

**Pennsylvania Department of Environmental Protection
AIR QUALITY TECHNICAL ADVISORY COMMITTEE MEETING**

Minutes

December 13, 2018

Air Quality Technical Advisory Committee (AQTAC) Members Present

Joseph Duckett
Josie Gaskey
Jayme Graham
Judy Katz
Charles McPhedran
Patrick O'Neill
Nancy Parks

Joseph Guzek
RJ Shaffer
Kevin Stewart
Gary Merritt
John Tissue
John Walliser
Michael Winek

Department Staff Present:

Kirit Dalal
Samantha Harmon
John Krueger
Krishnan Ramamurthy
Nancy Herb
Naishadh Bhatt
Hitesh Suri
Viren Trivedi
Jennie Demjanick

Sean Wenrich
Susan Foster
Kristen Furlan
Shawn Mountain
Charles Boritz
Chris Trostle
Allen Landis

Others Present:

Andrew Williams – EDF
Patrice Tomczak – Moms Clean Air Force
Roy Rekeying – All4
Leeann Leiter – Earthworks
Barbara Johnson – Penn Environment
Patterson – MSC
Richard Fox – PA House of Representatives
Morris Tiberie – Clean Air Council
Thomas Au – Sierra Club
Mark Szybist – NRDC
Mark Levy – Associated Press
William Anderson – PSR
Sarah Casper – Sierra Club
Terry Black – ERM
Mitch Hescox – EEN
Dave McCullough – EEN
Phil Coucet – EEN
Colin McGroarty – ERM
Keith Salador – CAC

Shannon Dawson – Wojdak
Ed Kubinsky – CROMPCO Corp.
Kathy McCanly – Sunoco
Josh Worth – Wawa
Ezra Thrush – PennFuture
Henry Alexander (affiliation unknown)
Evan Popper – Clean Air Council
Matthew Rindtuss – PA House of Reps
Raina Ripple – EHP
Lois Bauer – Impacted resident
Stephanie Myers – LAMPA
Lisa Hallowell – EIP
Dale Tiberie (impacted resident)
Dr. Robert Little – PSR
Sarah Martik – Center for Coalfield Justice
Terence Trefiak – Target Emission Services
Matt Walker – Clean Air Council
Dr. James E. Jones – Physician

CALL TO ORDER

Patrick O'Neill, AQTAC Chair, called the December 13, 2018, meeting to order at 9:15 a.m. in Room 105 of the Rachel Carson State Office Building, 400 Market Street, Harrisburg.

ADMINISTRATIVE ITEMS

Mr. O'Neill provided background information about AQTAC for the new committee members and members of the public in attendance. Introductions were made by AQTAC members and the audience.

Approval of Minutes

The minutes of the June 14, 2018, AQTAC meeting were discussed, including the edits requested to page 10 of the minutes. The minutes were deferred for action at the last meeting on August 2, 2018, which was held as a webinar. Kirit Dalal confirmed the changes and noted that a sentence was added at the bottom of the agenda to alert interested parties that the order and timeframe of agenda items are subject to change; therefore, early arrival is recommended to ensure an opportunity to comment on agenda items. A statement of this kind will be included on all future AQTAC agendas. The minutes of June 14, 2018, were approved by a vote of 14-0-3. The minutes of the August 2, 2018, AQTAC meeting (conference call/webinar) were discussed and approved by a vote of 14-0-1.

Kevin Stewart commented that the Committee had requested updates on several items that were not included on the August 2, 2018, agenda, but stated he did not have an itemized list. Mr. O'Neill clarified that the only item he recalls that wasn't listed was a request by Nancy Parks for information about DEP's plans for existing oil and natural gas sources, including both conventional and unconventional sources.

INFORMATIONAL ITEMS

Preliminary Draft Proposed Amendments to the Stage II Vapor Recovery Regulations

Chris Trostle provided an overview of preliminary draft proposed amendments to the Stage II Vapor Recovery regulations, including a PowerPoint presentation.

Nancy Parks asked for clarification about fixing leaks in some cases within one month or in other cases within six months. Chris Trostle responded that the Department of Environmental Protection (DEP) is requiring gasoline dispensing facilities to check their equipment on a monthly basis but also to be vigilant and monitor at all times. The fallback is the required leak testing. Facilities should check leaks and repair them as they occur, within 15 days.

Josie Gaskey asked about the number of facilities that will be affected. Chris Trostle responded that DEP conducted a survey in the Southeast region and received a little over 1,000 responses. The draft proposed rulemaking will affect facilities that have been above 10,000 gallons of gasoline at any one time per month. If the facility is always below 10,000 gallons a month, the facility won't need to comply. About 17.9% of facilities in the SE region are below 120,000

gallons per year, and probably half of those facilities would not have to take any action. In the Southeast and Southwest regions, about 90% of facilities are affected.

Joe Duckett asked how volatile organic compounds (VOCs) are apportioned from the three VOC sources mentioned: spills, venting from tanks, and miscellaneous such as leaks. Chris Trostle responded that if gas stations are not well maintained, the leaks will overwhelm venting from tanks and spills. Well-maintained tanks can emit 2-4 tons per year (tpy) of VOCs whereas, if there is a leak, emissions can be as much as 15 tpy as the lower limit of control efficiency (65% control), which EPA set, is approached.

Mr. Duckett asked, with reference to the vacuum pump or vacuum hose in the diagram on Slide 5, if there is less chance for leaks if the hoses are kept under negative pressure. He also asked if there is a carbon canister or a collection device at the vent. Chris Trostle responded that you can install a pressure management system at the vent that is slightly carbon. The systems are expensive. Normally there is a pressure vacuum vent that holds the vapors until the pressure/vacuum vent valve reaches the cracking pressure, and then vapors are emitted. Mr. Duckett asked if this type of system is more of a safety vent than a control vent. Chris Trostle responded that yes, it is, and it also controls emissions to a small degree. Mr. Duckett asked if it works as a control measure because it is not venting all the time, only at a certain pressure. Response: Yes.

Kevin Stewart asked several questions regarding clarification of the 4th bullet of Slide 6 of the presentation, which states “Environmental Protection Agency (EPA) estimated that onboard refueling vapor recovery (ORVR) system would need to achieve emissions reductions of 77.4% to be equivalent to the amount of Stage II control alone.” He asked what this number means and how it was determined. Chris Trostle responded that EPA looked at all Stage II systems across the country and determined that, on average, the systems are achieving 86% control of emissions. Ten percent of gasoline throughput is not subject to Stage II. To get the 77.4%, the rule penetration (90%) is multiplied by control efficiency (86%) to equal 77.4%, which is the amount of control needed by ORVR to be comparable to Stage II.

Mr. Stewart asked if this calculation for Stage II emission reductions includes or does not include ORVR on the vehicles, or if it is just Stage II alone. Chris Trostle responded that the estimate includes the impact of ORVR.

Mr. Stewart asked if ORVR by itself, with no Stage II, achieves the goal of 77.4% reductions. Chris Trostle responded: Yes. According to EPA guidance, which only looked at evaporative emissions, DEP determined that in 2017 we’re getting a detriment due to incompatibility.

Mr. Stewart asked what the detriment is from ORVR with Stage II. Chris Trostle responded that currently, 86% of cars have ORVR, and there is 13% detriment from cars with ORVR for evaporative emissions.

Mr. Stewart asked what the percentage for ORVR reductions alone would be if the e-vacuum assist of Stage II is removed. Chris Trostle responded that EPA assumes that 98% of emissions from refueling are reduced.

Mr. Duckett inquired if having both systems is worse than just one system. Chris Trostle responded that the answer is yes unless it's a vapor balance system.

Mr. Duckett asked if anyone quantified disadvantages of both systems operating rather than just ORVR. Chris Trostle responded that DEP determined that 77.4% is equivalent, and, now that nearly the entire fleet has ORVR, we're approaching 98% ORVR penetration; however, due to older cars, we are closer to 90%. We have not estimated the exact difference with both systems compared to just ORVR.

Mr. Duckett commented that the exact difference would be hard to estimate, but relevant. Mr. O'Neill stated that it would depend on how much gas is pumped. We don't know total emission reduction. Chris Trostle responded that DEP can estimate emission reduction if we don't default to the Federal standard. We would be closer to the 86% we are at now, or more. If we don't have that, some stations will go down to 65%.

Mr. O'Neill inquired if the regulation will apply statewide. Response: No, it will only apply in Philadelphia and Allegheny Counties. Mr. O'Neill suggested that DEP consider making it applicable statewide and reduce the emissions throughout the state. Chris Trostle responded that this is an ozone control measure, and these VOC reductions would not have much of an effect outside of the Philadelphia and Pittsburgh areas.

John Tissue asked if the continuous monitoring and dripless nozzle requirements are required to show the equivalency of the ORVR compared to Stage II or if they are additional requirements to get additional reductions. Chris Trostle responded that EPA only looked at evaporative emissions and said that spillage and breathing losses would not change. DEP disagrees with that analysis. Studies indicate that there will be a lot of drips, and manufacturers indicate there can be a lot of fugitive emissions from these sources. DEP wants to hold the line and keep emissions the same. Continuous pressure monitoring is equivalent to annual testing, which will result in leaks being detected and fixed sooner.

Mr. Tissue asked for confirmation that Philadelphia and Pittsburgh will continue to do continuous monitoring or annual testing. Chris Trostle responded: Yes, that's the way it is now and it will not change.

Mr. Tissue asked about the costs of the new technologies. Chris Trostle responded that the new technologies are currently more expensive.

Ms. Parks asked what the emission reductions are in tons/year. Chris Trostle responded that DEP does not have that information at this time, but it is obtainable. Ms. Parks requested DEP to get the information and provide it to AQTAC at the next meeting.

Mr. Stewart asked, given Ms. Park's request, that DEP provide more than just the final answer, such as emissions from the different components of the system, comparison to current and future inventory, the assumptions used for the analysis, etc. He would also like to see range and calculations, split by source, and changes due to rule changing, etc., and to include it in the incompatibility analysis.

Ms. Gaskey stated that, as written, the rule does not allow a repair to be made on the day of the test. She questioned DEP's reasoning for this. Chris Trostle responded that repairs should be made before the test. DEP wants owners and operators to look at the station on an ongoing basis, not to check only on the day of the test.

Mr. O'Neill asked when the onboard systems became mandatory on cars. Chris Trostle responded that for light-duty passenger cars, the requirements were phased in at 40% in 1998, 80% in 1999, and 100% in 2000. Light-duty trucks were phased in beginning in 2004 at 40%, 2005 at 80% and 2006 at 100%. Medium-duty trucks were phased in over two years beginning in 2005 or 2006.

Mr. O'Neill commented that cars 18-20 years old and trucks around 12-15 years old are creating the most problems. He also commented that some old cars will remain on the road for a while and will not be controlled at the pump without Stage II. Chris Trostle responded that DEP agrees with both statements.

Mr. Ed Kubinsky, with CROMPCO, asked if DEP has spelled out which certification categories will be allowed to do the testing and the decommissioning. Chris Trostle responded that the installers are allowed to do decommissioning, and testers are allowed to do testing. Mr. Kubinsky then asked that DEP consider allowing the UMI certification category to be authorized to do decommissioning in addition to the UMX category, and only allow the UTT category to do testing. Chris Trostle assured that DEP will consider this request.

Due to the large number of public attendees filtering in, Mr. O'Neill again reviewed the purpose of AQTAC and procedure and time limits for the Public Comment portion of the meeting.

Preliminary Draft Proposed RACT Regulations for the Oil and Natural Gas Industry

Krishnan Ramamurthy provided a preliminary overview of the proposed Control Technique Guidelines (CTG) Reasonably Available Control Technology (RACT) regulation for the oil and natural gas industry, including the difference between New Source Performance Standards (NSPS) and the CTG. Charles Boritz gave a PowerPoint presentation on this preliminary draft proposal.

Mr. Duckett suggested getting rid of 'zero' terminology for anything in this rulemaking and suggested quantifying limits. Charles Boritz responded that the controller and pumps referred to for the natural gas processing plant need zero bleed, which means that when natural gas is used to actuate it, it then goes through a separate fuel system or back to the pipeline and does not vent to the atmosphere. There are other alternatives to natural gas-driven pneumatic controllers and diaphragm pumps, also called zero bleed (i.e., instrument air-driven, electronic controllers, and electric pumps). This requirement is part of the NSPS standards DEP adopted, and the CTG must be consistent.

Joseph Guzek agreed with Mr. Duckett and asked about the quantity of VOCs in natural gas in Pennsylvania. Charles Boritz responded: As noted in the technical support document for GP-5 and GP-5A, DEP conducted a natural gas analysis based on fractional gas analyses submitted as

part of applications. The result was a wide range of 20% and 0.5% or less. The average was determined to be about 4.47% VOC by weight for Pennsylvania.

Mr. Duckett asked if that analysis is the reason a natural gas analysis is required for GP-5. Charles Boritz responded that yes, it is one of the reasons. DEP also wants to confirm that emission estimates are accurate based on the gas sample.

Mr. Stewart asked if a detailed analysis was done or will be done at some point, specifically to provide information on current inventory of emissions from the different components, estimates of tpy emissions avoided, and estimated cost effectiveness. Charles Boritz responded that a Regulatory Analysis Form (RAF) will be completed and include that information.

Mr. Stewart asked if AQTAC can review the RAF analysis before the draft rulemaking is added to the agenda to provide input and possible amendments to strengthen the proposal. Charles Boritz responded that DEP will try to accommodate that request. Krishnan Ramamurthy clarified the rulemaking is not a permit but rather a rulemaking based on the CTG. EPA completed technical and economic evaluations when developing the CTG. The requirements DEP is including in its rulemaking have been determined to be cost-effective by EPA. Legally, DEP is obligated to make the rule at least as stringent as EPA's CTG. DEP will analyze expected reductions, sources affected, increase in reductions from earlier requirements, etc. DEP has estimates of expected reductions and will continue with the analysis.

DEP has completed a rough estimate of emission reductions from storage tanks resulting from the CTG. Using the CTG for actual emissions greater than or equal to 4.0 tpy VOC, there are 56 facilities where a 95% control requirement would result in approximately 460 tpy in VOC emission reductions. The current emissions for affected facilities under the CTG are 490 tpy. Using DEP's threshold of actual emissions greater than or equal to 2.7 tpy of VOC, there are 97 facilities where a 95% control requirement would result in approximately 590 tpy in VOC reductions. The current emissions for affected facilities under the DEP proposal are 620 tpy. DEP's requirements would include an additional 41 facilities and result in an additional 124 tpy of VOC reductions over the CTG. A co-benefit is the reduction of 49 tpy of methane over the CTG.

For fugitive emissions, DEP's draft regulation is also more stringent than the CTG. Under the CTG, there is a reduction of approximately 403 tpy of VOC, with a co-benefit of 9,027 tpy of methane. Under the DEP proposal, VOC reductions would be 578 tpy with a co-benefit reduction of 12,932 tpy of methane. This is a very preliminary analysis.

Ms. Parks asked how many facilities in Pennsylvania are currently functioning below the 2.7 tpy threshold and how much VOC is going to be emitted from those facilities that are not controlled. Charles Boritz responded that DEP does not have those numbers at this time but will get back to the Committee with the information. There are approximately 3,100 facilities with storage tanks, and most of them already have controls. Staff could not recall the number of facilities without controls, but approximately 100 of them are above the 2.7 tpy threshold; those below the threshold have a minimal emission impact, as their reported emissions are approximately 0.000333 ton.

Referring to the fugitive emission components requirements on Slide 21, John Walliser asked about the percentage of wells to which it would apply. Charles Boritz responded that a preliminary analysis shows that approximately 80,000 conventional wells exist, and most are exempt under the low production standard. Approximately 12,000 unconventional wells exist, and only about 6% would be exempt for low production.

John Tissue inquired about the frequency and method of calculation for leak detection and how DEP quantifies the difference between the different reporting frequencies. Charles Boritz responded that in the technical support document for GP-5/GP-5A, DEP used numbers from EPA surveys which showed a 40% decrease with annual surveys; 60% reduction with quarterly surveys; and 80% reduction with monthly surveys. EPA revised these estimates in its recent reconsideration to 60% reduction with semiannual surveys and 80% reduction with quarterly surveys. DEP's draft proposal requires quarterly surveys, which should result in an approximately 80% reduction. Additionally, DEP took into account whether the source had or did not have a leak detection and repair (LDAR) requirement.

Mr. Tissue asked for clarification on whether the 80% reduction is due to a leak being detected sooner than it would with annual inspections. Charles Boritz responded that the annual survey will prevent approximately 40% of emissions from a leak while the quarterly surveys will prevent approximately 80% of emissions from a leak. As a result, the difference between the annual and quarterly surveys will be about 66%. In an example of 100 tons, it would be 60 tons emitted versus 20 tons emitted.

Mr. Tissue asked if it was worth looking at requiring monthly surveys rather than quarterly. Charles Boritz responded that the percentage reductions are for the instrument-based surveys only. DEP has monthly walk-through requirements that should catch leaks between surveys.

Mr. Duckett asked where the 26,000 hours of operation limit comes from. Charles Boritz responded that it comes from the CTG and is based on a "Natural Gas STAR Lessons Learned" paper by EPA. The estimate is based on replacing the rod packing every three years rather than the industry average of every four years.

Mr. Duckett asked if DEP has estimated what the reasonable cost per ton would be for this rulemaking. Charles Boritz responded that DEP has not determined this yet, but, generally under RACT regulations, \$3,000-\$5,000 per ton of VOC is a benchmark.

Ms. Graham asked if the January 1, 2021, implementation date was established because of Pennsylvania's designation as a member of the Ozone Transport Region or if it was out of the CTG. Charles Boritz responded that it is based on the regulations governing RACT and the CTG.

Ms. Graham asked what DEP's schedule is for moving this regulation forward. Charles Boritz responded that the schedule depends on how much feedback DEP receives. Additional analysis is required by DEP to firm up responses to questions because quantification is difficult. DEP will continue to work to fine tune the proposal and must format it correctly for the Legislative Reference Bureau. DEP may also need to address EPA action on the CTG. DEP's goal is to move the proposal forward as soon as possible.

Ms. Graham asked how DEP will ensure compliance and the kind of inspection and enforcement levels needed by DEP and Allegheny County Health Department staff to accomplish the requirements of the proposal. Charles Boritz responded that this rulemaking is not discretionary. DEP is still analyzing what will be needed and will involve enforcement staff early in the rulemaking process.

Regarding Slide 11, Mr. Stewart asked what kind of emissions a facility would have that would require exemption from the emission limits in the proposed rule and if there are restrictions on the use of exemptions in the proposal. Charles Boritz responded that the facilities would have to demonstrate the need for exceptions. Affected facilities must still look for ways to stay under the threshold. Additionally, this requirement has applied to gas processing plants for a long time; the requirement is a carryover from the 2011 Oil and Gas NSPS (40 CFR Part 60 Subpart OOOO).

Mr. Guzek commented that it is a good draft and it's good to release it early. By getting it out ahead of time, the industry may work to get to the exemption level before it becomes a requirement.

Mr. O'Neill stated that most of the equipment discussed is associated with unconventional oil and natural gas and asked what the effect is on conventional oil and gas. Charles Boritz responded that DEP is implementing the Federal CTG, and in the CTG there is no distinction between conventional vs. unconventional wells. The CTG does have some applicability thresholds and most conventional wells will be below the threshold, but there is no automatic exemption just because the wells are conventional.

Mr. O'Neill commented that capturing VOCs is critical, but we want to make sure methane is addressed as well. He asked how much of the methane emissions are from conventional vs. unconventional wells and if a larger percent is from unconventional wells. Charles Boritz responded that the conventional wells are exempt from permitting and emission reporting, so DEP cannot provide a precise distribution between conventional and unconventional. Industry estimates a 50/50 split, even though conventional wells produce only 2% of the natural gas.

Mr. O'Neill expressed concern about the emissions from conventional wells and whether these emissions are being addressed. Charles Boritz responded that since August 23, 2011, all wells are required to comply with 40 CFR Part 60 Subpart OOOO. Anything prior to the 2011 date is likely to be affected by the CTG but will not be required to do LDAR (generally speaking, due to low production), but storage vessels and other elements are subject to restrictions.

Mr. O'Neill asked what Pennsylvania plans to do if EPA withdraws the CTG. Charles Boritz responded that DEP will wait to see what rationale EPA uses if they withdraw the CTG and how they respond to the comments that were submitted to them. If EPA withdraws, DEP has no legal obligation to complete a rulemaking within a certain timeframe but is still required to address existing sources.

PUBLIC COMMENT

The public was invited to make comments regarding the draft proposed rulemaking for the Oil and Gas CTG or any other presentations.

Andrew Williams, Environmental Defense Fund (EDF), commented on the proposed RACT for existing natural gas facilities, noting that methane is an issue of huge environmental significance and is responsible for 25 % of the climate change impact we experience today. He mentioned that Pennsylvania is the second largest natural gas producer in the nation, and the future role of natural gas is a base to economic and energy security of the Commonwealth. He pointed to several areas where the proposed regulation should be improved and recommended that DEP revisit its proposal.

Mitchell C. Hescox, Evangelical Environmental Network (EEN), commented that it is unclear from the draft regulation that the new standards will adequately address the massive unreported fugitive emissions of both VOCs and methane based on EEN's research. He provided data on EEN's findings and mentioned that areas in Pennsylvania in non-attainment for ozone levels are already at the upper end of attainment levels. He mentioned that it is unclear whether the efforts would provide the necessary reductions to reach ozone attainment, and he also presented concerns about health effects on people living near natural gas production or related facilities.

Raina Ripple, Southwest Pennsylvania Environmental Health Project (EHP), commented on the health effects caused by fracking, methane and other VOCs based on the data collected by their team and other researchers. She urged DEP to support and seek passage of strong existing source regulations for both methane and VOCs.

Henry Alexander, a private citizen, commented that he wrote the first two sets of VOC regulations for EPA in the past and mentioned the regulation will not only reduce health impacts but is also a cost-effective way to address climate change.

Patrice Tomczak, OTC Specialist with Moms Clean Air Task Force, commented on the impact on children from the wells and the impact of climate change on vulnerable populations. Ms. Tomczak would like DEP to strengthen general permits and this rulemaking to address the impact of methane.

Lois Bauer, from Washington County, commended DEP on the hard work they have done and commented that it is critical to enact strong regulations for existing sources, especially compressor stations, as she has experienced many health impacts such as nose bleeds, rashes, etc. She believes there is a need to strengthen the relevant regulations in light of deregulatory actions by the Federal government.

Matt Walker, Clean Air Council, commented that research and studies have shown that methane emissions from the gas industry in Pennsylvania are on the rise. He urged DEP to strengthen the methane pollution controls outlined in the draft rule to cover as many sources of natural gas air pollution as possible. Mr. Walker expressed concern that the rule will exempt a significant number of existing wells due to the production level exemptions. On behalf of Council, he provided several recommendations on methane controls from different sources.

Lisa Hallowell, Environmental Integrity Project, commented on the recent article she saw about there being a 300% methane increase, but industry claims a 30% decrease. Methane is as dangerous as greenhouse gases from all type of facilities. Leaks contribute to methane emissions and impact climate change. She urged DEP to have specific regulations for methane.

Leann Leiter, Earthworks' Community Empowerment Project, commented that the complete rule must regulate methane as well as VOCs. All the inspections and the LDAR schedule throughout Pennsylvania must be consistent, and there should not be any exemptions to the requirements. She also emphasized the importance of the consistency and frequency of inspections based on the study, research and data available to Earthworks. She commended the quarterly survey requirement and requested that DEP remove the 'step-down' provision.

Stephanie Myers conceded her speaking time and submitted written comment, which address her concerns about the environment and climate generally, the impacts of climate change in the US that we are already seeing, and the disconnect between natural gas policies and its actual impacts on the environment. She asks for bold action to control methane emissions from natural gas infrastructure and recognize the devastating effects on the climate.

Robert Little, MD, Physicians for Social Responsibility, commented that additional reductions of VOCs are technically and economically feasible. He also commented that the proposed rule should be strengthened and built upon to control both VOCs and methane emissions from existing and modified sources.

Dale Tiberie, a private citizen, encouraged and urged DEP to consider the impact of the release of methane and other VOCs into the atmosphere and the impact on human health. Mr. Tiberie also indicated that optical gas imaging (OGI) is a very important tool to the process of eliminating emissions.

Terence Trefiak, Target Emission Services, indicated his company is very supportive of the use of OGI as it is far superior to Method 21 in efficiency and effectiveness. Overall, the draft regulation is good. Mr. Trefiak questioned the definition of fugitive emission component (page 7 of the draft Annex A) and suggested that DEP clarify whether the definition is for a specific percent VOC, as not all components with any amount of VOC align with other EPA regulations. He asked for clarification in the general provisions regarding exemption and compliance with OOOO. He further suggested checking the cross requirements for facilities and to figure out what is grandfathered for a facility.

Sarah Casper expressed her support for DEP and the current actions addressing oil and gas wells and discussed the difficulty of controlling VOCs based on her prior regulatory experience. She commented on the noise from compressor stations and the release of toxic chemicals from leaks and fracking, including the effects on human health and the potential for groundwater contamination. She also pointed out the oil and gas pipeline leaks and emissions from chemicals such as formaldehyde, benzene, radon, etc., from oil and gas pipelines and fracking.

James E. Jones, MD, commented that he has treated many people affected by air pollution. Dr. Jones stated that the emissions of methane need to be properly measured and that DEP shouldn't

rely on industry's figures. He stated that the sources of methane need to be located and the emissions from those sources need to be controlled and proper enforcement actions taken.

Isaac Brown, Executive Director, Center for Methane Emission Solutions, submitted written comments but did not provide testimony. Mr. Brown commented that the current policy for existing sources in Pennsylvania, Exemption 38, leaves many sources uncovered and does not constitute leading control technology for many others. He suggested several options to improve the proposal.

Volkswagen/Driving PA Forward update

Samantha Harmon provided an overview of the Driving PA Forward grant and rebate programs.

Nancy Parks asked if the DC Fast Charging and Hydrogen Fueling Grant Program is a fleet program, a residential program, or both. Samantha Harmon responded that it is a public access program. Recipients can install chargers that will be used by their fleet, but the chargers must be accessible to the public. It is not targeted towards fleets; it's targeted towards public use and any combinations of public/fleet use. The program also allows for combinations of DC Fast Charge and Level 2.

Joseph Duckett asked about how the funds are used and what type of evaluation analysis is incorporated. Samantha Harmon responded that for the grant programs, there is a scoring matrix that DEP created which looks at several things such as small business status, project location, Act 47 status, environmental justice area, non-attainment area status, other priority area types, cost-effectiveness of the project, total NOx reductions of the project, number of vehicles, and other elements, focusing on the most cost-effective NOx reduction projects. For the rebate programs, DEP uses the eligibility to focus efforts on our priority areas.

Charles McPhedran asked if operators of charging stations can charge a fee for use of the stations. Samantha Harmon responded that they don't have to be free, but, if the operator is charging for use, the payment system must be one which the majority of the public can use. It can't be set up so that use is restricted to certain groups or certain payment types that are not commonly available. An example is a payment option with a card from the company that installed the equipment. They can have that as an option but must offer other options, too.

Mr. McPhedran asked if DEP has looked at the impacts beyond when the program is over. Samantha Harmon responded: Yes, DEP is looking into the future. Transitioning the current fleet will impact emissions into the future as much as 20 years. We are also considering the transformative impact of grant projects and are continuously monitoring whether we have the right amount of money committed to the right programs.

Air Quality Update

Sean Nolan provided the Air Quality Update on current and historical air quality data and monitoring throughout the Commonwealth.

Kevin Stewart asked what DEP does with exceedances outside of the ozone season. Sean Nolan responded that DEP monitors year-round and reports all emissions data to EPA; however, we are not sure how EPA handles the data.

Mr. Stewart asked if it is common to get inversions in this area. Sean Nolan responded that upper air measurements were completed at Allegheny County airport. Yes, there can be strong inversions if there is a cooler temperature at the surface.

John Tissue asked if DEP will meet the next NAAQS for PM_{2.5}. Sean Nolan responded: Yes, because EPA probably will not change the standards. We believe EPA will try to finish the PM_{2.5} NAAQS by 2020. DEP will meet the NAAQS for the most part, and the NAAQS will be similar to what it is presently.

Mr. Duckett asked whether the Department of Health is studying the impact of reduced emissions, given the dramatic reduction in concentrations of all these pollutants. He indicated that the Committee had not seen any studies. Sean Nolan responded that DEP does not know. The PA Department of Health should be contacted by the interested parties/individuals.

Report on Rulemakings / State Implementation Plan (SIP) Revisions

Kirit Dalal provided an update on rulemakings and SIP revisions.

Mr. Duckett asked if AQTAC will get a summary of comments on the Title V permitting issues. Kirit Dalal Responded: Yes, DEP will provide an update on the public comments received at the next AQTAC meeting.

Nancy Parks expressed concerns about the impact of the two ethane crackers (PA and OH). She proposed a discussion at the next meeting about southwestern PA generally and the impact of ethane crackers, especially in Beaver County and the one in Ohio.

Patrick O'Neill asked if DEP is notified of Ohio actions. In this context, there was discussion during the meeting that the Southwest Regional Office in Pittsburgh gets an application for the plan approval. Some committee members believed that DEP is sent the notification for facilities in Ohio. Kirit Dalal clarified that the discussion referred to sources in PA, not OH. John Kruger clarified that the regional office might be getting the notifications as DEP has to do the modeling. DEP will get back to the Committee on this question.

Ms. Parks asked if DEP has the monitoring network needed to track the impact in Southwestern PA. John Kruger responded that DEP staff members are extremely busy with the current monitoring network, but we're trying to increase monitoring in unconventional shale areas. Currently, there are no plans to install monitors specifically to monitor the impact of the Ohio cracker.

Mr. Stewart commented that the Ohio EPA closed the public input period for the ethane cracker in Ohio on December 11, 2018.

OTHER AQTAC BUSINESS / OPEN DISCUSSION

Mr. O'Neill discussed the "to-do list" with the following items to be addressed:

- Questions from Kevin Stewart and Nancy Parks on Stage II Program about the quantity of emission reductions.
- Similar question on RACT CTG about the quantity of emission reductions and the total number of exempt facilities.
- Conventional and unconventional wells – how many sources below 2.7 tpy threshold and how much uncontrolled emissions (tons VOCs, methane etc.).
- Explore the relationship between VOCs and methane from all drilling sources. Quantify and provide presentation to AQTAC on relationship between VOCs and methane.
- Joseph Duckett asked for a summary of comments on the Air Quality Fees rule.
- Nancy Parks asked for a discussion about the impact of ethane crackers in Pennsylvania and Ohio.
- John Tissue mentioned the fee package – some facilities are no longer applicable for Title V, and post implementation package for non-Title V is still required.
- John Tissue would like discussion on what percent of Title V could switch before it negatively affects expected impact of new fees package.
- Mr. Duckett mentioned increasing fees, incentives to go for non-Title V designation.
- Mr. Tissue asked where the tipping point is when fee package is not enough.

Responding to Mr. Tissue's questions, John Krueger noted that, given the complexity of many synthetic minor facilities, some have suggested that the proposed maintenance fee of \$2,500/yr. is too low. In addition, the difference between the proposed synthetic minor maintenance fee and the proposed Title V maintenance fee (\$10,000/yr.) may encourage facilities to apply to become synthetic minors.

Next Meeting: The next AQTAC meeting is scheduled for 9:15 a.m. on Thursday, February 7, 2019, in Room 105 of the Rachel Carson State Office Building, 400 Market Street, Harrisburg, PA. *(Editor's Note: The February 7, 2019, AQTAC meeting was later cancelled due to a lack of action items.)*

Adjournment: Nancy Parks made a motion to adjourn, and it was seconded by Kevin Stewart. With no further business before AQTAC, Patrick O'Neill adjourned the meeting at 3:15 PM.

Minutes prepared by Samantha Harmon and Hitesh Suri, Air Quality Program Specialists. For additional information, please contact Kirit Dalal at kdalal@pa.gov or 717-772-3436, or visit the AQTAC Web page at:

<http://www.dep.pa.gov/Business/Air/BAQ/AdvisoryGroups/Air-Quality-Technical-Advisory-Committee/Pages/default.aspx>