conversation that has come up in the past, noting that the EPA wants to focus not only on the tailpipe but also other ways, such as this, to reduce emissions.

Mr. Massey suggested that the barrier to increasing the impact of the DERA program is a lack of funding. He noted that the EPA might be able to expand funding if companies were willing to pay into the program for an incentive, such as carbon credits. He also commented that the TEAM partnership's recommendations are generally ways to reduce the convenience of driving, largely through fees. He notes that this would disproportionately affect lower-income individuals and suggests that a better strategy is to make other modes of transportation more convenient. Lastly, he recommended that the EPA promote truck stop electrification to provide offsets while truck drivers are idle. Mr. Simon thanked him for his comments and stated that the EPA has previously funded some truck stop electrifications through DERA.

Mr. Hoekzema commented that Texas has a similar program to DERA at the state-level that is well resourced, but that program prefers to target vehicles that spend most of their time in Texas, rather than on long-haul trucks that travel to other states. He suggested that the EPA address long-haul trucks, due to their regional to national travel patterns. He also gave his personal experience with the TEAM partnership, saying that they have seen personal vehicles being substituted by delivery services, so it is difficult to know whether there is a net benefit in that case. He encouraged the EPA to undertake a study on the implication of these mode shifts. Mr.

Simon thanked him for his observations and mentioned that the CAAAC's Mobile Source Technical Review Subcommittee has been discussing new mobility and its impacts, noting that it seems there are not net improvements.

Final Remarks, Public Comments and Adjourn

In closing, Mr. Shoaff thanked everyone for their time and attendance. He stated that the EPA will contact meeting participants for feedback on potential meeting dates in late spring and for ideas for that meeting's agenda. He also encouraged the meeting participants to follow up on the topics discussed individually. He concluded by thanking the speakers.

Mr. Weinstock also thanked everyone for their participation and noted that the Agency is starting a new FACA committee for farm, ranch and rural communities. He noted that there were no public comments made during the public comment period of the meeting and officially adjourned the meeting.

Appendix

CAAAC Meeting Attendance List	
Committee Members and Presenters	
Name	Organization
Dr. William Bahnfleth	Penn State University
John Booher	Briggs and Straton
Shannon Broome	Hunton Andres Kurth LLP
Tomas Carbonell	Environmental Defense Fund
David Cozzie	U.S. Environmental Protection Agency
Natalene Cummings	Forest County Potawatomi Community, Natural Resources Dept.
Veronica Figieroa	Mosaic Fertilizer
Jeremy Fincher	Sac and Fox Nation
Steven Flint	New York Department of Environmental Conservation
Gail Good	Wisconsin Department of Natural Resources
Dan Greenbaum	Health Effects Institute
Barron Henderson	U.S. Environmental Protection Agency
Ben Hengst	U.S. Environmental Protection Agency
Mitchell Hescox	Evangelical Environmental Network
Bob Hodanbosi	Ohio Environmental Protection Agency
Andrew Hoekzema	Capital Area Council of Governments
Dr. Adrienne Hollis	Union of Concerned Scientists
Jason Howanitz	Jefferson County Department of Health
Timothy Hunt	American Forest & Paper Association, American Wood Council
Anne Idsal	Acting Assistant Administrator, USEPA/OAR
Stef Johnson	U.S. Environmental Protection Agency
Gary Jones	Specialty Graphic Imaging Association Foundation
Mike Koerber	U.S. Environmental Protection Agency
Shannon Koplitz	U.S. Environmental Protection Agency
Nancy Kruger	National Association of Clean Air Agencies
Eric Massey	APS
Robert Meyers	Crowell and Moring
Gillian Mittelstaedt	Tribal Healthy Homes Network
Daniel Nickey	Iowa Waste Reduction Center Business and Community Services
Donald Peters	Community Against Pig Pollution and Disease
Mary Peveto	Neighbors for Clean Air
Clay Pope	Consultant
Frank Prager	Xcel Energy Inc
Kris Ray	Confederated Tribes of the Colville Reservation
Maria Robinson	Massachusetts House of Representatives

Kimberly Scarborough	Public Service Electric & Gas
John Shoaff	U.S. Environmental Protection Agency
Karl Simon	U.S. Environmental Protection Agency
William Spratlin	Aptim Environment and Infrastructure
Ted Steichen	American Petroleum Institute
Vickie Sullivan	Duke Energy
Mary Uhl	Western States Air Resources Council
Larry Weinstock	U.S. Environmental Protection Agency, OAR
Robert Wyman	Latham and Watkins, LLP, National Climate Coalition
Other Attendees	
Barbara Bankoff	Bankoff Associates
Francis Chung	E&E News
Mary Douglas	National Association of Clean Air Agencies
Alex Guillen	Politico
John Kinsman	EEF
Jonathan Lubetsky	U.S. Environmental Protection Agency
J. Mittell	U.S. Environmental Protection Agency
Stuart Parker	IWP News
Kelley Raymond	U.S. Environmental Protection Agency
Sean Reilly	E&E News
Leslie Ritts	NEDA/CAP
Jordan Zambrana	U.S. Environmental Protection Agency
Contractor Support	
Lesley Stobert	SC&A, Inc.
Allison Owens	SC&A, Inc.