

**CITY OF PHILADELPHIA**

**DEPARTMENT OF PUBLIC HEALTH**

**AIR POLLUTION CONTROL BOARD**

The virtual meeting of the Air Pollution Control Board was held Thursday, January 28, 2021.

**Eddie R. Battle, Chairman, presided:**

**ATTENDING:**

**MEMBERS:**

Eddie Battle, Chair of the APCB

Dr. Arthur Frank Member, APCB

Joseph O. Minott, Member, APCB

Dr. Carol Ann Gross-Davis, Member, APCB

Thomas Edwards, Member, APCB

Terry Soule, Member, APCB

**STAFF:**

Dr. Kassahun Sellassie, Director, Air Management Services (AMS)

Hallie Weiss, Program Manager, AMS Laboratory

Edward Wiener, Source Registration Chief, AMS

Thomas Barsley, Fac, Comp & Comp Chief, AMS

Henry Kim, Program Services Chief, AMS

Maisha Wheeler, Administrative Scientist, AMS Laboratory

Jiazheng (Jason) Li, Environmental Engineering Supervisor, AMS

Richard Annunziato, Asbestos Manager, AMS

Vanessa Accime, Analytical Chemist Supervisor, AMS Laboratory

Edward Braun, AMS

Abdessalem Cherifi, Electronic Technician, AMS Laboratory

Morgan Robinson, Analytical Chemist, AMS Laboratory

Aadarsh Shah, Environmental Engineer, AMS Laboratory

Patrick O'Neill, Divisional Deputy City Solicitor, Environmental Law

Dennis Yeun, City Solicitor, Environmental Law

India McGhee, City Solicitor, Environmental Law

James Garrow, Communications, Health Commissioners Office

Marlena Gordon, Contract Coordinator, AMS

Eliza Alford, City Council

Tung Vu, Engineering Specialist, AMS Laboratory

Matina Granieri, Office of Sustainability

John Ewurum, Environmental Engineer, AMS

**GUESTS:**

Emma Cheuse, Earth Justice

Craig Johnson, Interpret Green

John Krueger, PADEP

John Lee, Clean Air Council

Charles McPhedran, Earth Justice

Richard Pepino, UPenn

Peter Winslow

Adrian Wood, UPenn

Laila Reilly

Lynn Robinson, Nix the Gas Plants

Bernadette Henderson

Kenneth Ratzman, NJDEP

Maria-Antonia Andrews, UPenn

Mary Powell-Civera

## **1. WELCOME**

The proceedings commenced at approximately 2:00 p.m. Chairman Battle asked the Board members to introduce themselves.

## **2. ACTION ON MINUTES**

Chairman Battle asked for additions or corrections to the minutes for the October 22, 2020. No corrections or additions needed. Motion to approve the minutes were moved. Motion carried, minutes were approved.

## **3. LETTER FROM CLEAN AIR COUNCIL**

Excerpts read by Joseph Minott

“We (Clean Air Council) are very pleased that the Air Pollution Control Board is now considering the need to include health considerations as part of the air permitting and licensing process. We much appreciate the efforts that Kass and staff at Air Management Services in proposing to better regulate toxic air pollution and reduce cancer risks from large stationary sources in Philadelphia. We recognize this is not an easy task and we appreciate the staff’s thinking and time on this important issue and that the board is now considering draft guidelines. As a member of the board, I am proud that Kass has provided the board the opportunity to consider how best to reduce cancer risks of Philadelphians from air pollution from stationary sources.”

Mr. Minott gives Kass a lot of credit for coming up with this concept and moving it forward.

Issues:

Do we have an opportunity to make it a little stronger, a little bit tighter? We’d like to give Kass a chance to answer some of the issues raised in the letter.

Community health risks and impacts of an individual source. A source emits more than one pollutant, yet the program really looks at each pollutant and sets the standard for that and has no ability to look the pollutants in an aggregate from one source. There may be multiple stationary sources. From one source, we’re only looking at it from pollutant to pollutant.

Looking at the pathways of exposure from the sources of pollution. We’re all familiar with inhalation, but we also know that air pollution is deposited on the ground, on vegetables, on fish and in dirt. When kids eat dirt, is there an ability in the framework to consider that a possibility in terms of making it more protective?

One of the things Clean Air Council is interested in is recognition that residents are exposed to more than one regulated source at a time. Is there a way the guidelines can recognize the need to reduce the emissions and health risks from each source, more than currently proposed?

What are we doing specifically that looks at the need to protect children’s health and address communities with environmental concerns? Air pollution exacerbates synergistically what they’re exposed to. Is this something we can incorporate into the guidelines? We don’t think the guidelines, as written, address the issue of cumulative risk well enough. We’d like to see if there is a mechanism to relook at this issue and come up with a solution.

Cumulative risk impact – It happens in two different ways. Example: A refinery can emit a lot of different pollutants. The way we look at it now, we look at the impact of each pollutant, but each pollutant isn't the only one the community is being exposed to. They're being exposed to all of them. Is there a way of looking at what that risk is in terms of controlling these things? Much more complicated – What if there are 3 refineries? How do we look at the risk of all 3 refineries in issuing a permit and asking them to reduce their air pollution? There isn't just one way that we're exposed to toxics. We're most aware of the air we breathe. But pollutants are also in the waterways, fish, vegetable in the garden and in the dirt.

#### Questions / Comments

Dr. Frank: The issue of cumulative exposure is one of the most difficult things we have to deal with. Permits are not given with the sense of multiple exposures. Each individual permit is looked at from the perspective of is this facility meeting the regulations. And the fact that there may be 3 other refineries (example: a burn facility, recycling etc) never gets looked at. If there is some way that the City of Philadelphia can address this issue and somehow get to the idea of cumulative exposure and it's protection of vulnerable communities that would be a wonderful thing.

Ms. Gross-Davis: I agree that it is a difficult thing to do, especially when you think about EPA struggles with cumulative exposures. However, there was a paper published by Charles Lee that specifically looked at how state and local agencies can use tools and it connects EJ mapping tools like California's EJ Screen and combining it with local data to identify where other facilities are. EPA is beginning to talk to state directors about how these tools that we have. Enhance them, but then make them actionable. We need to think about how AMS could use the mapping they have that would have facilities and schools. We can use our existing mapping to help identify and make a path forward. At this point, we don't look to see if there are other sources because it's not required.

Mr. Soule: I think there are some opportunities with the State. The State has some screening models where they take into account all of the background data based on TRI (toxic release inventory) and other data that is already there and take that into account when they are permitting.

Ms. Cheuse: I work with Earth Justice. We've been working on some of these air pollution issues in different parts of the country. We're delighted to learn from and support the important work that you do. I've worked with Clean Air Council on some matters. On some of the key questions and really important points that board members have offered, it is difficult to look at the entire picture. One way we've thought about this is trying to encourage leaders like the board and AMS that want to take a step forward is to use the best available science to look as broadly as possible at the real world impacts communities are facing. There are a number of ways the board and AMS can choose to do that. Looking at all of the carcinogens is not complicated. Adding those together is something that EPA does. The cancer risk from those are something that EPA and other regulators do regularly. It is an essential piece for the guidelines to have value for the community because otherwise you could have a source that could emit 80 pollutants that individually might be causing cancer risk right under a threshold but together that cancer risk could be adding up just from that one source and contributing high levels of regular threat. It doesn't really matter what pollutant that cancer risk is coming from. It adds up and is worse early in life. In utero and in childhood it's especially problematic. Really focusing in on that would go far as a step forward. The multiple pathways of exposure is another way to look at the cumulative impacts that is a core part that EPA recognizes is needed. EPA itself does not go far enough on that in each instance, but it is at least recognizing the need to look at multi-pathway risk from cancer and non-cancer. We don't see in the guidelines where this is included. One thing the board and AMS could do immediately is reduce the thresholds for action and for unacceptability. What that would do is recognize the bucket of risk community members face is not coming from one source. If someone was to propose a new refinery in a community that already has regulated sources, the level of risk the community faces as a whole and what

the City allows them to experience without fence-line monitoring and without mitigation measures to reduce that pollution, that total risk needs to be reduced.

Ms. Gross-Davis: I do agree with Emma about the science. The idea of science with dealing with multi-pathway pollutants is also something we're struggling with. It might not be ready, and we don't want to add too much uncertainty on how these things are happening in this new regulation. We want it to be successful. There could be some language put in there that offers the availability to look at particular instances and doesn't preclude it from happening.

Regarding hazard quotient equal to or greater than 1. Does AMS really mean anything greater than 1.0? What if it's 1.4? This needs some clarity.

Mr. Minott: I'm hoping we would look at how to assess multiple pathways, but if the board and AMS chose not to do that then that would reinforce lowering the threshold.

Ms. Gross-Davis: The challenge with deciding cancer risk is negligible is a tricky situation. Especially when we're thinking about that from a screening perspective. Perhaps there can be some conversation about lowering the threshold to have them do a model so that there is some room to address some of the concerns about multi-pathway vulnerable populations and cumulative risk.

Mr. Soule: I would like to give Kass and his staff the opportunity to take a look at these comments and respond to them. I think all of the comments are valid and I think some of those are being addressed.

Mr. Minott: I am extremely appreciative of the fact that the City is doing this. I give Kass an immense amount of credit for taking this on. It is my sincere hope that he does not see this as a criticism of anything he's done. I am very grateful.

Mr. Winslow: I would also like to thank Kass and AMS for taking this on. This is a challenge and we (being the citizens and in the environmental justice community) really appreciate what Kass and his team are doing to address these issues. I agree with what Joe has put forward. These very same issues of cumulative impacts are being grappled with by the air quality sub-group of the advisory group that has been put together by Councilman Katherine Gilmore-Richardson to advise her and the environmental committee. I suggest we should be talking to each other and not past each other about these issues because the intention is to be supportive and helpful in putting Philadelphia in a position to have the best practices and the most protections for its citizens in terms of the quality of the environment.

Dr. Sellassie: We had a meeting January 5<sup>th</sup> with Joe and Emma and I told them what we can and cannot do. We can't do multi-paths because we are air pollution. The authority for Air Pollution Board is only for air. Maybe Pat or Dennis can explain more. The purpose of this risk assessment is, if any source permitting (plan approval, installation) we check. They are applicable for air pollution permit and license only. We don't do soil or water. If its allowed, based on what we have, we issue permit. If its not, we deny it and ask for mitigation. If no mitigation is done, we don't issue permit.

We are more stringent than other places. We got recognition by MARAMA. California 1401 B is less stringent than AMS. PA DEP asked why we do renewals. Our purpose is to reduce toxics. We've been working on this for almost 3 years. I need to move on to other things, like mobile sources. I don't know how Air Pollution Control Board is working. You have the authority to comeback and check and update any time you want? Why not implement this and start? We can always revisit it. Every year we have 600-700 permits. They install because you do ask for risk assessment. After installations are done it will be difficult to tell facilities them have to do something else. When we get this done, we need to be impartial. We try to balance everything. Whenever you do promulgate regulation, you have to do social, economic, environmental and political aspects or else you fail.

Chairman Battle: On behalf of the board, we are pleased with your, and your staff's work. We like members to bring their thoughts and concerns to the board. It is no reflection on the high regard we have for you and your staff. The board is please with you and your staff.

Dr. Sellassie: Thank you.

Ms. Gross-Davis: I do agree with the delay that permits that are coming in that do have toxics are not being evaluated. What is our timing? Are going to be voting at the next meeting? Some of the things that were brought up today could still be worked on outside of this specific regulation.

Dr. Howarth: I would like to see this regulation passed in short order, but I do think it could benefit from some changes that would lead to improving it. It doesn't have to delay it. The National Air Toxics assessment done by the EPA isn't a process in which cumulative impacts are looked at. Philadelphia ranks in the 10 percentile of the cancer risk and non-cancer health endpoint risk, which means that we have a very significant health impact due to air toxics which is exactly what prompted Kass to work on this. However, by simply looking at emissions from certain pollutant sources and not considering the large contribution from traffic and other pollution sources that are below the threshold, what we're doing is allowing a level of risk, due to the permitted threshold that are in the regulations are artificial. It doesn't truly measure the risk to people. The only way to measure it more accurately is to not have a threshold or have a much lower threshold so that all of the industry that would need to be permitted are included in this process. And data from all of the industrial processes is included. It could easily be GIS mapped and we could determine which neighborhoods are most impacted. By not doing that, we're making ourselves feel better by having this kind of regulation in place, but it will not have the effective impact we're all looking for.

Mr. O'Neill: We do have an existing reg 6 that AMS uses. Also AMS has done a lot of work, especially with Philadelphia Air Quality Survey (PAQS), that has been taking the NATTA data and has now looked at the city in a neighborhood type perspective. What Kass has done with PAQS is taken it down to the ground level and he now has a grant to do an additional toxic study that will look into these issues. Air pollution in Philadelphia has dropped substantially in the last 30 years. The only thing we're not in attainment for is ozone. Despite the huge decrease in pollution, there is an unusually large increase in asthma. Thinking that there must be a connection, but it's not that easy to make that connection. What Kass has proposed is a very substantial program and I think you should try to get it in place sometime within the next 6 months.

Keep in mind you have the reg change here and then you have the guidelines. The guidelines are where the real meat is. I suggest you look at those closely. When we refer this to the legislative unit, I suspect they're going to look at that balance between what needs to be in the reg and what belongs to be in the guidelines. AMS can change its guidelines easily with the help of the board. Changing the reg is harder.

#### **4. PROGRAM UPDATE**

Presented by Air Management Services Director Kassahun Sellassie, PhD

Dr. Sellassie introduced himself and offered a PowerPoint presentation of the Program's updates:

##### **Air Quality**

From Oct. 1, 2020 to Dec. 31, 2020, there were 70 good days (76%), 21 moderate days (23%), and 1 unhealthy day (1%).

From Jan. 1, 2020 to Dec. 31, 2020, there were 276 good days (76%), 85 moderate days (23%), and 5 unhealthy days (1%). Data is quality assured through 9/30/2020.

Current 2020 4th 8-hr O<sub>3</sub> concentration is 70 ppb at NEA with a 2020 design value of 73 ppb.

### **National Ambient Air Quality Standards (NAAQS)**

**December 18, 2020:** EPA published in Federal Register (85 Fed. Reg. 82,684) the final rule on the primary and secondary Particulate Matter national ambient air quality standards (NAAQS) without revision.

**December 31, 2020:** EPA published in Federal Register (85 Fed. Reg. 87,256) the final rule of retaining the current ozone national ambient air quality standards (NAAQS) without revision.

### **State Implementation Plan (SIP)**

**November 24, 2020:** EPA published in Federal Register a final rule (85 Fed Reg. 74,888) approving the negative declarations submitted to satisfy the requirements of the Emission Guidelines and Compliance times for Municipal Solid Waste Landfills (MSW) for the City of Philadelphia in the Commonwealth of Pennsylvania.

### **EPA Updates**

**September 28, 2020:** EPA announced that it has chosen 11 air toxics monitoring projects to receive funds as part of the agency's Community-Scale Air Toxics Ambient Monitoring grants program. Philadelphia is one of the awardees.

**October 30, 2020:** EPA published in the Federal Register (85 Fed. Reg. 68,964) a proposed rule to revise the Cross-State Air Pollution Rule Update Rule (CSAPR Update Rule).

**November 19, 2020:** EPA released a draft risk assessment related to the agency's review of the pesticide registration for ethylene oxide (EtO) and is seeking public comment.

**November 21, 2020:** EPA's Office of Enforcement & Compliance Assurance released a report that estimates the excess pollution resulting from aftermarket tampering of the emissions controls of diesel pickup trucks sold since 2009.

**December 9, 2020:** EPA finalized a rule that governs how the agency calculates costs and benefits for rules promulgated under the Clean Air Act.

**December 14, 2020:** EPA published in the Federal Register (85 Fed. Reg. 80,782) a notice of availability of the "EPA Tampering Policy: The EPA Enforcement Policy on Vehicle and Engine Tampering and Aftermarket Defeat Devices under the Clean Air Act".

### **PA DEP Updates**

**September 26, 2020:** PA DEP would amend air quality regulations relating to control of volatile organic compound (VOC) emissions during loading of underground gasoline storage tanks (Stage I vapor recovery), during filling of motor vehicles at the pump (Stage II vapor recovery) and during and after decommissioning of Stage II vapor recovery equipment from gasoline dispensing pumps.

**October 15, 2020:** At the PA DEP Air Quality Technical Advisory Committee (AQTAC) meeting, DEP presented the draft proposed rulemaking that would control VOC emissions from certain existing sources.

**December 10, 2020:** At the PA DEP Air Quality Technical Advisory Committee (AQTAC) meeting, DEP provided updates on the RACT III rulemaking status. This rulemaking will establish presumptive emission limits on certain sources

### **City Updates**

**October 1, 2020:** Philadelphia City Council adopted a resolution (No. 200518) recognizing Wednesday, October 7, 2020 as Energy Efficiency Day in the City of Philadelphia.

**December 3, 2020:** The Philadelphia City Council adopted a resolution (No. 200666) declaring the intent to prioritize climate action and environmental justice in the ongoing COVID-19 recovery effort. The resolution aims to “achieve a just and green recovery that creates new, good green jobs

### **Other:**

**October 19, 2020:** The Harvard T.H. Chan School of Public Health, report the findings of their analysis of the link between long-term exposure to fine particulate matter (PM2.5) and the development of Parkinson’s Disease or Alzheimer’s Disease and related dementias

**November 4, 2020:** The U.S., which currently emits 15 percent of global greenhouse gas (GHG) emissions, formally exited the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC).

**December 17, 2020:** President-Elect Joe Biden announced that he will nominate Michael S. Regan, Secretary of the North Carolina Department of Environmental Quality, to be the next Administrator of EPA.

### **AMS Updates**

#### **Air Monitoring and Chemistry (AMS Laboratory)**

The 2020-2021 Air Monitoring Network Plan was approved by EPA on 10/14/2020.

The Health Commissioner has approved the publication of the Philadelphia Air Quality Survey (PAQS). Report on December 14, 2020. Publication should be shortly.

### **Chemistry**

- **Philadelphia Air Quality Survey (PAQS)** – AMS has completed 31 months of sampling in October 2020.
- **Village Green Monitor** - The Village Green monitors continue to collect continuous meteorological and particulate data at 6th and Arch Streets across from the Constitution Center.
- **National Air Toxics Trends Site (NATTS)** - The Laboratory continues to provide sampling cartridges and analysis for carbonyl compounds for the EPA Region III NATTS site in Washington, DC
- **Fuel oil Sampling** - We have recently reinstated Fuel oil testing for Sulfur content and Viscosity. We started collecting samples
- **Coating and Paint Analysis** - We continue to do paint and ink samples used in industry.

### **Outreach**

On October 8, 2020, Hallie Weiss, Vanessa Accime, Kyle Robinson, and Nishant Shah provided a virtual outreach presentation on air monitoring and lab operations to the University of Pennsylvania Class.

Numerous Lab staff attended the 2020 Mid-Atlantic Regional Air Monitoring Associations (MARAMA) Air Monitoring Workshop virtually on December 8-10, 2020.



### **Regulatory Services Activities**

From Oct 1st, 2020 to Dec 31st, 2020:

AMS issued **165** permits, **123** air and **42** asbestos permits.

AMS serviced **87** citizen complaints: **56** involving air pollution, **8** involving asbestos, and **23** involving noise.

AMS also performed **468** inspections, **108** air, noise inspections, and **360** asbestos inspections.

AMS observed **3** vehicles at 3 locations and issued **2** citations for violations of the City's anti-idling rules.

AMS issued 104 (**FC&E 93**, Asbestos 11) new Notices of Violation, resolved **48 (FC&E - 42, Asbestos 6)**, and collected **\$26,380 (FC&E - \$21,180, Asbestos - \$5,200)** in fines and penalties.

AMS issued **865 permits**, 686 air and 179 asbestos permits.

AMS serviced **469** citizen complaints: 342 involving air pollution, 34 involving asbestos, and 93 involving noise.

AMS also performed **2,845 inspections**, 1,524 air, noise inspections, and 1321 asbestos inspections.

AMS observed **31 vehicles** at 27 locations and issued **13 citations** for violations of the City's anti-idling rules.

AMS issued **356** (FC&E - 334, Asbestos - 22) **new Notices of Violation**, resolved **460** (FC&E - 427, Asbestos - 33) Notices of Violation, and collected **\$ 182,883** (FC&E - \$151,133, Asbestos - \$31,750) in fines and penalties.

### **Questions / Comments:**

Dr. Sellassie: I would like the Air Pollution Control Board to thank AMS employees. They are doing good, hard work and are on time with everything.

Ms. Gross-Davis: I do applaud AMS employees because it was a big transition to be doing all of this work. I know the field work they are trying to do, so I do applaud them for all of their good work.

I want to update on some of the new executive orders. The new ozone rule, the new PM rule, the transparency rule and the one for the cost benefits (increasing consistency and transparency and cost benefits in the new Clean Air Act. Are all under the list that will be reviewed by EPA. Although they went ahead with no changes, but EPA will be reviewing them.

## **5. Risk Assessment (draft regulation)**

### **Questions / Comments**

Mr. Edwards: I still haven't received an answer regarding exhaust stack velocity that the risk assessment is based on. Stacks should be designed to an engineering standard. American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) is usually the standard and that standard requires 10 meters a second. I don't know what the analysis was done to, but my concern is if it isn't close to what people should be using, you're going to generate a lot of permitting work that perhaps you

shouldn't be focused on. Do you know how close the assumed stack velocity is to the ASHRAE standard?

Mr. Li: When we did the modeling, the assumed exit velocity was 0. something meters per second. Basically, it was just erring on the conservative side. Made everything conservative and considering worst case scenario.

Mr. Edwards: That's very conservative considering the standard is 10 meters per second. If I go through your process and it comes back that I have to work with you on a risk assessment, do we do the analysis on that?

Dr. Sellassie: For everything we took the conservative side. For example, all the factors increase stack effective height. So our point is, not only the stack, after the stack, effective height. With the effective height, the higher you go, the less concentration at the ground level. That is the purpose. If we go 5 or 10, that means less concentration than what we take in our assessment. It is good for the community and good for our assessment. We try to take to most conservative way. We will consider increasing, but the concentration will be less

Ms. Gross-Davis, was your question for the worksheet? Once you go to the EPA models, some of the actual data for the facility would actually be put in there. Correct?

Mr. Edwards: My understanding is the worksheet the distance from the property line vs the stack height is based on analysis that has a meter per second exit velocity baked into it. The data is based on an exit velocity that's in violation of engineering standards by a factor of 10.

Ms. Gross-Davis: For the screening part. So if that then requires them to use one of the modeling, then it goes to the actual. Let's make sure AMS is basically saying let's give the benefit of the doubt that if your putting out toxics at a height of concentration for a fence-line community, we're not going to put in all those engineering controls right now because we're worried about (?) toxic. Is that right Kass?

Dr. Sellassie: Yes

Ms. Gross-Davis: Hopefully the modeling part will then bring in the actual, which allows the industry to model it out and say we have the right stack height and this is what's happening.

Mr. Edwards: I'm not as familiar with the modeling as I may should be when I ask these questions.

There are certain stacks that are specifically designed to be low profile. That's a special stack that is built with a fan inside it. They talk about stack effective height when you do calculations. Does the modeling spreadsheet allow the permit applicant to dial that in?

Dr. Sellassie: We have the minimum stack height sheet. 10 feet?

Mr. Li: Yes, like Carol-Ann said, that's for the screening purpose. You can pass the screening, but it doesn't mean you're denied. You can do it for the modeling. Laboratory vents those are probably exempt

Ms. Gross-Davis: Part 3 of the guideline - sources without stacks that don't meet the minimum requirement of what a stack is, shouldn't use the worksheet and should go directly to the modeling.

To Tom, if you want to read up on the guidelines, it talks about it on page 10.

**6. NEW BUSINESS**

Next meeting is on April 29<sup>th</sup> of this year from 2 – 4. A full hour is not needed for preparation.

Chairman Battle reiterates that the board is quite pleased with Kass and AMS.

**7. ADJOURN**

The meeting adjourned at approximately 4:00pm.