Clean Air Act Advisory Committee
April 25, 2012
Holiday Inn – Old Town Alexandria, VA

Welcome/Opening Comments

Lorie Schmidt, United States Environmental Protection Agency (USEPA), opened the meeting by introducing Principal Deputy Assistant Administrator Janet McCabe, USEPA Office of Air and Radiation (OAR).

Ms. McCabe thanked the committee for the recommendations on the "Moving Towards Multi-Air Pollutant Reduction Strategies" report, which was presented at the last CAAAC meeting. The comments on the report reflected the diversity of stakeholder views and identified specific areas EPA should consider to move towards thinking in a multi-pollutant way. Ms. McCabe provided examples of areas EPA should consider which included how sources are defined, what rules apply to sources, timing and sequencing of the different Clean Air Act (CAA) programs, how EPA distributes information, tools and resources to encourage the use of multi-pollutant rules within sectors, how monitoring and information technologies can assist, and evaluating various tradeoffs.

Ms. McCabe provided an overview of the various tasks that have been influenced by the "Moving Towards Multi-Air Pollutant Reduction Strategies" report. She began by explaining the electronic reporting tool has improved the consistency of reporting from effected sources and improved the ability to share information among implementing agencies as well as the public. The report highlighted innovative monitoring strategies as something EPA should focus on. EPA has created "The EPA Handbook: Optical Remote Sensing for Measurement and Monitoring of Emission Flux," which assists in monitoring stationary sources. This handbook has established more cost efficient monitoring techniques. Ms. McCabe assured the recommendations from the report will continue to be used by EPA to implement programs that support the CAA.

Ms. McCabe discussed and provided updates on recent EPA regulatory actions. The most recent announcement was the promulgation on April 17, 2012 of the Oil and Gas New Source Performance Standard (NSPS) and Maximum Achievable Control Technology (MACT). The rule is the first federal rule to address emissions from hydraulic fracturing and natural gas development. The rule will result in substantial volatile organic compound (VOC) reductions using green completion technology.

On March 27, 2012, EPA proposed the Carbon Pollution Standard for New Power Plants. Ms. McCabe explained this is the first rule to set limits on the amount of carbon pollution that fossil fired power plants built in the future can emit. The rule reflects a trend in the power sector to build cleaner plants that utilize available technologies. The proposal does not apply to any currently operating plants or to new permitted plants that begin construction within the next 12 months. Ms. McCabe acknowledged power plants are the largest source of carbon pollution in the United States. EPA Administrator Lisa Jackson has made it a priority to first focus on the largest sources of carbon pollution, exemplified by this rule. Dates have not yet been set for public hearings.

Ms. McCabe moved to the Tailoring Rule which recently proposed Step 3. The Tailoring Rule established the first two thresholds for sources of greenhouse gas emissions to require air permits. Ms. McCabe explained that EPA does not intend to lower the threshold to bring lower sources into the permitting rule at this time.

In June 2010, EPA promulgated a new National Ambient Air Quality Standard (NAAQS) for sulfur dioxide (SO_2). The new rule set a one hour standard to protect public health from high level exposure of SO_2. The states have been proceeding with the initial steps of implementation of a new NAAQS. EPA has been working on guidance to assist states with implementation of the new standard. In the final NAAQS, the Agency finalized a smaller monitoring network because of the ability to use air quality monitoring as a way of identifying SO_2 issues. Ms. McCabe stated implementation has proven to be challenging. A letter was sent to state commissioners with the schedule on how to proceed with designations of the areas based on monitoring data. Stakeholder meetings will take place in the near future.

Ms. McCabe addressed ozone designations which are expected to be finalized next week. Approximately 45-46 areas will be designated as non-attainment for the 2008 ozone standard. She noted one area will be designated in May 2012 due to late additional information. Most areas are expected to be classified as marginal areas. EPA is also working on an ozone rule that will lay out the additional expectations for states doing ozone implementation in non-attainment areas. This rule is expected to be proposed in summer 2012.

Ms. McCabe explained on April 13, 2012, the challenges to the Cross-State Air Pollution Rule (CSAPR) were heard in the DC Circuit. The argument focused on issues relating to EPA's authority to issue the Federal Implementation Plans in the cross-state states. EPA is confident the rule is legally sound. Ms. McCabe noted the rule is currently not being implemented and the Clean Air Interstate Rule is in place until the court resolves the issue.

The Mercury and Air Toxics Standard (MATS) Rule has gathered interest among the utility sector and the utility regulating sector. Ms. McCabe encouraged states and agencies to contact EPA with any questions surrounding the MATS rule.

Ms. Schmidt thanked Ms. McCabe for her overview. She opened the discussion to any questions from committee members.

John Paul, Regional Air Pollution Control Agency, thanked Ms. McCabe for her presentation. Mr. Paul asked for details on issues being considered in the Ozone State Implementation Plan (SIP) implementation guidance. Ms. McCabe responded the rule coming out will address the classification categories. The second rule that will be proposed this summer will address more ozone SIP implementation guidance issues. EPA will be reaching out to states and local agencies to discuss these issues.

Mr. Paul asked if a city (e.g., Cincinnati) is designated non-attainment, can the city participate in the Ozone Advance program before submitting the letter of approval. Ms. McCabe responded Ozone Advance is intended for attainment areas. She clarified the Ozone Advance was

established to provide assistance and encouragement to non-attainment states to implement activities that would keep the state out of attainment. Mr. Paul added Ozone Advance creates the opportunity for states to meet with relevant businesses and inventory the consequences of moving back to non-attainment.

Eric Svenson, PESG, commented on the low price of natural gas and speculated prices will remain low. He recommended finding ways to provide additional value to renewable sources that are reflected in a more transparent way into SIPs.

Ms. McCabe thanked Mr. Svenson for his comment. She explained the Agency's work in Connecticut relating to transparency in SIPs. Ms. McCabe confirmed his comment will be taken into consideration.

Eddie Terrill, Oklahoma Department of Environmental Quality (DEQ), followed up on Mr. Paul's comment about Ozone Advance. Mr. Terrill stated it is important to think about state-wide options and think outside the box about programs that are acceptable to be in the Ozone Advance plans. A mandatory rulemaking, similar to nonattainment situations, must be implemented to create incentives for areas get involved. For example, some areas are in non-attainment based on 2011 data, but may enter attainment in 2013 under the right circumstances. Mr. Terrill urged that, as the programs move forward, there be communication between regions and states to share ideas. Also the regions must be more engaged than in the past to address problems and help avoid designations in the future.

Ms. McCabe responded she would follow up with Mr. Terrill's suggestion.

Stacey Davis, Center for Clean Air Policy, followed up on the comment from Mr. Svenson about energy efficiency. She encouraged EPA to incorporate energy efficiency in its rules. EPA is incorporating energy efficiency in the Ozone NAAQS. The Boiler MACT rule also presents an opportunity for encouraging Combined Heat and Power Partnership (CHP). Ms. Davis noted it is fantastic to see coordination among the agencies. CSAPR also provides opportunities for energy efficiency. She suggested there be coordination among the programs in order to create standard efficiency measures to add additional value to the program.

Ms. McCabe explained that EPA has been working for a year and a half on further guidance on the Exceptional Events Rule, which is an issue especially in the West. EPA is a few weeks away from putting out the next draft of the guidance. The first draft received many positive comments. EPA will also put out a Q&A document along with templates. Ms. McCabe used Region 9 and the Phoenix area as an example of areas following the guidance and documenting exceptional events. She encouraged the committee to look for updates in the next few weeks.

Ms. McCabe explained EPA has a lot of MACT Risk and Technology Reviews to be completed. The reviews are statutorily required every eight years and almost all of them are on a court deadline. EPA missed the deadline. In each rule, EPA looks to see if there are advances in technology that the statute would require EPA implement or whether the current requirements continue to be sufficient. She noted there is no option of not undertaking a rulemaking because of the statutory and court requirements.

Ms. McCabe said that she did not have a specific calendar for Tier 3, but that they would it through as fast as they could.

Ms. McCabe noted the issue of cumulative impacts in permits is challenging. The Agency is working to develop analytical tools to help evaluate sites and communities with existing impacts. The Agency has created a document that identifies the legal tools that exist in environmental statutes that provide opportunities to address EJ. Ms. McCabe confirmed there is a lot of work happening to improve attention to these issues.

Mr. Sheats asked if Ms. McCabe would incorporate the ideas presented to the New Jersey Department of Environmental Protection (DEP) on cumulative impacts and permitting. Ms. McCabe confirmed that EPA will consider all ideas.

Ms. Schmidt thanked Ms. McCabe for her presentation and confirmed the discussion provided several ideas to take back to the Agency.

Sustainability and the EPA Report

Ms. Schmidt began the next topic by explaining EPA is looking into how to incorporate sustainability into the practices of the Agency. She introduced Tamara Saltman, USEPA OAR. Ms. Saltman began the presentation by reminding the CAAAC members that EPA hopes to receive input from them about what EPA can do in OAR. Ms. Saltman provided an overview of her presentation, which included a summary of the sustainability report and reviewing EPA activities consistent with the report before opening the floor for discussion on further opportunities for EPA to address sustainability.

The report titled "Sustainability and the US EPA," (known as the "Green Book") was requested by Administrator Lisa Jackson about 18 months ago, from the National Academy of Sciences (NAS). NAS was tasked with answering four specific questions. The first question asks what the operational framework versus sustainability at EPA should be. How could EPA decision-making be better rooted in risk assessment/risk management paradigm be integrated into the new sustainability framework? What kind of tools might EPA need to support the framework? The fourth question asks what expertise is needed to support the framework.

Ms. Saltman explained the report was published in September 2011. NAS defined sustainability in the report as "creating and maintaining and conditions under which humans and nature can exist in productive harmony that permit filling the social, economic, and other requirements of future generations." The report was very explicit that sustainability was both a process and a goal. The report stated EPA does have role to play in sustainability and that EPA should implement its mission in a way that optimizes the social, environmental, and economic benefits. Ms. Saltman confirmed NAS acknowledges this transition will take time.

Ms. Saltman explained the report concluded that though risk methods are important tools they are not sufficient in considering the full ramifications of sustainability. Therefore EPA needs to

develop more sophisticated tools. The report sets out a very conceptual framework on how EPA may consider developing these tools. However, the report does not identify specific tools or approaches EPA should use; therefore it is in no way prescriptive. Furthermore, it does not identify legal issues, including the opportunities or constraints that may apply.

Ms. Saltman stated EPA has not responded to the report. In thinking about how to respond, the Administrator has requested products from the Agency along with comments from National Advisory Council for Environmental Policy and Technology (NACEPT) and stakeholders. NACEPT is developing a report with more detailed recommendations on how EPA may implement the recommendations found in the report. The NACEPT report is expected to come out in approximately one year. The Administrator asked each of the program offices and regions to talk to their stakeholders and collect comments on the Green Book. There have been 100 listening sessions so far. The CAAAC meeting served as one of the final listening sessions. The comments heard at the meeting will be summarized and added to the comments already collected by EPA. The Agency will take all comments into consideration as they decide how to move forward.

There are some existing OAR efforts that are already advancing sustainability including Energy Star and SmartWay. Ms. Saltman provided the committee with a list of examples of regulatory and non-regulatory activities that OAR does that may serve as opportunities to encourage sustainability. EPA determined four questions for discussion. Is sustainability, as defined by the economic, environmental, and social consequences of an action or decision, an appropriate lens that EPA should be using to assist in decision-making? Are there any particular examples of public or private sustainability efforts that you have experience or knowledge of that could help inform EPA's deliberations? What scientific or analytical tools would be most helpful for EPA to develop as we consider incorporating sustainability more explicitly into our programs and decisions? Are you aware of existing tools that we should adopt? How can EPA, states, or local partners take advantage of opportunities to advance sustainability in regulation, enforcement, compliance assistance, SEPs, technical assistance and/or other core functions and media programs?

Julie Simpson, Nez Perce Tribe, offered two comments. She stated when EPA mentions states and local partners they also include tribes. Her second comment was on the issue of sustainability and EPA. The report suggested that EPA's actions and policies are not entirely sustainable and need to be made more sustainable. Ms. Simpson stated this is confusing since EPA should foundationally be a sustainable entity.

Ms. Saltman responded that tribal partners are included in the discussion. She provided the examples of Kendall Station and the Green Infrastructure Project where EPA expanded its traditional approach of risk management to include evaluating how to minimize the risk and maximize benefits.

Robert O'Keefe, Health Effects Institute, stated that there should be a hierarchy of actions informing sustainability with life-cycle analysis at the top, such as a paradigm. He noted this would take a long time to accomplish. Mr. O'Keefe stated organizationally with concepts such as sustainability, there is often a direct conflict with EPA's management turnover. This conflict is

that it requires a change in thinking that is not mandated by statute, and requires consistency in management. He asked how to sustain something without a sustainable management enforcement mechanism?

Eric Svenson, PSEG, stated that PSEG is very heavily involved in sustainability aspects as well. Another way to view sustainability is called "People-Profit-Planet", which is the economic, environmental and social consequences of decisions made by corporations, industries, and government. He noted companies struggle to get the value of these different elements (People-Profit-Planet) into the marketplace so that the right decisions are made. Mr. Svenson suggested EPA work on developing transparent examples of companies doing sustainable activities in the market (e.g., energy efficiency).

Ms. Wiecks noted that the definition of sustainability did not include cultural. She requested that cultural needs be added to the definition. Ms. Wiecks provided the example if a species of plant or animal moves due to climate change and the reservation boundaries do not move then tribal members will have a much more difficult time harvesting that plant or animal for cultural or religious purposes.

Gary Jones, Graphic Arts Technical Foundation, stated that the printing industry launched an independent sustainability program in 2008 called the Sustainable Green Print Partnership, where they defined what a sustainable printing operation looked like and established criteria for it. The group looked at defining a sustainable operation. This included third-party audits that facilities have to pass to provide credibility since sustainability is somewhat market-driven. The challenge EPA faces is both structural and cultural. Structurally, EPA is limited because they historically functions on a media-by-media approach and sustainability requires is a multi-media approach. Culturally, EPA has to ensure sustainability cuts across all media, which poses a challenge. From a regulatory perspective, there are tremendous opportunities to get involved. However, regulations can often the be the prohibiting factor companies run up against in changing practices that may be more sustainable than what is currently regulated. The goal of sustainability is to capture and preserve natural resources for reuse; the issue is that when getting an air permit companies are driven by the best available technology, some of which are not optimally efficient. In addition, Mr. Jones stated that he presented a paper to stakeholders in Wisconsin about transforming their regulatory program towards incorporating sustainability.

Mr. Jones stated another challenge is the monetary measurement of sustainability. He noted 27% of companies the printing members interact with want carbon footprint information because they see it as the measurement of "greenness." Yet carbon footprinting is only a fraction of sustainability. There needs to be a better system developed because research has shown that consumers have a greater increase in awareness on environmental issues, but are confused about the facts given the competing claims about greenness and sustainability. Clarity will allow everyone to be on the same page.

Syndi Smallwood, Pechanga Band of Luiseno Indians, stated that sustainability requires a holistic approach, which differs from the traditional EPA approach of working within one medium.

Carolyn Green, EnerGreen Capital Management, followed up with similar comments. She noted that sustainability is often fraught with political, social-cultural prejudices, and individual interpretations. She provided the example that oil companies cannot be sustainable using the definition of sustainable as it is used now because it almost mitigates against using non-renewable resources. If the industry is founded on using non-renewable resources then there is disconnect between the ideal and reality. Ms. Green suggested using a new term. She explained that in terms of EPA and the air program, EPA needs to knock down its silos. For example, the notion of recycling to reduce hazardous or municipal waste is ideal but the Definition of Solid Waste (DSW) negates this action because of conflicting parties wanting opposite results.

Ms. Saltman thanked Ms. Green for the statement that sustainability this is not just an air issue. She reemphasized that the CAAAC meeting was one of over 100 meetings the Agency coordinated with stakeholder groups. In the next few months EPA will analyze all the feedback they have gotten.

Mr. Svenson commented when applying to the Dow Jones Sustainability Index there was a great deal of granularity in terms of data. He suggested the Agency play a larger role in aggregating data by entity. For example, the Natural Resource Defense Council (NRDC) benchmarking report is used within the energy industry for all corporate reporting to highlight a corporation's improvement over time. He emphasized the importance of information transparency. When data is organized in a way that highlights the aggregation of the corporate entity or municipality it is easier to view all the multi-media aspects of how corporations or municipalities compare amongst each other so as to identify those who are "best in class." The Center for Clean Air Policy has done work similar to this in terms of looking at industries in other countries and creating a comparative information model. Comparative and transparent information in the public domain drives entities to want to perform at their best. Furthermore, sustainability is the real issue.

Vince Hellwig, Michigan DEQ, stated he has heard from a number of companies in Michigan that have found hurdles that prevent them from seeking alternatives, such as water-based or alternative materials, for the codings. From the pollution prevention angle, companies have to keep all their records, which present a cost. Therefore it is more difficult to approve going to a higher cost alternative material.

Kelley Green, Texas Cotton Ginners' Association, noted that from a company's standpoint, sustainability is critical. He agreed with Ms. Green that EPA needs to address the silo issue. Silos can lead to unsustainable practices because there could be companies that cannot implement the most sustainable practices because of a rule or law that is blocking progress.

David Foerter, Institute of Clean Air Companies, noted sustainability is an appropriate lens. He continued the real question is how to define what that lens is. Sustainability has been discussed by many groups and industries and it is already part of the corporate philosophies and practices. Therefore, the next step is integrating sustainability into EPA to create long-term sustainability. Mr. Foerter noted it is critical that data and common tools are available to all entities when going through this process.

Ms. Saltman requested additional comments and recommendations be sent to saltman.tamara@epa.gov.

Subcommittee and Day 1 Updates

Ms. Schmidt introduced Jim Blubaugh, USEPA Office of Transportation and Air Quality (OTAQ). Mr. Blubaugh will provide a report out from the SmartWay Workgroup which is part of the Mobile Sources Technical Review Subcommittee (MSTRS).

Mr. Blubaugh thanked Ms. Schmidt for the introduction. Mr. Blubaugh explained MSTRS is co-chaired by Drew Kodjack and Gay MacGregor.

The MSTRS met last week to discuss a number of different transportation topics. The primary focus was on the goods movement and the discussion on the new fuel economy label. Mr. Blubaugh noted the new label is currently available. The idea behind the new label was to use "plain English" to display new smog ratings and fuel economy ratings for the consumption of fuel prices to give the consumer more accurate estimates as to the cost they will entail over the life of owning a particular vehicle.

Mr. Blubaugh moved back to the goods discussion. The meeting included a panel with guest speakers from various entities including Swift Transportation (major trucking company), shipping lines company, FedEx, and CSX. Each of the major four sectors of the freight and sustainability side (local delivery, rail, marine, trucking) were represented on the panel. The discussion was focused on the goods movement from ports and major distribution centers throughout the country. He noted sometimes goods distribution centers are located in EJ areas. Mr. Blubaugh stated there were interesting differences expressed from the various sectors represented on the panel. Mr. Blubaugh expressed the goal of the discussion was to build a legacy fleet group based on the success from the previous Clean Diesel Workgroup. The request for proposal (RFP) was published last week for the Diesel Emission Reduction Program. The RFP will remain open until the end of May.

Mr. Blubaugh explained the SmartWay Transport Partnership is a partnership program between the freight industry and EPA with the idea of promoting sustainability while reducing costs. The goal is to conserve fuel within the sector, which is achieved through employing operational strategies and employing technologies improvements to streamline efficiency and reduce the amount of fuel used. EPA provides more than 3,000 companies involved in the program with tools. The tools are used to measure initial environmental footprints and set goals to achieve reductions. Improvements are made over a certain amount of time to measure the success of the company and the program. Companies are provided with recognition once a year. The program has been in operation for approximately ten years.

Mr. Blubaugh explained the workgroup has been tasked with three separate questions and formed sub-workgroups to address the three questions. The first question is how to accelerate and sustain and continue the legacy fleet through efficiency improvements in the tucking and rail sectors.

The trucking sector has three divisions. The largest division is made up of the trucks are found on the road every day. The middle section includes companies with 100 trucks and above. The largest and lowest section includes the one-truck and two-truck operations. This particular sub-workgroup has been tasked with determining how to reach the middle section of the trucking sector.

The second sub-workgroup looks for additional fuel savings and emission reductions for the marine and air sectors. The third sub-workgroup is tasked with determining how to formulate a public-private market based partnership model in the non-road sector. Mr. Blubaugh noted the unique opportunities and many challenges that exist in the non-road sector to employ energy saving, fuel saving, and environmental improvement technologies.

Mr. Blubaugh provided a timeline on the status of the three sub-workgroup tasks. The workgroup began in October 2011 and will assemble in the fall to discuss draft recommendations that will be sent to the Agency within the year after the meeting. The recommendations will be circulated at the workgroup level. Over the following six months the recommendations will be edited and sent to the MSTRS in May 2013.

Mr. Blubaugh concluded his presentation on the SmartWay Workgroup and opened the discussion to any questions.

Mr. O'Keefe thanked Mr. Blubaugh for the presentation. He acknowledged there are many variations of this partnership program around the world, noting the largest and most comprehensive example is Clean Air Asia. Clean Air Asia works with green freight programs throughout Asia. Mr. O'Keefe asked what EPA can bring to these programs regarding technology and assistance. Mr. Blubaugh thanked Mr. O'Keefe for his question. He noted countries are always asking the SmartWay Transport Partnership for assistance in implementing foreign-based programs. The Agency is currently working with the Ministry of Environmental Protection of the People's Republic of China to provide technical support to assist in establishing the foundation of a similar program.

Mr. Foerter thanked Mr. Blubaugh for the update on the SmartWay Transportation Program. He asked if the tool to measure environmental footprint is benchmarked against anything else. Mr. Blubaugh responded the tools are for the individual companies to input their fleet makeup (e.g., number of trucks, rails). Based on the input values, an environmental footprint is calculated. The individual company then applies the various strategies to improve efficiency and establishes a target the company desires to reach. All environmental footprints are measured against the baseline of the industry itself.

Mr. Foerter followed up asking if the baseline is transparent (e.g., Company A has a baseline of X and measures Y). Mr. Blubaugh confirmed the baseline is transparent, with some sensitivity.

Ms. Schmidt thanked Mr. Blubaugh for the presentation.

The meeting took a 15 minute recess.

Title V Update

Mr. Paul began the session by stating that the Permits, New Source Review, and Toxics Subcommittee met the day before. He explained he will provide a report from that meeting to lead into the presentation that Anna Marie Wood, USEPA, will give on Title V.

During the subcommittee meeting the day before, Kevin Culligan, USEPA, presented on the MATS standards and greenhouse gas (GHG) NSPS for electric generating units (EGUs). Mr. Culligan discussed the cost-benefit analysis of the MATS standards. He also provided a GHG Best Available Control Technology (BACT) Prevention of Significant Deterioration (PSD) permit update. Juan Santiago, USEPA, provided an update followed by Mr. Paul, who focused on permit comment letters. Mr. Paul turned the meeting over to Ms. Wood.

Ms. Wood thanked Mr. Paul for the introduction. She provided an outline of her presentation, which included Title V background, Title V Task Force efforts from CAAAC, a review of the IG audit and request to EPA to address certain Title V issues, and Executive Order (EO) 13563.

Ms. Wood moved to slide 4 of her presentation which discussed the history of the Title V Program. She reviewed three initiatives that led to improvements in the program. The Title V Program was enacted as part of the 1995 amendments. Ms. Wood noted the three initiatives (2004 CAAAC Title V Task Force, the 2005 EPA IG Audit Report, and EPA's Plan for responding to Executive Order 13563) have identified potential improvements.

Ms. Wood explained the CAAAC established a Task Force in May 2004 because there was a long history implementing the Title V Program. She noted it was a good time to reflect on changes that could be made to make implementation more effective.

Ms. Wood outlined the charge of the CAAAC Task Force. The Task Force focused on determining what is working, what is not working, and ways to improve the Title V Program. The goal was to produce a report that characterized where recommended changes could occur. EPA was also interested in the viewpoints on issues for which there was no consensus in order to determine how best respond to the recommendations.

Ms. Wood provided a timeline of the Task Force. The Task Force conducted public outreach efforts, which included three public hearings, two conference calls, and written comments through March 2005. In April 2006, a report was submitted to EPA. In September 2006, EPA had a dialogue with CAAAC about the report and outlined the appropriate next steps.

The Task Force made 100 recommendations after a thorough analysis of the comments. The issues were sorted into three main areas in the report, including program overview papers, content issues, and process issues. The three categories were further broken down into sub-issues.

Ms. Wood discussed the final report, which elaborated the three main subject areas into 18 topic areas. The report offered descriptions for each topic area, laying out supporting information, including legal requirements and comments, as a foundation for discussion. The report also summarized the discussion of the Task Force and made specific recommendations related to the 18 topic areas. Ms. Wood noted that not all 100 recommendations received unanimous support. The Task Force recommendations did not specify whether the issues should be addressed by guidance or rulemaking. Ms. Wood provided a link to the report in her presentation.

Ms. Wood provided an overview of EPA's response to date. EPA had internal discussion about the 100 recommendations and tried to determine an appropriate preliminary Agency reaction. EPA's view may differ from the recommendations, but EPA benefited from the discussion and the information presented in the report. EPA sorted the 100 recommendations into a vehicle for moving forward, determining if rulemaking or guidance would be appropriate. EPA discussed the Agency's ideas with CAAAC and developed a draft plan with three focus areas.

In terms of rulemaking there were three areas of focus. The first area of focus was allowing alternative forms of public notice. The next area of focus was excluding insignificant emission units from the permit. The final area of focus was to allow a list of administrative amendments and minor permit revisions. Out of the 100 recommendations, those were the three things that were the initial focus for EPA.

Ms. Wood moved to the 2005 IG report. That report included a series of recommendations to EPA to improve and clarify the Title V Program. Three of those issues remain unresolved at this point. The first unresolved issue relates to annual guidance on compliance certification. The second is guidance on the Statement of Basis and the third is regarding use of credible evidence and its incorporation into the Title V Program. EPA is in the process of developing a rule to address the credible evidence as it relates to compliance certifications. EPA is planning to complete this by winter 2012, but may run into early 2013. EPA has committed to create guidance with respect to the Statement of Basis and compliance certification issues that were raised in both the IG and Task Force reports. Both reports are intended to be completed by the end of 2012. EPA is still determining how to best address the remaining recommendations.

Ms. Wood discussed the EO 13563, which required each federal agency to develop a plan to look at opportunities to streamline regulatory programs and reduce burden.

EPA received input from state permitting authorities. The National Association of Clean Air Agencies (NACAA) had reviewed the recommendations from the Task Force and developed a priority list of recommendations. The NACAA recommendations for guidance were similar to what EPA recommended in response to the IG report, Task Force recommendations, and the EO. EPA will also focus carefully on another list of recommendations that stem from the Task Force report.

Ms. Wood outlined the three initiatives EPA has started. The three initiatives include input received from the states, the plans to move forward with the two guidance documents (Statement of Basis, compliance certification), and the credible evidence rulemaking.

EPA will continue reviewing the remaining recommendations and all the other information to identify additional areas for Title V improvement. EPA has initiated an internal workgroup to figure out the next set of things to focus on and the right mechanism associated with those things. EPA will keep CAAAC involved and provide periodic updates to states soliciting additional suggestions. EPA has made progress in using web-based posting for notification for permitting that will save states resources, time, and money. EPA continues to look for programmatic and systematic improvements.

Ms. Wood opened the discussion to questions and comments.

Mr. Kaufmann thanked Ms. Wood for her presentation. He asked which EPA office was the lead on the credible evidence initiative.

Mr. Santiago responded he is a key person on the initiative. He stated there is a credible evidence rule that describes how to use credible evidence in the context of many areas, including permits. EPA is adding language that was intended to be in Title V rules. The lead office is the Air Quality Policy Division (AQPD), with assistance from the Office of Enforcement and Compliance and Office of General Counsel (OGC).

Ms. Wiecks suggested EPA include more tribal outreach.

Ms. Wood closed the session.

Tailoring Rule Permit Streamlining Workgroup

Mr. Santiago began the presentation on the newly formed Streamlining workgroup. He explained the purpose of the workgroup was to develop and recommend to EPA potential streamlining approaches for GHG permitting in the context of the Tailoring Rule. Some of this started under the Step 3 rulemaking and also under the Tailoring Rule; however, the workgroup was asked to look beyond EPA rules and develop recommendations for EPA. EPA needs to ensure streamlining approaches and techniques make permitting more efficient in order for EPA to continue to move down the phasing process it established under the Tailoring Rule. Another key component of EPA's phase in approach is the ability of permitting authorities to issue timely permits and for sources subject to permitting to obtain and comply with those permits. Finally, streamlining approaches that could help expedite permitting and make more efficient use of resources need to be developed to allow expansion of the permitting programs to smaller sources of GHG emissions.

Mr. Santiago provided background on the first Tailoring Rule. It was published in the Federal Register in June 2010 and its role was to tailor the applicability criteria that determine which sources become subject to GHG air permitting requirements under PSD and Title V air permitting programs. The rule addresses the burden associated with permitting GHG at the regulatory levels, thereby relieving resource burdens by phasing in the applicability of these air permitting programs to GHG sources. This is accomplished by doing a series of steps, called the "phasing approach." Step 1 contains sources that were already part of the program, called

“anyway sources.” Step 2, established the criteria for large emission sources and retains the “anyway sources.” This step sets a threshold for the first time. Mr. Santiago explained the newly proposed Step 3 retains the threshold established under Step 2 and takes the opportunity to start up the streamlining approaches to make the permitting process more efficient. The comment period for Step 3 closed on April 20, 2012 and the Agency is moving forward on finalizing it this summer.

Mr. Santiago explained that permit streamlining is an integral part of the phasing approach. If permits become more efficient then EPA can continue its phasing approach established under the rule. Permit streamlining techniques have the potential to obviate the applicability of PSD and Title V requirements for some GHG emitting sources, the potential to promote more efficient treatment of GHG emitting sources that will already be subject to these programs, and allow the expansion of PSD and Title V applicability to more GHG emitting sources while protecting sources and permitting authorities from undue expenses.

Under the Step 3 proposal, EPA recommended the following measures. The first is the treatment of Plantwide Applicability Limitations (PALs) for GHGs. PALs are an applicability procedure under the NSR Rule that applies to conventional pollutants. EPA is proposing to make changes to the PAL regulations to make GHG PALs more consistent in the way that PALs work with conventional pollutants. The second is the ability for EPA to issue synthetic minor permits. These two things are ready as proposals and actual regulatory changes under the Step 3 rulemaking. EPA requested comments from the workgroup on five other measures identified, such as excluding “empty permits” from the Title V permitting program. Empty permits are sources that are required to get a permit for the first time because of their GHG emission levels, but those permits would have no applicable requirements.

Mr. Santiago presented the timeline for the workgroup. The workgroup was formed in April 2012 and will work through October 2012. The goal is have an interim report due August 15, 2012 and the final report due to EPA in September 2012.

Mr. Paul noted that one of the things the workgroup has been looking at is the Title V permits. State and local governments could figure out ways to issue permits by rule and general permits, which questions the benefit of some of the measures presented. In addition the workgroup had some discussion about what was the level of evaluation needed for criteria pollutants that are emitted above significance levels and what would happen if lower GHG cutoffs were enacted.

Ms. Weeks stated that EPA committed in the original Tailoring Rule the approaches presented, presuming there would be administratively burdensome level of permitting. However, the Step 3 phase has not had many permits. Therefore, that fact coupled with the justified decision to keep the permit threshold for large facilities appears to make the discussion about streamlining a bit premature. She emphasized that she understood the concept of forward-looking, but finalizing any of these ideas at the current moment seemed a bit premature.

Mary Turner, Waste Management, responded to Ms. Weeks stating that the streamlining process is never premature because anytime efficiency can be gained it is useful to all parties. All the agencies and industries agree on increasing efficiency. Ms. Turner then acknowledged that

although industry may view PALs as a hurdle if there was a way to get past the hurdles to getting the PALs then it would be a useful tool for permit streamlining after the fact. Once there was a rule proposal for allowable PALs that never developed, but perhaps now is the time to revisit the allowable PALs option to do streamlining in terms of getting a PAL upfront. She concluded stating that the group needs to think about how to get past the hurdles to make streamlining work for everyone.

Mr. Green noticed a proposal for granting EPA the authority to issue synthetic minor permits and noted it is important to explicitly state what needs to be covered and what does not need to be covered under the permits. In addition, facilities that have limited hours of operation, fuel use, etc., may have a federal enforcement permit on the basis of other pollutants, therefore it would seem that either a permit by rule, general permit, or in a rulemaking containing a limit to GHGs would suffice and a separate permit to limit GHGs would not be necessary.

Mr. Feldman asked EPA to clarify the workgroup process for the committee as he had been involved with two previous workgroups that had differing styles and wanted to know if there was a standard procedure established on how to form workgroups. He noted that in both workgroups CAAAC solicited volunteers from membership to be on the groups, yet with respect to the new streamlining workgroup many committee members were not informed about the formation of the workgroup until the meeting.

Ms. Wood thanked Mr. Feldman for his comment. She responded by saying that the formation of workgroups varies depending on the topic and EPA's needs. For issues such as streamlining EPA brings the issue forth because the constituency of the CAAAC makes a lot of sense to produce a cross-sectional response. Workgroup formation has varied over time and there may not be a standard rule for it. In terms of the composition of streamlining workgroup, at least 40% of the group is CAAAC. The unique thing about this group is that they are getting at a different kind of challenge and players. EPA's goal was to get representatives that could speak to the different types of sources and issues that may arise from streamlining.

Ms. Wood addressed Ms. Weeks' comment stating that when EPA proposed decreasing the threshold that action will introduce millions of sources into the program, many of which EPA does not typically encounter. Therefore the workgroup is comprised of sectors such as boiler representatives because it is conceivable that mid-sized and smaller-sized boilers will enter into the program as well as landfills. In addition there are representatives from the Nicholas Institute for Environmental Policy at Duke University, who will focus on energy efficiency, as it will to play a major role in this topic. State, local, and tribal representatives are heavily represented because ultimately they are the implementers.

Ms. Wood noted that people not in the workgroup sent comments about Step 3. Members outside of the workgroup are welcome to present their ideas to the group as long as the group agrees on the presentation. Ultimately, EPA wants the workgroup to drive the discussion and inform the Agency on this issue.

Mr. Feldman commented on how the level of transparency in forming workgroups needs to be higher. He continued stating that it would have been better to know about committee's actions as

they were happening rather than after the fact. He also mentioned that in the chemical industry and refining industry thresholds do make a difference, so the workgroups needs to be mindful that there a whole host of industries that are affected depending on what the threshold is and whether streamlining is in place.

Ms. Weeks acknowledged that those issues will be present at the workgroup discussions. On the issue of timing, since the CAAAC does not meet on a regular basis, EPA wanted to have the process underway as soon as possible. She apologized for any surprise it may have caused the committee members as that was not the intent. She stated that EPA will certainly make sure anyone who is interested in these issues can discuss it with EPA or members of the workgroup.

Mr. Kaufmann agreed with Mr. Feldman's comments, particularly on the interest of larger manufacturers and thresholds. Furthermore he responded to whether the effort is premature in cataloging the issues and he did not believe so. His example was that in Region 6, there is already a substantial backlog in processing GHG permit applications, which could be exacerbated with the addition of major chemical companies considering new projects that will trigger BACT for GHGs. Representatives from Region 6 have stated that it would take two years to get a permit, illustrating that streamlining is absolutely necessary. On the topic of the new workgroup, Mr. Kaufmann asked if there was some way that those not on the workgroup could get their thoughts on streamlining to the workgroup. Ms. Schmidt responded that EPA will figure out a way to make sure that general committee members have the ability to get comments to the workgroup.

Ms. Weeks clarified her earlier comment on streamlining. She had not meant that it is not a useful exercise for EPA to consider what might happen if and when the statutory thresholds are reached, her concern was that the current proposal was not justified at this time and it may be premature to have those limits. She clarified that it is a good idea to have the conversation; however any action EPA takes in this arena needs to be justified within the statutory framework. Also, she supported Mr. Paul's comment about trying to make the materials available to those who are not on the workgroup.

Energy Star 20th Anniversary Update

Ms. Schmidt welcomed everyone back from lunch. She introduced the first item on the afternoon agenda, the Energy Star 20th Anniversary Update. The Energy Star program was started under Administrator Reilly. Ms. Schmidt introduced Beth Craig, USEPA, who is currently running the program.

Ms. Craig thanked Ms. Schmidt for the introduction. She began with presenting historic events that occurred in 1992, nothing the most important event was the creation of the Energy Star program. From the inception of the program, it was designed as a market transformation program. It had all of the barriers to efficiency which existed. Examples of barriers included the lack of a measurement standard and the lack of an easy identifier. Ms. Craig explained the program worked with players in the marketplace to identify the barriers, determine possible ways to address the barriers, and began to develop strategies to overcome the barriers.

The Energy Star program started in 1992 with computers and monitors and focused original partnerships on manufacturers. In 1995, the program expanded to buildings and established partnerships with businesses and building owners. From there, Energy Star moved to working with home builders in the development of the Energy Star Homes program. In 1997, the program expanded in a different way where the partnerships increased. With the advent of bringing clotheswashers and light fixtures into the program, it moved from individual partnerships (e.g., manufactures) to joining with utilities and efficiency program administrators and retailers to be the spring block for the program.

Ms. Craig discussed the history of clotheswashers as a case study of the Energy Star program. Back in 1997, key barriers to clotheswashers included concerns about performance problems and the high purchase price. Bern, Kansas, a town with a population of 210 people, had a partnership with Maytag. Individuals who washed the clothes were tasked with weighing the clothes, evaluating the cleanliness of the clothes, and went through the process to evaluate whether the front loaders could work within the American economy. From that success of the pilot, advocates leveraged the Energy Star program to increase the efficiency criteria for efficiency and water.

Ms. Craig continued with the case study of lighting in the Energy Star program. She began with the concerns of people with the commercialization of light bulbs by Edison 75 years ago. Even as technology was improving, the issue was there was a lapse before light bulbs were commercialized to the point where consumers would use them. One of the major issues with efficient lighting was concerns by consumers about the performance of the lighting. A group of utilities and efficiency advocates formed a coalition the Program for Evaluation and Analysis of Residential Lighting (PEARL) to test performance and bring those types of concerns to the U.S. Department of Energy (DOE) and EPA in terms of the Energy Star program.

The first Energy Star specifications for fixtures was brought to the marketplace in 1997 and starting looking at lighting as a whole rather than in pieces. One of the early successes was looking at torchieres, which in the 1990s had problems with burning. Ms. Craig noted as fixtures become more energy efficient they were also becoming safer. New bulb specs were introduced in 1999. Utilities, retailers, and manufacturers have traditionally supported new lighting options to advance lighting energy efficiency.

Ms. Craig addressed some of the early performance issues that required attention within the Energy Star program. The Energy Star program looks at issues not solely in terms of energy efficiency, but instead looks to create products that consumers would be interested in purchasing.

Ms. Craig explained there are many updates in the lighting sector. She provided the example of the update requirements under the Energy Independence and Security Act (EISA) of 2007. EISA tries to lay out statutory changes to bulbs in addition to where the Energy Star program is moving beyond the changes within statute. There is so much going on in the lighting world that EPA put out a report last fall entitled, “Next Generation Lighting Programs: Opportunities to Advance Efficient Lighting for a Cleaner Environment.” The most striking line in the report states, “Approximately 3 out of 4 light sockets in the United States still contain inefficient light bulbs.” There is still an enormous inefficiency in lighting.

Ms. Craig moved to the Energy Star Certified Homes Program. Energy Star has been labeling new homes since 1995. As of the end of last year, over 1.3 million Energy Star certified homes had been built-to-date. EPA published the "Version 3" program requirements, which became effective as of January 1, 2012. Ms. Craig explained while making the home more efficiency, Energy Star is looking to improve the quality of indoor air as well.

There has been tremendous growth in the performance measurement sector. Ms. Craig presented a chart the shows the number of buildings that have been benchmarked. In the last few years, the growth has been exponential. She presented another chart that displays the number of labeled buildings within the United States. Almost 40 percent of commercial building space has been benchmarked in the United States. For example, under EISA there are requirements for Federal Agencies to benchmark their buildings and Portfolio Manager is a tool to complete the requirement. For the government to lease new space, the building must be energy efficient.

There are several voluntary programs taking place as well. Communities have come together to benchmark buildings and look how to reduce energy efficiency and what particular benefits can be to that community. One of the major changes has taken place at the state and local level. In some cases states have put laws in place requiring public buildings to benchmark. Select states and local communities have gone further are required benchmarking for private buildings. Once a building is benchmarked, the task becomes making improvements in energy efficiency. Ms. Craig noted that some states (e.g., Kentucky, Wyoming) have focused on improving schools. The savings from improving energy efficiency are put back into the school system towards retaining teachers.

The large success of the Energy Star program has been attributed to the creditability of the program as well as the structure of establishing partnerships. The goals of Energy Star are reducing greenhouse gases, saving energy, and saving money for businesses and consumers. Energy Star focuses on using a system-wide approach to move forward with advancing technology. Energy Star also focuses on moving with other programs, even within EPA, to promote energy efficiency.

Kathryn Watson, Improving Kids Environment, thanked Ms. Craig for the presentation. She commented the work completed by Energy Star over the past 20 years is impressive. Ms. Watson noted looking at indoor air quality within buildings is refreshing to hear. She asked if there is a component of measuring indoor air quality within the benchmarking of existing buildings program.

Ms. Craig replied there is no benchmarking program for indoor air. The EPA OAR has a program for indoor air and schools. The benchmarking itself and Portfolio Manager does not go into indoor air quality.

Ms. Watson followed up asking if benchmarking is a process where schools could voluntarily take advantage of the benchmarking process. Are the schools provided with a list of things that can be done to address energy levels once the benchmarking process is complete?

Ms. Craig responded a school can input their utility data into Portfolio Manger to generate a baseline of their energy efficiency. The schools are assisted by a professional engineer or architect. Energy Star has tools that schools can use to improve their energy efficiency. The Portfolio Manger does not specifically instruct schools on what tools they should use.

Mr. Kaufmann asked about interfaces with organizations. On the private sector side there is the Leadership in Energy and Environmental Design (LEED) program. He asked how Energy Star building performance intersects with LEED. On the industry side, DOE has a number of programs that measure energy efficiency and energy management system s onsite at manufacturing facilities. How does Energy Star interface with those programs?

Ms. Craig answered the DOE programs are hands-on technical assistance, whereas Energy Star programs provide the tools and guidelines rather than offer onsite assistance. Energy Star does work with LEED. Energy Star is focused on energy efficiency, while LEED programs have a larger portfolio.

Ms. Simpson thanked Ms. Craig for the presentation. She asked if there have been Energy Star housing initiatives in tribal housing or low-income housing projects.

Ms. Craig responded Energy Star has previously worked with HUDD. Ms. Craig confirmed she would follow up with Ms. Simpson on this topic.

Mr. Paul thanked Ms. Craig for her presentation. Mr. Paul explained he believed there is room for improvements in efficiency of generation, transmission, and usage. He asked where there is the greatest potential for increased energy efficiency for decreasing the cost of energy is.

Ms. Craig replied she was unsure.

Ms. Svenson responded historically almost 2/3 of the energy consumer on the generation side was lost from the power conversion process. Now with new combined cycle technology for natural gas there is approximately 50-60 percent thermal efficiency. On the transmission loss there is around 5 percent over long distances. On the end user side there is room for potential loss. Typically the largest loss of efficiency is found on the end user side.

Mr. Paul followed up by stressing the importance of using Energy Star reduces the loss of efficiency on the end user side.

Mr. Jones requested clarification on the industry groups.

Ms. Craig explained the first steps include collecting data and providing guidance to individual companies within the sectors (e.g., printing facility). Next Energy Star develops energy guides by sector by working closely with companies within the sector. Ms. Craig confirmed she will provide Mr. Jones with a contact within the printing industry.

John Crouch, Hearth, Patio, & Barbeque Association, stated he has provided comments to the Residential Energy Star House on fireplace issues for years. He asked if Ms. Craig envisions a

time when an Energy Star house will have a permanent non-paper label on it so every subsequent owner would know a house is an Energy Star house. Mr. Crouch was concerned that futures owners of houses may not be concerned with Energy Star and asked if homes should not be labeled.

Ms. Craig responded EPA is discussing the issue internally. The person who purchases the new Energy Star home chose it specifically, but still has the option to make changes to the home that may change the efficiency of the home.

Ms. Craig noted hospitals are a type of building that will be benchmarked over time. Hospitals require massive amounts of electricity. She confirmed this is an area of Energy Star.

Ms. Schmidt thanked Ms. Craig for her presentation on Energy Star.

Modeling Presentation and Discussion

Chet Wayland, USEPA, thanked the committee for having them. He introduced Tyler Fox, USEPA, who is the group lead for the modeling group in OAQPS. They recognize that these are challenging times with 1-hour standards and some issues with PM-2.5 now with the end of the surrogacy policy. EPA has done a lot to try to improve the situation and there are more things that they can do. Mr. Wayland noted there are new challenges to modeling. There has never been a 1-hour standard before. He turned the presentation over to Mr. Fox.

Mr. Fox continued by saying that the challenges to the currents models are recognized by EPA. The new 1-hour nitrogen dioxide (NO_2) and SO_2 NAAQS are more stringent, due to the averaging time and the levels. EPA often hears that the overly conservative nature of the model is to be blamed and, given the changes in the standards, it is necessary to provide new guidance and reconsider the past practices. The probabilistic form of the standards has complicated aspects of the compliance demonstration. EPA has worked to clarify that and has brought in new post-processing techniques into the model so that it streamlines the process.

With the end of the PM-2.5 surrogacy policy, there is need to do an explicit compliance demonstration for PM-2.5, something that was not done before. PM-2.5 has complications that challenge the current models. The accuracy of the models has received greater scrutiny than before, when there were standards that were not as tight and situations where there was more available increment in terms of air quality that new sources could consume. There is also a common misconception that these models are overly conservative in all cases. EPA recognizes that they need to extend those evaluations and they look to work with the community to develop field studies and provide more data to improve the models.

Mr. Fox explained EPA revised the NAAQS in February 2010. The standard is 100 ppb, based on the three-year average of the 98th percentile of daily maximum 1-hour concentrations. The monitored design values are based on three-year averages. He clarified that the monitoring guidance does not pre-empt Appendix W, which allows use of five years of National Weather Service (NWS) meteorological data, looking at the averaging time over those five years, or at

least one year of site-specific on-site data. He emphasized that Appendix W prefers on-site data. It provides flexibility to use the NWS data, but the use of that data brings in some issues in terms of representativeness and the performance of the model.

The clarification memo was issued in June 2010. It established that AMS/EPA Regulatory Model Improvement Committee Model (AERMOD) is the preferred model for estimating NO_2 impacts in near-field applications. It also established that there is a three-tiered screening approach for 1-hour NO_2 modeling. Tier 1 assumes a full conversion of NO to NO_2. Tier 2 applies ambient ratio to that conversion, with an annual default ratio of 0.75. Tier 3 lists screening methods that can be approved on a case-by-case basis. These include the ozone limiting method (OLM) and the plume volume molar ratio method (PVMRM). These are not refined techniques so they would require approval from the regional office.

EPA has established that the three-tier screening approach was applicable to the 1-hour standard, with some qualifications. The Tier 1 applies without any justification. It is full conversion and acknowledged to be conservative. Tier 2 may also apply to the 1-hour standards in certain cases, but there may need to be some consideration may need to be provided in terms of the nature of the peak hourly impacts, given that that default ratio is representative of an annual basis of an area-wide conditions. Tier 3 could be used on a case-by-case basis, but EPA emphasizes the need for representative inputs like background ozone data and in-stack NO_2:NOx ratios in terms of the importance of credibility in applying those methods.

Mr. Fox provided more detail on the Tier 3 methods because they are new and unfamiliar. The OLM and PVMRM methods are specifically mentioned, but they need more evaluations of both. They are available as non-regulatory default options in AERMOD, but they would need some justification and approval from the regional office. EPA has worked to streamline the process and there should not be too many issues to use the techniques for permitting.

There are a number of documents on the Support Center for Regulatory Atmospheric Modeling (SCRAM) website related to these techniques. A number of the evaluations of the PVMRM show encouraging results. As discussed in the 10^{th} Modeling Conference, moving forward to update Appendix W may allow the opportunity to conduct evaluations sufficient to establish PVMRM as a technique.

EPA has two locations with evaluation databases. New Mexico Abo has a gas processing plant with a north and south monitor. There is a generating station in Hawaii Palaau. Mr. Fox then referred to his presentation which presented observed concentrations and then the PVMRM results, OLMGROUP ALL, OLM, and FULL.

Mr. Fox next transitioned to talk about the SO_2. EPA modified the standard in June 2010. The standard is 75 ppb based on 3-year average of the 99th percentile of daily maximum 1-hour concentrations. Even though the design values for SIP purposes have a three-year averaging time that does not preempt the Appendix W requirement for use of five years of NWS meteorological data or at least 1 year of site-specific data. Mr. Fox noted is a preference for on-site data.

The problem is associated with source-oriented impacts, especially for utilities and industrial sources. There has been a long history of using dispersion models to characterize ambient SO_2 levels under PSD and SIP regulations. In terms of going from an annual to hourly standard for NO_2, here it goes from an annual, 24-, and 3-hour standards to a 1-hour standard. The change is not as dramatic in terms of the averaging times, but the stringency is greater than it was. EPA receives questions about whether AERMOD can estimate 1-hour impacts. EPA addressed that by redoing the evaluations for 1-hour. They recognize the importance of that because there is a potential role for modeling in the 1-hour SO_2 SIPs and, possibly, for designations. EPA recognizes that any conservatism or lack of confidence in the models' ability to predict concentration levels would be problematic, both in terms of defining the boundaries for designations as well as the level of control necessary to get an area into attainment for the SIPs.

AERMOD does work off of an hourly time step, so all of the model concentrations were based on 1-hour estimates. There was a lot of confidence that the 1-hour results would be better than the 3-hour, 24-hour, and annual. The performance issue will depend on the application and, for PSD purposes, they are looking at the distribution of concentrations not paired in time and space. They look at an area and try to match the distribution of concentrations. They run scenarios using five years of meteorological data and expect that they would capture the nature of those concentrations in the vicinity of that source such that they are able to determine violations. They are not pairing it with time and space to say that a violation occurs at time X at a specific location. However, they will need to improve the models to do that, especially as the models like this are used for health studies where the associations with time and space are much more critical.

Mr. Fox next presented the evaluation of AERMOD. He said that it was evaluated on field study databases that formed the basis of the promulgation of the model in 2005. EPA redid the evaluations for the 1-hour standard. He noted that there were only 17 field study databases, some without building downwash and some with, some with flat or rolling terrain and some with complex terrain. The modeling team had a fairly robust characterization of the different situations for which PSD would apply, but not a complete set. They separated the evaluations into developmental databases that were used to formulate the model and improve the model. They held back some databases to do independent verification once they had completed the model formulation. Some were short-term, meaning they had tracer release with very intense monitoring network and receptor grids, and some were long-term studies that were at real power plants where there were a smaller number of monitors to assess the performance for a specific situation.

They followed the protocol, called the Cox-Tikvart approach. They compared performance to the previous regulatory model, ISC3, and the complex terrain model, CTDMPLUS, and to ISC-PRIME, the previous model for downwash situations. Each case showed that, for the promulgation and under the 1-hr NAAQS, AERMOD outperformed the previous models. In fact, the average ratio of predictions versus observations for 1-hour and 3-hour was almost equal to 1 (0.995). They felt that there was very good performance by model for those evaluations.

Mr. Fox proceeded to show the evaluations. They are Q-Q plots. The line in the middle is the one-to-one line, perfect agreement, and the dashed line is a factor of 2. As demonstrated in the

promulgation of AERMOD, the evaluations show that AERMOD is consistently unbiased in its performance across a wide range of scenarios and AERMOD, through this demonstration, is a significant improvement over past models.

With that said, these evaluations are unique in terms of the robust, site-specific meteorological data and better characterization of hourly actual emissions. In some cases, there are continuous emissions monitoring (CEMs) so there is a lot of confidence in the representativeness of the critical inputs to the model. Mr. Fox said that that allows them to remove as much as possible the uncertainty or bias associated with those inputs and test the model formulation. In the regulatory context for PSD, maximum allowable emissions and the most representative meteorological data, airport data, can be used. Use of those situations, for PSD, is necessitated by the program itself and maybe leads to the model being conservative or not as representative as it needs to be.

Mr. Fox said that the field studies include multiple monitoring sites and are designed to capture impacts. Through those designs, he is confident that they are able to inform them about model performance. One thing to note is that often people use PSD applications of the model and compare it to a single monitor site. One, the single site might not represent maximum concentrations. It is one point in space. Also, PSD uses maximum allowable emissions, not the actual emissions that may occur. With regard to a new source, there are no actual emissions. The representative meteorological data that is used may or may not approximate the situation as well for that locale. Those are not good indicators of model performance.

For some sources that have SO_2 monitoring, there are multiple monitors. They are trying to work with states and there was a presentation by Eastman at the 10th Modeling Conference. Mr. Fox urged the committee members to take a look at the transcript or invite the presenter to speak again because it was quite interesting. It is important to be careful about the interpretation of the evaluations. There could be misperception of model. EPA will work with people to learn from situations where the model may not be working as well as it needs to and to alleviate the situations. The first part is to know where and when those situations occur in order to take action.

In terms of the additional modeling guidance for NO_2 and SO_2, this was under the guise of NO_2, but a number of the issues are applicable to SO_2, as well. Mr. Fox said that they clarified the procedures for analyzing the results and updated AERMOD to reflect those, specific to NO_2. They recommended a default 1-hour ambient ratio of 0.8 – it actually went up – as well as default in-stack ratios for the Tier 3 techniques. Again, this is in absence of more appropriate information. There is always a preference for local, area-specific information. By design, these are national defaults. They err on the side of being conservative to cover the various situations that may occur. EPA does not urge people to use these defaults but rather urges people to collect the data that is more local and site-specific. There was discussion at the 10th Modeling Conference about the ease with which some of these ratios and data could be provided.

EPA clarified that and the model has been updated to produce that. Similarly, there is a complicated aspect to a cumulative analysis when there is a violation and it is necessary to determine if one source is contributing significantly to that violation. The “significant concentration gradient” (SIL) comes back into play and the model now has post-processing

routines to automate that approach. That should help tremendously for the time and resources spent.

In terms of the treatment of intermittent emissions, an important aspect was the flexibility of dealing with these sources. The challenge was that in a number of situations the maximum allowable emissions reflected the use of an emergency generator. Intermittent sources are likely uncontrolled and are often not included in the model, but when it is included and it is assumed to be operating continuously, then it can be the defining scenario for whether a site gets its permit or not of if the facility is violating the 1-hour standard. Mr. Fox clarified that this was not what was intended for setting the standard for public health or for compliance demonstration in EPA regulations. What EPA did was provide guidance that contained more flexibility, and made sure that the demonstration was based on emission scenarios that can logically be assumed to be relatively continuous or which occur frequently enough to contribute significantly to the annual distribution of daily maximum 1-hour concentrations. This means that if it is something that is out of the control of the facility or it is not used frequently enough to really impact the distribution then, it can be treated like an intermittent source and not modeled as part of the facility permit. He noted that although there are emergency operations that can be considered intermittent, there are routine tests that can be planned and may necessitate a permit condition, depending on the timing and the operation of those tests. The key distinction for excluded and non-excluded intermittent activities is that if it is out of the facility's control and not impactful in terms of the frequency of its occurrence then it can be excluded versus something that is planned and can be qualified for the permit. EPA has received a number of comments on this topic and will work on examples so that they can provide more clarification to the states and local governments.

For determining background concentrations, there is an issue here that gets at the long-standing way in which EPA conducted modeling for permitting. There is an approach that AERMOD near-field is applicable with 50 kilometers. The 1990 draft NSR Workshop Manual stated that to define a significant impact area modelers need to go out another 50 kilometers, which was meant to be conservative. When it was developed in 1990 it was a very black and white approach. Now, with the sophistication of the models the mentality has changed. With new guidance, EPA has expressed concern about the literal and uncritical application of these prescriptive policies and does not suggest using past practices for compliance demonstration. In Appendix W, there is a criterion called the SIL, which is used as the sole criterion for identifying which nearby sources to model. EPA acknowledged that Appendix W did not comprehensively define the term, and that they need to work towards coming to an understanding of what SIL means so that it may be more practical in its implementation. In addition, under Appendix W, EPA does not find it appropriate for modelers to go out 90-100 kilometers to evaluate potential impacts under these 1-hour standards.

EPA noted that the Agency needs to be more clear about what is defined as a significant concentration gradient and how to use it to define an area that needs to be accounted for and the nearby sources that need to be modeled. EPA recognized that using past practices equates to using additional time and resources to model sources making the process inefficient. What EPA did try to do with this guidance is provide some approximation, which suggests focusing on nearby sources within about 10-km of the project source in most cases.

Mr. Fox cautioned that combining model estimates with the monitored background can be problematic and needs further guidance. EPA has expressed a preference for using monitored information rather than modeling other sources explicitly, if there is monitored information available. In the June memo, EPA identified Tier 1 as the highest overall 1-hour monitored background concentration, which was conservative. It has since been modified with an alternative which suggests a multi-year average of the 98th percentile on a season by hour-of-day-basis, which should be acceptable as a less conservative Tier 1 approach in most cases.

EPA held two webinars, one for NO_2 the other for SO_2. The information is available on EPA's SCRAM website. In addition, the AERMOD Implementation Workgroup addressed issues being faced specifically in implementing the 1-hour NO_2 and SO_2 standards. The workgroup summary is also available on the EPA SCRAM website.

EPA has intended to release draft PM-2.5 (particulate matter with less than 2.5 microns diameters) permit modeling guidance for some time and now the Agency will discuss the guidance at the beginning of May and release a public draft by mid-May.

The NSR program for the PM-2.5 implementation rule was promulgated in 2008 and it established the existing significant emissions rates (SERs) for PM-2.5 precursors. These SERs were not redefined as specific to NO_x and SO_2 in their role as a precursor to PM-2.5. There is a "grandfathering provision" that would allow applicants of federal PSD permits to continue to rely upon the PM-10 Surrogate Policy. EPA published an appeal to the grandfathering provision and the PM-10 Surrogate Policy in May 2011.

Recognizing the need there, EPA issued the "Page Memo," which was used to assist sources and permit authorities to carry out the required analyses for modeling for PM-2.5. EPA needs to provide some broad-level guidance to describe the procedures for demonstrating compliance for PM-2.5. EPA recommended that special attention be given to background information given that it reflects the contribution of both primary and secondary formed PM-2.5.

Given the potential contribution of secondary PM-2.5 and the fact that modelers do not explicitly account for that in dispersion models, the Agency's current models do not account for chemistry, but do consider the application of PSD and compliance demonstration of PM-2.5 as a screening level analysis analogous to NO_2 impacts. EPA will be working towards a more refined approach and approved models for these topics especially as they relate to secondary PM.

For PSD modeling, there is an approach in place that model users should consult with Regional Offices to determine the most suitable approach on a case-by-case basis.

For monitoring background concentration, representative background monitored concentration of PM-2.5 will entail different considerations from those of other criteria. There are multiple components being accounted for, so when modeling emission sources EPA cautions modelers not to double-count.

The regulatory status of CALPUFF is that it was promulgated in 2003 for NAAQS and PSD increment. Use primarily for long range transport meaning distance longer than 50-km to 200 or 300-km maximum, it can be used in near field situations where there is complex wind, although that requires demonstration that not only CALPUFF can work in that situation but that it can also outperform the existing regulatory models. An example of this is a New Jersey study, which used CALPUFF and AERMOD for near field studies and found that AERMOD outperformed CALPUFF in the evaluation.

There is no model approved for chemistry in Appendix W. For SIP modeling, EPA goes through the alternative modeling criteria and that criterion is available for use in section 3.2 of Appendix W.

In terms of current actions, EPA understands that there is a need to establish a minimum wind speed threshold in AERMINUTE/AERMET. In addition EPA will follow up with the stakeholder community, including ORD, on the low wind speed and downwash issue. EPA will address the bug fixes in CALPUFF as well as continue to emphasize flexibility in the existing guidance. Examples of flexibility include pursing Appendix W, Section 10 which allows for post-construction modeling.

Mr. Sheets had a question about the cumulative impact analysis and how it differed from the regular analysis. He assumed that cumulative impacts accounted for all potential impacts caused by a pollutant, which sounded similar to a regular analysis.

Mr. Fox responded stating that the compliance demonstration would be criteria pollutant specific so first a site would check to see if the significant emissions rate (SIL) for each criteria pollutant is exceeded. For each pollutant, if the source emits more than x tons per year then the source facility must do a compliance demonstration. That entails addressing each pollutant based on whether or not the source facility exceeds a given threshold, then evaluating the source individually and independently to look at the impacts of a pollutant at various receptors near the source. If the source is below the SIL, then the evaluation is done because the site is de minimus. The facility or site would go through this process for each pollutant. If the pollutant is not de minimus then a cumulative impact analysis is required for that area, which must incorporate both background and other sources of the pollutant in the model. When the pollutant is modeled, if there are no receptors that violate the NAAQS then the site can move forward because the source could not contribute to a violation that is not present in the area. If there is a violation near a neighboring source then the site would have to evaluate whether the new or modified source contributed significantly to the violation.

Mr. Green inquired about the AERMOD prediction accuracy of 0.995 presented by EPA meant. Mr. Fox explained that 0.995 was a summary statistic achieved when averaging AERMOD prediction-to-observation ratios across 17 evaluation databases. It is important because the statistic demonstrates how well AERMOD performed in complex terrain, downwash, and urban scenarios. EPA is currently limited to the 17 databases, which are observations from monitors, but each PSD application will bring unique aspects that may or may not be captured in the databases, which demonstrates how EPA plans to use flexibility to inform the model. The model will not likely perform close to 1 at each example; however, based on the evaluation databases

that justified its promulgation for use, EPA found very good performance. In fact EPA found AERMOD improved performance up to 40% in some cases. EPA is working with states, locals, and other sectors to help further inform the model.

Mr. Green followed up with a question regarding the graphs presented and what the one-to-one lines meant and if there were similar output graphs for PM. Mr. Fox responded stating that the line showed where predictions equaled observations at the level of concentration, or perfect agreement. In response to the second question, for PM-2.5 AERMOD does not do chemistry, so it only handles the direct component. EPA does do evaluations of their regional scale models such as CAMEX and others, and those types of performance statistics are shown differently because in that situation the model can replicate PM-2.5 concentrations when more is evaluated in space and time, whereas in the graphs presented, EPA's goal was to find potential violations in a near field application. There are a number of different modeling techniques that can be used. EPA is evaluating better ways of modeling air quality over space and time.

Mr. Kaufmann presented the adage that "models are always wrong but sometimes they are very useful." He followed up by stating that one of the takeaways from the presentation was that he was concerned about the performance evaluations presented because those were for situations where the actual emission data and onsite meteorology data were present, therefore EPA was able to pair modeled data with actual monitor readings. This is generally not the case for most sites and facilities where for PSD maximum allowable emissions they use airport predictions which are not accurate, paired with the worst-case measured background concentrations. Essentially, there is a mismatch between what industry is seeing in downwind monitors and what the monitors are telling the modelers. In a situation where a site is located in a city like Houston, where there are 47 monitors, what is purpose of using a model?

Mr. Wayland responded by stating that in Houston, the 47 monitors are ozone monitors and that there are not many NO_2 or SO_2 monitors in Houston that are source specific. For ozone, it is probably the case that there are studies where people have done sensitivity analysis and modelers can see that it takes X amount of NO_x to move the ozone needle. This is an example of what Mr. Fox spoke about in the presentation, in terms of using qualitative approaches. To elaborate, if a site has a source that emits greater than 40 tons of NO_x, but the historical data may state that you need 200 tons of NO_x to impact ozone concentrations, then the site does not have to use modeling. For NO_2 and SO_2, since they are source-oriented specific type of pollutants it will be difficult to get away from monitoring unless there is a monitor that is cited in a point of maximum concentration from the source, such as post-concentration monitoring which needs further exploration. There have also been situations where the monitor is placed in the right location and if the case is made through modeling that it is in the right place, then perhaps monitoring would be sufficient. With the 1-hour standards, EPA encourages looking into multiple options. In addition, EPA is looking to pursue the Tier 2 approach in places such as Houston.

Ms. Giblin asked if EPA has found significant differences between the use of modeling for PSD purposes and the use of modeling for the designation of areas (e.g., attainment versus non-attainment).

Mr. Wayland explained that EPA recognizes that when doing modeling for designations, actual emissions are more representative because that is what one would get if a monitor was installed. The issue is if actual emissions are monitored and the site is in compliance what is to prevent the site from increasing their emissions and getting out of compliance the following year. If the site is monitored and it showed compliance the monitor will still be there throughout the years, providing a check system. EPA will have stakeholder meetings to discuss topics such as investigating ways to model actual and have some kind of check in for compliance.

Ms. Giblin followed up asking specifically about monitoring versus modeling. Mr. Wayland respond stating that in the initial proposal for the SO_2 NAAQS EPA proposed a robust monitoring network but received negative feedback stating that it would not be possible to create such a network because it is resource intensive. In the following proposal EPA put forth modeling and hybrid monitoring and modeling approaches. The EPA stakeholder discussion later on in May will discuss these options as well as what do to with areas that are unclassifiable due to being outside the monitoring areas.

Mr. Wayland closed the meeting.

CAAAC Operations/Next meeting/Close

Mr. Childers explained the next CAAAC meeting will tentatively be scheduled on a Tuesday/Wednesday or Wednesday/Thursday in September 2012. He requested all committee members send in their availability and inform him of any conflicting meetings taking place during that time.

Mr. Childers reminded that all memberships will expire in September and require renewal. EPA policy states that any member serving on the committee for over six years must present justification to stay on the committee. Applications for current and non-members are due May 1, 2012. The application can be found on the CAAAC website and can be emailed to Mr. Childers. His email address can be found on the CAAAC website. All recommendations for committee members are welcome. There is a process for review of members. Lobbyists with the House and Senate are now permitted to sit on a Federal Advisory Committee (FACA) including the workgroup and subcommittee.

Mr. Childers noted the voluntary measure report assisted in driving the SmartWay work that was part of the Mobile Source Subcommittee. Mr. Childers confirmed a request may be sent out on whether the request and review material needs to be altered to ensure CAAAC is receiving the best applications.

Mr. Childers concluded the three things to remember are the awards ceremony in September, applications are due May 1, 2012, and send it potentially conflicting dates in September.

Mr. Childers thanked all committee members and presenters for a successful meeting.

Ms. Schmidt expressed her appreciation for the discussion. She closed out the meeting.

Clean Air Act Advisory Committee
April 25, 2012
Holiday Inn – Old Town Alexandria, VA

List of Attendees

Jim Blubaugh	U.S. Environmental Protection Agency (USEPA) Office of Transportation and Air Quality (OTAQ)
John Campbell	Caterpillar
Pat Childers	USEPA Office of Air and Radiation (OAR)
Beth Craig	USEPA OAR
John Crouch	Hearth, Patio, & Barbeque Association
Stacey Davis	Center for Clean Air Policy
Howard Feldman	American Petroleum Institute
David Foerter	Institute of Clean Air Companies (ICAC)
Tyler Fox	USEPA
Pam Giblin	Baker Botts
Carolyn Green	EnerGreen Capital Management
Kelley Green	Texas Cotton Ginners' Association
Wick Havens	Ozone Transport Commission
Vince Hellwig	Michigan Department of Environmental Quality (DEQ)
Jim Hunter	International Brotherhood of Electrical Workers
Dan Johnson	WESTAR
Gary Jones	Graphic Arts Technical Foundation
Rob Kaufmann	Koch Companies Public Sector
Mike Koerber	USEPA Air Quality Planning & Standards (OAQPS)
Steven Lee	Hensley USA Rice Federation
Janet McCabe	USEPA
Liz Naess	USEPA
Robert O'Keefe	Health Effects Institute
Steve Page	USEPA OAQPS
Vicki Patton	Environmental Defense Fund
John Paul	Regional Air Pollution Control Agency
Juan Santiago	USEPA
Tamara Saltman	USEPA OAR
Lorie Schmidt	USEPA
Nicky Sheats	Thomas Edison State College
Julie Simpson	Nez Perce Tribe
Syndi Smallwood	Pechanga Band of Luiseno Indians
Eric Svenson	PSEG
Eddie Terrill	Oklahoma Department of Environmental Quality

	(DEQ)
Mary Turner	Waste Management
Valerie Ughetta	Alliance Auto Manufacturers
Jason Walker	Northwestern Band of Shoshone Nation
Kathryn Watson	Improving Kids Environment
Chet Wayland	USEPA
Ann Weeks	Clean Air Task Force
Joy Wiecks	Fond du Lac Reservation
Anna Marie Wood	USEPA