

**Clean Air Act Advisory Committee**  
**April 24, 2012**  
**Holiday Inn – Old Town Alexandria, VA**

**Permits, New Source Review and Toxics Subcommittee Meeting**

Bill Harnett, USEPA, welcomed everyone to the subcommittee on Permits, New Source Review and Toxics. Mr. Harnett explained the meeting will cover four topics. The first topic on the agenda will be an update on the Title V permitting program and how EPA is moving forward on recommendations from the CAAAC. The discussion will move to a presentation on the greenhouse gas NSPS for fossil fuel fired steam generating units and on the Mercury and Air Toxics Rule (MATS) for fossil fuel fired steam generating units. The subcommittee will finish with presentations on the status of greenhouse gas permitting from the EPA perspective with additional insights. Mr. Harnett turned to Ms. Wood for the Title V update.

Ms. Wood noted the purpose is to provide an update on a series of activities related to improvements for the Title V permitting program and planned next steps. She provided an outline of her presentation.

The Operating Permits Program was enacted into Title V of the Clean Air Act (CAA) in 1990. The three initiatives have been underway for a period of time in terms of efforts to improve the Title V program. The three initiatives are the 2004 CAAAC Title V Task Force recommendations, the 2005 EPA Inspector General (IG) Audit Report, and EPA's plan for responding to Executive Order (EO) 13563.

The Title V Task Force was recommended and convened by EPA in 2004. The Task Force was looking at the "State of the Program" report after 10 years of implementation. The Task Force was charged with gathering input from all stakeholder groups and assessing how well the Title V program was performing. Members were also asked to determine what elements of the program were working well and what elements of the program were working poorly. The Task Force was asked to provide a report to reflect all views. Members had the option to make recommendations for changes. Ms. Wood explained there were three public hearings and two conference calls held from June 2004 through February 2005. Written comments were accepted until March 2005. After extensive Task Force deliberations a final report was submitted to CAAAC in April 2006. EPA discussed the response with CAAAC in September 2006.

Ms. Wood outlined the various Task Force issues that were involved. Task Force issues were broken down into three overarching subjects with sub-issues associated with each subject. Program overview papers, content issues, and process issues were identified as the three overarching subjects.

The Final Report was issued with 18 topic areas that matched the three overarching subjects. The report included an issue description, provided relevant background, and recommendations. The Task Force made a total of 100 recommendations, but not all of the recommendations had unanimous or even majority support. Ms. Wood noted that recommendations generally did not

specify the method by which any particular recommendation should be implemented. The report is available on the CAAAC website. The link was provided in Ms. Wood's presentation.

Ms. Wood explained EPA's response to date included conducting an intensive internal process for discussing all 100 recommendations. EPA determined the preliminary Agency reaction moving forward, and each recommendation was deliberated and sorted based on the appropriate implementation method (e.g., guidance, rulemaking, etc.). Following the CAAAC discussion, EPA developed a draft plan of action.

A suggested potential guidance document was created that stemmed from recommendations in the report. The guidance document included clarifying expected context of Statement of Basis for the permitting process. Also, it was suggested that the use of "short form" for compliance certifications be addressed through guidance.

Ms. Wood noted there were several suggested potential rule changes, specifically the rulemaking on three specific recommendations. The three specific recommendations included allowing alternative forms of public notice, excluding IEU from permit, and making possible additions to the allowed list of administrative amendments and minor permit revisions. Ms. Wood concluded the summary of the CAAAC Task Force on Title V.

The 2005 IG Report included a series of recommendations for improvement and clarification of the Title V Program. Three of the recommendations are still unresolved. The first unresolved recommendation involves issuing a guidance or rulemaking on annual compliance certifications. The second unresolved recommendation involves developing a nationwide guidance or rulemaking on what should be included in the contents of statements of basis. The last involves issuing the draft rule regarding intermittent versus continuous monitoring as it relates to annual compliance certifications and including credible evidence.

EPA is in the process of developing a rule that will address the issue of credible evidence as it relates to compliance certifications. The timeframe on this rule is the end of 2012, with the possibility of being completed early in 2013. EPA is also in the process of developing a guidance document that addresses the recommendations on the contents of statement of basis and compliance certifications. Work is currently underway on this action and the guidance is expected to be completed in the fall/winter of 2012. The guidance documents will take into consideration recommendations from the CAAAC Title V Task Force to the greatest extent possible.

EO 13563 calls for each federal agency to develop a plan, consistent with law and its resources and regulatory priorities, under which the agency will periodically review its existing significant regulations to determine whether any regulations should be modified, streamlined, expanded, or repealed so as to make the agency's regulatory program more effective or less burdensome in achieving the regulatory objectives. Ms. Wood summarized that EO 13563 is an opportunity to take a fresh look at the Agency's approach to protecting human health and the environment and an opportunity to modernize EPA's regulatory program.

Ms. Wood continued by explaining that EPA included the Title V Operating Permits Program in the Final Plan for Periodic Retrospective Reviews. The goal was to simplify and clarify the requirements of the program. EPA has begun with the review process to implement the recommendation.

EPA received a letter from the National Association of Clean Air Agencies (NACAA). NACAA had reviewed the recommendations from the CAAAC Title V Task Force and presented recommendations to EPA for program improvement priorities. NACAA's recommendations were similar to those developed by the EPA workgroup for analyzing the Task Force report and those identified by the IG. Ms. Wood pointed out the specific NACAA recommendations in her presentation.

Ms. Wood addressed the next steps for EPA. She explained EPA is taking all three initiatives (task force, IG report, and EO 13563 Plan) as well as the recommendations from NACAA into consideration to issue a guidance document on statement of basis and compliance certifications. The Task Force Report will also serve as a source of information for identifying areas for improvement that are responsive to EO 13563.

Ms. Wood reiterated EPA will continue to develop the guidance document responsive to IG recommendations on schedule for winter 2012. EPA will continue the review process in response to EO 13563 to identify areas where the program can be improved. In addition, EPA will initiate an EPA workgroup tasked with following up on the areas for improvement that were already identified, as well as identifying additional areas that should be addressed, and developing a plan for moving forward. Ms. Wood explained EPA will continue to solicit suggestions from stakeholders for their future involvement.

She concluded her presentation and turned the meeting back to Mr. Harnett.

Mr. Harnett opened the discussion to questions and comments on Ms. Wood's presentation.

A member of the audience asked if the EPA workgroup will be internally staffed. Ms. Wood confirmed the workgroup will be staffed internally.

Mr. Harnett thanked Ms. Wood for her presentation. He introduced the next presenter, Kevin Culligan, USEPA, who will speak about greenhouse gas NSPS and the MATS rule.

Mr. Culligan began with an outline of his presentation. Mr. Culligan stated power plants are the single largest source of greenhouse gas emissions in the country. On March 27, 2012 EPA proposed a carbon pollution standard for new fossil fuel-fired power plants. This proposed rule is the first national standard in place for power plants. The proposed standard would ensure that new power plants use modern technology to limit this harmful pollution. EPA's proposed standard is flexible, achievable and can be met by a variety of facilities using different fossil fuels, such as natural gas and coal.

The rule proposes an output-based emission standard of 1,000 pounds of CO<sub>2</sub> per megawatt-hour (lb CO<sub>2</sub>/MWh gross). The output is measured on a gross basis and applies equally to all sources

of fossil fuel-fired boilers, Integrated Gasification Combined Cycle (IGCC) units, and Natural Gas Combined Cycle (NGCC) units. The standard does not apply to simple cycle units. When EPA set the standard, historical data from all plants built in the last five years was examined. EPA believes the standard is set at a level that allows flexibility to operate NGCC units in different ways. The standard can also be met by other types of units (e.g., coal, petroleum coke power plants) if they employ carbon capture and storage (CCS) technology. CCS is a new technology that may improve costs and decisions made in the future. EPA is proposing an alternative standard of 1,000 pounds averaged over 30 years. EPA is proposing that transitional sources will not be covered by this standard, provided they begin construction within 1 year of the proposal's publication. Mr. Culligan stressed that EPA is not proposing a standard for modified units or for reconstructions.

Mr. Culligan transitioned to discuss the 30 year average. New power plants that use CCS would have the option to use a 30-year average of CO<sub>2</sub> emissions to meet the proposed standard, rather than meeting the annual standard each year. He stressed that the standard would be met as a series of one year averages. For the first ten years, plants would be complying the 1,800 pounds of CO<sub>2</sub>/MWh standard. For the last 20 years, plants would need to meet the 600 pounds of CO<sub>2</sub>/MWh standard. EPA thinks there are cases in which companies would want to take advantage of this alternative option. The first case is when CCS is being installed and the company is unsure whether they can operate fully or meet the standard fully on the first day after being installed. For example, having a third party agreement could influence the ability to achieve the standard on the first day of operation. Alternatively, a company may take advantage of the second option because they are permitted to build the plant, while not fully building the CCS system and learning about the advancing technology over time.

Mr. Culligan confirmed the proposed rule was published in the Federal Register on April 13, 2012. There is a 60 day public comment period which will remain open until June 12, 2012. EPA plans to hold public hearings on the proposal. The dates, times and locations of the public hearings will be available soon.

Mr. Culligan opened the discussion for questions.

Howard Feldman, American Petroleum Institute, stated the new rule on utilities was part of a settlement agreement from December 2010. He asked what the status of the other parts of those announcement settlement agreements were.

Mr. Culligan noted EPA has not met the deadlines in the settlement agreements for the other parts of the standards for power plants or refineries. EPA does not have revisions to those settlement agreements and does not have plans on how to move forward at this time.

Gary Jones, Graphic Arts Technical Foundation, thanked Mr. Culligan for the presentation. He asked for the total cost associated with the rule in terms of estimated increase or decrease in electricity of the consumer. He also asked the impact on generation capacity. Mr. Jones inquired what the impact on the temperature will be.

Mr. Culligan encouraged Mr. Jones to read the proposal. Looking at the analysis by EPA or Energy Information Administration (EIA), given the price of natural gas versus the price of coal, the low demand growth back to 2000, and the large amount of natural gas already available, EPA believes NGCC units is the most likely technology to be selected by consumers. EIA analysis suggests that the only coal plants likely to be built between now and 2025/2030 would be a handful of plants that have CCS and are receiving Department of Energy (DOE) funding. These plants ought to meet the requirements of the proposed rule. Based on those projects, EPA does not see a significant cost associated with the proposed rule. New plants will have recordkeeping and reporting requirements for the rule, which are generally consistent with those required for greenhouse gas reporting.

Mr. Culligan stated EPA did not find significant impacts on electricity prices or emission reductions associated with the rule itself. Mr. Culligan confirmed generation capacity has the same result. Moving forward, consumers will meet generation needs with NGCC units and renewable. The transitional status people who did start moving forward on projects will still have the opportunity to move forward.

Mr. Hellwig asked if EPA took infrastructure needs into consideration for the gas plants in states that are close to the maximum on transmission storage capacity in peak periods.

Mr. Culligan responded the rule does not require any states to build new capacity. Any new capacity would be built with or without this rule. The rule could impact what capacity could be built, but all the analysis showed the lowest cost alternative moving forward to building new capacity is NGCC.

Mr. Hellwig followed up by asking if the infrastructure was taken into account for the need to build a NGCC plant.

Mr. Culligan confirmed that natural gas was taken into consideration. EPA completed modeling on a regional basis to see whether supplying the fuels that are needed is possible and what the costs associated with that would be.

Mr. Hellwig noted in Michigan, no matter where plants are located, they will require capital expenditure. Mr. Hellwig offered his concern about the lack of a cost impact, noting this transition cannot be completed without a cost impact.

Mr. Culligan explained a new generation is necessary regardless of the proposed rule. EPA believes people are likely to make the same choices they would have made otherwise, therefore found no incremental cost for the new generation.

Mr. Paul thanked Mr. Culligan for his presentation. He inquired about what EPA envisioned a complete application to look like from a utility that proposes to install a new coal fired generation. Mr. Paul asked what the Agency will look for, in terms of the future CCS.

Mr. Culligan responded that there are multiple requirements that would go into the building, permitting, and verification for a new source. The GHG NSPS is only one of the requirements. In

terms of the GHG NSPS, EPA is proposing that applications need to show an intent to meet the 1,000 pound CO<sub>2</sub>/MWh standard on day one or that the facility will meet the standard using the 30 year average. This rule as proposed does not put specific requirements on the demonstration of the sequestration. It puts requirements on the demonstration that the plant itself is not emitting more than 1,000 pounds CO<sub>2</sub>/MWh. The sequestration is evaluated through other requirements.

Mr. Paul followed up by asking what the package for utilities will consist of.

Mr. Culligan responded if a facility is meeting the 1,000 standard, it needs to demonstrate that it can capture to that level. Other requirements deal with how the sequestration is handled.

Jeff Muffat, 3M Company, stated that the economics have been around \$2.00 MCF natural gas price. He asked when that price goes to \$4.50-\$6.50 MCF, does that change the economics as to what might be a more appropriate new process for energy generation at that time.

Mr. Culligan responded that both EPA's analysis of the GHG NSPS and the EIA analysis are not based on current natural gas prices. The analyses are based on future projected natural gas prices, starting in 2015 and projecting further into the future. The plant decisions are made over the lifetime of the plant, so they assume the gas prices will be well in excess of \$2. Mr. Culligan explained EPA conducted a number of sensitivities that would force higher natural gas prices, higher electricity demands and less availability, and looked at significantly higher gas prices in the \$9+ range. He noted the economics still chose natural gas as the preferred option over coal, which is consistent with the types of analysis completed for the EIA.

Stacey Davis, Center for Clean Air Policy, thanked Mr. Culligan for the presentation. She applauded EPA for releasing the proposed rule. She explained that the proposed rule presents new compliance flexibility and sets a good example for how to use the CAA to reduce greenhouse gases in the future.

An audience member inquired if there is an example of a plant already operating with the technology outlined by the proposed rule.

Mr. Culligan clarified the standard is a CO<sub>2</sub> standard. He stated there are no NGCC units meeting the requirement today. Many of the elements of CCS have been demonstrated and more pilot programs of CCS are underway.

Mr. Harnett introduced Mr. Culligan's second presentation on MATS.

Mr. Culligan began the presentation on MATS by providing an outline. The MATS rule has been out longer and is more familiar to many people. The first slide depicts the coal and oil plants located across the country. The map shows the sources that are subject to the MATS rule.

Mr. Culligan explained the MATS rule was finalized on December 16, 2011. The rule sets standards for all hazardous air pollutants (HAPs). EPA used surrogates instead of putting forth specific emission limits for the 70 HAPs that come from power plants. Limits on PM encompass all non-mercury metals. The rule is required under the CAA to address toxic pollutants from all

stationary sources. There are both direct and indirect health benefits from the rule. Mr. Culligan stated air toxics are linked to IQ loss, neurological damage, lung disease and premature death. These standards set uniform requirements across the coal-fired and oil-fired fleets. EPA conducted outreach through public hearings both before and during the process.

Mr. Culligan explained that comments received have been instrumental in finalizing the rule. Mr. Culligan highlighted some of the changes, including moving from requiring a limit on all PM (both condensable and filterable) to just requiring limits on filtering PM. Filtering PM is a surrogate for non-mercury metals. Based on the EPA analysis and feedback since the rule was finalized, a number of units will be able to meet the limits through existing ESP or ESP with upgrades. This option will reduce the cost of the rule and address some of concerns about the amount of equipment that will need to be installed. There were clarifications of subcategory definitions to ensure the right units were covered in each category. EPA added subcategories for non-continental oil-fired units and limited use oil-fired units. EPA simplified and improved monitoring provisions for clarity, consistency and increased flexibility (e.g., continuous monitoring or quarterly testing, except for Hg). EPA clarified how to use averaging and expanded the number of cases in which the fourth year option was permitted. In the Final Rule, sources can request from their permitting authorities the fourth year. For instance if a unit's compliance option was to retire, but in order to retire the facility needed a transmission upgrade, the facility could be granted an extension. EPA put out an enforcement policy that explains limited circumstances for reliability. This policy states upfront that EPA will work with sources and will grant compliance orders that allow certain units to operate in the fifth year as they complete installation controls and/or complete upgrades if there is a reliability concern.

The health benefits of the MATS rule significantly outweigh the costs. The projection cost is slightly under \$10 billion. The estimated health benefits range between \$37 to \$90 billion dollars.

In terms of achievability of the standards, the types of technologies that EPA believes people will likely use to meet the standard are installed on a large number of units. In order to meet the acid gas standards, technologies that can be used include wet scrubbing, dry scrubbing, or dry sorbent injection. These types of technologies are used on over 2/3 of the fleet today. Mr. Culligan noted many ESPs with upgrades can meet the standard.

Mr. Culligan moved to the next slides that reiterate the points made earlier. A large number of units have technologies that are already meeting at least one, if not more, of the standards. The technologies have been installed on plants for a number of years. In the final Regulatory Analysis (RA), EPA did not project significant retirements from the rule. The combined projected retirements under the MATS rule and Cross-State Air Pollution Rule (CSAPR) is slightly under 10 gigawatts. Mr. Culligan noted that currently there are many companies who are running simple-cycle turbines and coal-fired units on natural gas, not on coal. A new analysis incorporating MATS will be published within the next month. In 2010, the analysis was projecting under 5 gigawatts of retirements. Today, without MATS, around 30 gigawatts of retirements are projected. This difference is due to the low price of natural gas. Mr. Culligan explained coal prices are rising due to the increased difficulty of reaching new sources of coal.

Mr. Culligan stated the rule was made effective on April 16, 2012. The compliance dates are all driven from the effective date of the rule. Sources have three years to comply from April 16, 2012. Mr. Culligan explained April 16, 2015 will generally give people enough time to install controls. EPA believes it is appropriate if sources ask for a fourth year to install controls, while permitting authorities should use discretion under the Act to grant it. The fourth year can also be used if a facility intends on retiring a unit, but the unit is needed to make up generation when installing controls into the fourth year. For reliability reasons, EPA will work with sources when a fifth year is appropriate to make any technology fixes required. New sources will be subject upon startup.

Mr. Culligan encouraged participants to visit the MATS website for more information and supporting documents.

Susana Hildebrand, Texas Commission on Environmental Quality (TCEQ), asked if the \$3-\$9 in health benefits is based on the co-benefits of PM-2.5.

Mr. Culligan confirmed the large majority of the quantified benefits are based on the PM-2.5 benefits. The only toxics benefits that EPA directly calculated were some of the benefits associated with mercury. There is much less information on calculating benefits for toxics.

Mr. Culligan confirmed he understood Ms. Hildebrand's point that the quantified benefits are significant to reducing toxic pollutants. He noted Congress agreed there are significant benefits that put forth the MACT requirements. EPA thinks the co-benefits are worthwhile.

Ms. Hildebrand asked if the PM-2.5 benefits are from the studies that include the other PM-2.5 benefits and other regulations.

Mr. Culligan explained they do not include the PM-2.5 and other regulation benefits.

Ms. Hildebrand clarified all the PM-2.5 benefits refer back to the same studies that result in the benefits. Mr. Culligan confirmed the same studies are used to quantify the benefits. He clarified emission reductions are due to the rule.

John Walke, Natural Resources Defense Council (NRDC), explained he authored a blog post that identified five air toxics rules issued by the prior Administration in which PM-2.5 and NO<sub>x</sub> co-benefits were quantified in the Regulatory Impact Analysis (RIA) to provide calculated monetized benefits. One of the points of writing the blog post was to demonstrate the method EPA's Air Program has always operated. Just about every RIA from the Air Program has been quantifying the co-benefits of criteria pollutant reductions, primarily PM and NO<sub>x</sub>.

Mr. Harnett thanked Mr. Culligan for the presentations. He moved to the next presenter, Juan Santiago.

Mr. Santiago said that he and Mr. Paul would be giving an update on GHG permitting. They would first cover the Steps of the Tailoring Rule and would then move on to cover the permitting activity to date, as well as some of the comments that EPA has filed on permitting actions. They



would talk briefly about the status of biomass work and finish by discussing the recently proposed Step 3 Tailoring Rule, as well as some of the work done recently regarding streamlining techniques.

Mr. Santiago referenced the chart on slide 3 of his presentation. The slide shows, in a graphic format, the steps under the Tailoring Rule. Steps 1, 2, and 3 cover January 2012 to January 2016. The five-year study was committed to be completed by April 2015 to help inform the future rulemaking for April 2016.

He continued by describing the permitting activity to date under the Tailoring Rule. From January 2, 2011 to April 13, 2012, 31 companies were issued permits. The majority of the permits, 26, were issued by state permitting agencies. EPA issued five of the permits. EPA has provided comments on 13 draft GHG permits to be issued by state agencies and there are currently about 27 GHG permit applications under review by EPA. EPA is also tracking approximately 70 PSD permit applications that include a GHG component. Slide 4 of his presentation provides a breakdown of the types of industry that are applying for permits, including biofuels, EGUs, and paper mills.

Mr. Santiago explained that EPA has provided comments on permitting actions. He described some of the general terms and the top comments that EPA has been filing. Most of the comments address inadequate support or give explanations for the form of the GHG BACT emissions limits. Some of the original permits coming through did not have numerical limits and some of the comments that EPA filed said that the facility needed numerical emission limits or a design standard. If a numerical limit is not feasible, it must be documented in the permit record. Other comments regarding inadequate support explained that the applicant must specify averaging time for limits, should consider setting output based limits for GHG, and can use limits on a CO<sub>2</sub> basis or an individual gas basis, given that GHG is a group of six gases.

EPA has also filed comments that permitting actions must ensure practical enforceability and adequate compliance monitoring to measure emission or efficiency over time. Consideration of a source's non-CO<sub>2</sub> constituents, such as methane and N<sub>2</sub>O at combustion sources, is important. EPA has also commented on the use of continuous emission monitoring system (CEMS) for CO<sub>2</sub> measurement. The direct measurement of the emissions is preferred, specifically for EGUs and some of the larger sources.

Mr. Santiago pointed out a common theme. EPA has provided comments on explanations for rejecting control options, specifically for CCS, based on feasibility or cost. Explanations for selecting or discounting control technologies must be included. In this particular case, the reasoning behind not selecting the most efficient turbine or boiler must be explained. The record should clearly show why CCS was eliminated as a potential BACT technology. EPA has also made comments about inclusion of emissions during start-up and shut-down in the compliance calculation for BACT limits. Overall, it is important to document GHG control considerations.

Mr. Santiago moved on to discuss biomass work. There is a biomass deferral in place right now. In January 2011, EPA announced an expedited rulemaking to completely defer the application of pre-construction permitting requirements to biomass-fired CO<sub>2</sub> and other biogenic CO<sub>2</sub>

emissions for a period of three years. During that time, EPA was going to consult the relevant science and do a robust analysis of how to treat CO<sub>2</sub> emissions from biomass. In order to do that, EPA sent a biomass study to the SAB in September 2011. The SAB had a meeting to discuss the initial thinking on this study. The SAB is expected to present its views on the study during spring of 2012. Once published, EPA will consider the SAB comments and if necessary, EPA will decide to propose a rulemaking that would establish how to treat CO<sub>2</sub> emissions from biogenic sources in the context of PSD and Title V. The biomass deferral rule is finalized in July. It runs for three years. It applies only to the CO<sub>2</sub> portion of the emissions and it is only for the purposes of PSD and Title V.

Mr. Santiago explained other ongoing GHG permitting activities include the implementation of Steps 1 and 2, which includes the permitting action discussed earlier. EPA created a website that has questions and answers, GHG permitting guidance, biomass permitting guidance, and everything that EPA has compiled related to GHG and permitting in one central location. In April, EPA proposed the Step 3 rulemaking. The comment period ended on April 20, 2012 and EPA is on schedule to finalize the rulemaking during the summer. EPA also began the five-year study, which it committed to as part of the Tailoring Rule, to decide where to go with Step 4. The study includes experiences with permitting activity during the first 3 steps, the work of the GHG Permit Streamlining Workgroup, and any other experience and knowledge that has been gained from implementation of the first three steps.

Mr. Santiago continued by describing the Tailoring Rule Step 3 Proposal, proposed on February 20, 2012. The comment period ended on April 20, 2012. EPA proposed to keep the thresholds at current levels. There is no proposal to lower the thresholds at this time. The proposal is based on EPA's analysis of where things are today, with regards to activity and resources. EPA proposes two approaches to streamline GHG permitting. To EPA, streamlining is one of the key components that will possibly allow the thresholds to be moved. One of the two approaches to streamline permitting is GHG PALs. EPA has reviewed a few different ways that the rules could be modified to make PALs more effective and efficient for GHG permitting. EPA also proposed to give EPA the authority to issue synthetic minor permits where EPA is the PSD permitting authority. In addition to those proposals, EPA is reviewing a variety of things that are related to streamlining and seeking comment on those, including PTE emissions calculations, guidance on how to do PTE for smaller sources, presumptive BACT, and electronic permitting.

Mr. Santiago said that the last piece he would discuss was the GHG Permit Streamlining Workgroup. He mentioned that the group began under the CAAAC earlier in April and that there had been a meeting earlier in the day. The workgroup has been charged with looking at what EPA has identified as streamlining methods for source categories and confirming, expanding on, or narrowing the scope of those methods. EPA is asking the workgroup to provide some ideas on approaches to make permitting more efficient. EPA is also asking the group to identify any regulatory and policy barriers to these techniques and to prioritize categories and different approaches. The group started working in April and will continue through October, when it will produce a report. He outlined the deliverables and deadlines. The group will produce a draft interim report in August 2012 and will submit a draft final written report in September 2012 to be deliberated upon by the CAAAC for submission to EPA. The final report may address the

issues and potential barriers associated with development of permitting methods, as well as provide ideas on how to implement some of the recommendations.

Mr. Paul began to present the second half of the presentation. He said that he has been looking at GHG permits. He reiterated that the comments are not meant to discredit or give credibility. The second website listed on Slide 2 of his presentation provides copies of EPA's comment letters. Mr. Paul reiterated that it is important to establish BACT numerical limits for CO<sub>2</sub>. It was originally believed that energy efficiency would be the early BACT route. To express that, establish a numerical limit for CO<sub>2</sub>, include all the GHG emission sources in the BACT determination and emissions limits, include start-up and shut-down emissions in the limit, specify the compliance method, and document all of the decisions, calculations, and compliance methods.

Mr. Paul continued by discussing the EPA comment letters. As of the date of the presentation, 29 letters were posted. The first letter to be posted was for Nucor Iron, which is also the first one being legally challenged in the Title V permit part. Mr. Paul displayed three recent comment letters on Slide 4 of his presentation. He tries to review all of the letters for any significant and original comments in order to bring them to the attention of the state and local agencies.

He listed Christian County LLC (12/29/2011), Milwaukee Metropolitan Sewerage District - Jones Island (03/15/2012), and Newark Energy Center (04/17/2012) as three recent letters with significant issues included. He presented text that was excerpted from the letters. State and local agencies had been advised to discount CCS in the economic step, not the feasibility step. The letters suggested that EPA could say that CCS was not yet an available technology, but in the Christian County letter EPA said for the first time that CCS was an available technology. Permit applicants cannot assume that CCS is not an available technology.

In the Milwaukee Metropolitan Sewerage District letter, the sewage treatment plant was burning landfill gas in boilers and wanted to install simple-cycle turbine boilers to burn landfill gas. Region 5 said in the letter that "It appears that Step I of the GHG BACT analysis only considered simple cycle turbines, and did not consider either combined cycle turbines or combined heat and power (CHP) systems. Increasing the efficiency of fuel burning equipment is a way to decrease the emissions of GHGs. Combined cycle turbines are generally more energy efficient than simple cycle turbines, and CHP systems can be even more energy efficient." The letter asks that the applicant revise the BACT analysis to also consider combined cycle turbines and CHP systems or explain in the record why they were not considered available control technologies. The letter also asks for clarification on whether the BACT analysis evaluated simple-cycle turbines with higher efficiency.

When the workgroup was working on BACT for GHG, one of the big issues was redefining the source. The source applied for a simple cycle turbine, and EPA stated in the letter that the applicant should consider combined cycle. Some state and local governments already do this.

Mr. Paul moved on to discuss the Newark Energy Center Project letter. He included the letter because the agency is looking at thermal efficiencies and proposing to achieve a thermal efficiency of 58.4%. The Russel Energy Project in California was at 56.4 and the Cricket Valley

Project in New York was 57.4%, so the energy efficiencies are being looked at. This letter was issued on April 17 and they are already citing the NSPS Proposal. They are advising that the applicant keep in mind that the NSPS is 1,000 lbs/MW-hr and that other states have set lower CO<sub>2</sub> limits.

There are additional issues being raised in these permits, other than GHG BACT issues, that are coming into play because of the GHG PSD requirements. They include BACT for other pollutants emitted in significant amounts, impact of those pollutants, and even ozone modeling. There was a letter issued to Minnesota that said, "The permit record does not appear to include any air quality analysis to show that this source will not cause a violation of the Ozone Ambient Air Quality Standards. EPA's 8-hour ozone implementation phase 2 rule requires that NO<sub>x</sub> be considered as an ozone precursor under PSD. One of the elements of that rule is a requirement that PSD program regulations define the term "significant" for ozone to include 40 tons/year of NO<sub>x</sub>. Since this permit modification has NO<sub>x</sub> emissions above the significance level for ozone, EPA regulations require that the record contain an ozone impact analysis for this source. A quantitative modeling analysis is not necessarily required but MPCA should consult with EPA Region 5 regarding the appropriate form of such an analysis in this case." Whereas previously this would not have been a significant source with regard to NO<sub>x</sub>, it was brought into PSD because of CO<sub>2</sub> and, because it was into PSD because of CO<sub>2</sub>, they had to look at NO<sub>x</sub>, which were greater than 40 tons. The Region wants them to address the impact on downwind ozone nonattainment areas. There are additional issues that are coming into play beyond the GHG BACT issue.

There are other issues, including synthetic minor limits for other pollutants and NSPS and MATS limits for new sources. These are new limits that must be considered for new sources. A new source could be acceptable under GHG BACT but would possibly not meet limits under NSPS or MATS.

Mr. Paul said that, going forward, EPA is continuing to track the GHG BACT decisions. For the EGUs and other large combustion sources, they are also paying close attention to the NSPS and MATS. This is all in addition to other PSD and new source reviews.

Mr. Santiago thanked Mr. Paul for his presentation. He noted that Mr. Hoffman had a question.

Mr. Hoffman thanked Mr. Santiago and asked a question in terms of the number of permits. He pointed out that EPA's regulatory background support information for the Tailoring Rule had estimated 600 permits per year. A year and a quarter in, there have been approximately 30 permits issued. He asked if EPA had any comments, observations, or insights about that difference.

Mr. Santiago confirmed that the original background documentation that supported the Tailoring Rule did estimate 600 permitting actions per year. He clarified that that number includes potential permitting actions, and not all of them will go through. Those numbers were based on size and capacities of emission units and facilities and any modifications. Mr. Santiago clarified that each particular source must make a business decision about whether it wants to participate in a project or not.

Rob Kaufmann, Koch Companies Public Sector, asked if Mr. Santiago knew, of the 30 permits that have been issued, how many had been challenged, like the Nucor permit.

Mr. Santiago responded that he did not have the information with him, but that he could come up with it. Nucor has been challenged on multiple fronts, but he was not sure about the other ones.

Mr. Kaufmann asked about the biomass referral issue. He stated that some states have not incorporated that referral into their State Implementation Plan (SIP), which leaves a patchwork situation for companies with operations in multiple states. He asked, if EPA decides to make that referral permanent, would EPA require states to incorporate that referral into their SIP?

Mr. Santiago responded by saying that it would be a decision made at the time of the rulemaking. He stated that it would be premature for him to give an answer at the current time. EPA would definitely consider that as part of the rulemaking process.

Carolyn Green, EnerGreen Capital Management, referred to the comment made during the presentation that said CCS should not be eliminated until the economic phase. She asked if that comment assumes that all geological formations can handle CCS, or if it means that CCS is technologically feasible even if it is 1,000 miles away and reached by a pipeline.

Mr. Santiago clarified that EPA believes, for certain sources like big EGUs, that CCS is technologically feasible. Having the right geological formation nearby is a component that needs to be considered. At that time, it must be looked at from an economic perspective. What would it cost to put in the infrastructure to reach the geological formations where the gas would be sequestered? If that makes it too costly, that is the way to eliminate it.

Mr. Paul confirmed that they are advising states and locals that it is feasible to capture the gas. It comes down to a question of economics.

Ms. Green clarified her question. She asked, if a facility is in an area that geologically does not support CCS, is it technically feasible there? Ms. Green continued asking is EPA saying that it is technically feasible somewhere in the country so the decision not to do it in one place is an economic decision, irrespective of what the local geology supports.

Mr. Paul confirmed that he does not speak for EPA. If it were New Jersey asking him the question, he would advise the state to look at the technology and if the state were to eliminate it, it would be an economic decision. That would be the most defensible basis because somebody could say that it was technically feasible to capture the gas and build a pipeline. Somebody is piping CO<sub>2</sub> somewhere at some distance, so the question is about what point it becomes economically infeasible.

Mr. Santiago responded that the intent of the workgroup is to inform EPA about streamlining techniques to make GHG permitting more efficient so that additional sources could be added to the permitting programs in the future. Under Step 3, EPA is not proposing to lower the

thresholds. The EPA believes that there is not enough streamlining, resources, or infrastructure in place right now to bring in additional sources to the permitting process.

Pam Giblin, Baker Botts, asked for any comments about what EPA has been doing to facilitate the consultation with U.S. Fish and Wildlife Service (FWS). She noted the public fears delays in permitting due to the endangered species component. She understands that it is not directly in EPA's control but wonders if EPA has been reaching out to FWS to make that part of the process go more smoothly.

Mr. Santiago responded that he would take Ms. Giblin's question back to EPA to get more information.

Ms. Giblin thanked Mr. Santiago and reiterated that, as people develop their timelines, the Endangered Species Act (ESA) piece is the unknown. She would appreciate anything that EPA could do to facilitate greater certainty to that process.

Kelley Green, Texas Cotton Ginners' Association, raised a question about sources that are already limited in hours of operation because of other pollutants by the existing permit, even if it does not have CO<sub>2</sub> emissions limits in it expressly. Would it be possible to use it as a proxy? If a source is already limited in hours of operation by another federal permit, EPA should use a permit by rule to say that a source does not have to apply for a separate permit, which could serve as a proxy.

Mr. Santiago thanked Mr. Green for his contribution and confirmed that the workgroup did discuss that possibility.

Mr. Childers closed out the meeting.

**Clean Air Act Advisory Committee  
April 24, 2012  
Holiday Inn – Old Town Alexandria, VA**

**List of Attendees**

Pat Childers	United States Environmental Protection Agency (USEPA) Office of Air and Radiation (OAR)
Kevin Culligan	USEPA
Stacey Davis	Center for Clean Air Policy
Howard Feldman	American Petroleum Institute
Pam Giblin	Baker Botts
Carolyn Green	EnerGreen Capital Management
Kelley Green	Texas Cotton Ginners' Association
Bill Harnett	USEPA
Vince Hellwig	Michigan Department of Environmental Quality (DEQ)
Susana Hildebrand	Texas Commission on Environmental Quality (TCEQ)
Gary Jones	Graphic Arts Technical Foundation
Rob Kaufmann	Koch Companies Public Sector
Jeff Muffat	3M Company
Liz Naess	USEPA
John Paul	Regional Air Pollution Control Agency
Juan Santiago	USEPA
Eddie Terrill	Oklahoma Department of Environmental Quality (DEQ)
Mary Turner	Waste Management
Valerie Ughetta	Alliance Auto Manufacturers
Phillip Wakelyn	Texas Cotton Ginners' Association
John Walke	Natural Resources Defense Council (NRDC)
Kathryn Watson	Improving Kids Environment
Joy Wiecks	Fond du Lac Reservation
Anna Marie Wood	USEPA

## List of Observers

Praveen Amar	Clean Air Task Force
Maria A. Amaya	University of Texas at El Paso
Shannon Maher Banaga	PSEG
Barbara A. Bankhoff	Bankhoff Associates
James (Jac) Capp	Georgia Environmental Protection Division (EPD)
Jessica Coomes	BNA News
Emily Davis	Natural Resources Defense Council (NRDC)
Doug Deason	ExxonMobil
Misti Duvall	National Association of Clean Air Agencies (NACAA)
David Frigman	American Fuel & Petrochemical Manufacturers (AFPM)
Clara Hoffenberger	ExxonMobil
John Hornback	Metro 4/SESARM
Jeremy Jacobs	Greenwire
Dan Johnson	WESTAR
John Kinsman	Edison Electric Institute
Jessica Montanez	USEPA
Chris Nelson	3M Company
Stuart Parker	IWP News
Leslie Ritts	NEDA/CAP
Julie Simpson	Nez Perce Tribe
Syndi Smallwood	Pechanga Band of Luiseno Indians
Jeb Stenhouse	USEPA
Leila Surratt	Center for Clean Air Policy
Gene Trisko	United Mine Workers of America (UMWA)
Stacey VanBelleghen	Latham & Watkins