CITY OF PHILADELPHIA

DEPARTMENT OF PUBLIC HEALTH
AIR POLLUTION CONTROL BOARD

The meeting of the Air Pollution Control Board was held Thursday, January 24, 2019, At the Municipal Services Building, 1401 John F. Kennedy Boulevard, 16th Floor, Room Z.

Eddie R. Battle, Chairman, presided:

ATTENDING:

MEMBERS:
Eddie Battle, Chair of the APCB
Dr. Arthur Frank, Member, APCB
Joseph O. Minott, Member, APCB
Bill Miller, Member, APCB
Dr. Caroline Johnson, Deputy Health Commissioner, PDPH

STAFF:
Kassahun Sellassie, Director, Air Management Services (AMS)
Hallie Weiss, Administrative Engineer, AMS Laboratory
Philipose Cheriyan, Chemist Supervisor, AMS Laboratory
Keith Lemchak, Administrative Engineer, AMS
Ramesh Mahadevan, Engineering Supervisor, AMS
Henry Kim, Chief Program Services, AMS
Edward Wiener, Chief Source Registration, AMS
Richard Annunziato, Asbestos Manager, AMS
Jiazheng Li, Environmental Engineering Specialist, AMS
Patrick O'Neill, Environmental Counsel for the City of Philadelphia
Dennis Yuen, Environmental Counsel for the City of Philadelphia
India McGhee, Environmental Counsel for the City of Philadelphia
Saleem Chapman, Office of Sustainability, PDPH
Sofia Guernica, Office of Sustainability, PDPH

GUESTS:
Eugenia South, Assistant Professor, UPENN
Kathleen Lee, Assistant Professor, UPENN
Dr. Tran Huynh, Assistant Professor, Drexel University
Marilyn Howarth, Director, Center for Excellence in Environmental Toxicology (CEET), UPENN
Maria Andrews, Assistant Director, CEET, UPENN
Mia Fatuzzo, Student, UPENN
Karl Koerner, Clean Air Council member
Hannah Listend, Student, UPENN
Noah Werksman, Student, UPENN
Dr. Richard Pepino, Deputy Director, CEET, UPENN

Tom Mckeon, CEET Staff, UPENN

1. WELCOME

The proceedings commenced at approximately 2:05 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 of July 26, 2018 or October 25, 2018. Hearing none, he asked for a motion to approve, which was seconded and so moved.

3. PROGRAM UPDATE

by Air Management Services Director Kassahun Sellassie (Update)

Dr. Sellassie introduced himself and offered a PowerPoint presentation of the Air Program's updates (see attached).

Dr. Sellassie summarized the air quality (AQ) monitoring data, comparing the 2017 AQ to 2018 AQ data. He states the unhealthy days are from Ozone only, not from PM 2.5. He explains that although we are getting closer to the 2008 Ozone standard, which is .075ppm, further analysis is being done of the higher (0.079-ppm) readings at Northeast airport.

Also discussed were Environmental Protection Agency (EPA) updates. EPA defended the Obama NAAQS for ozone established in 2015. EPA proposed an approval of a revision to the Commonwealth of Pennsylvania's state implementation plan (SIP); EPA published Final 2015 Ozone SIP Implementation Rule; EPA published Literature Review on Air Sensor Performance Targets; and EPA Released 111(b) Proposal to Revise New Source Performance Standards for GHG Emissions from Fossil Fuel-Fired Power Plants.

Other updates are on October 10, 2018 a Public Hearing was held at the AMS' division building on 321 University Avenue regarding the Amendments to the Dust Control Regulation: AMR II Section IX. AMS received three testimony from three Commentators. There were six questions from industries and one from a citizen. Currently, a Comment Response document is being finalized; and in the Department of Environmental Protection (DEP) latest rulemaking, the five-county Philadelphia area was the only area in Pennsylvania designated nonattainment of the 2015 ozone standards.

In addition, the AMS Laboratory, Quality Improvement (QI) section, and Outreach activities were discussed. In closing, he summarized the quantitative numbers from AMS' Regulatory Services Activities.

Questions/Comments:

Dr. Frank: Alot of the data is good and things are moving in the right direction but what concerns me is the ozone. We are the only part of Pa. not in attainment. The standard is coming down, we don't meet the current standard. You have said that you have research going on, but what are some of the other places doing or what have they done to bring down the ozone. Are there some of those things we can implement rather quickly, to see that we become an attainment area?

Dr. Sellassie: For now, we only regulate point sources/industries. We send our data to all Title V industries like Temple, PES, Veolia and Honeywell and plan to ask them to reduce their air pollution that causes NOx, VOC's and other pollutants by putting some air pollution controls; changing operating hours, throughputs or by changing material. Once that is done, we assume it will reduce. Currently, we do not regulate mobile sources but we have a training the end of March with Mid-Atlantic Regional Air Management Association (MARAMA). Most of the emissions of Ozone precursors is from mobile source (50%) so if we do not control that and only concentrate on stationary source it does not change, we will never get to our objective.

Dr. Frank: Yes, you have some very big footprints of places with pollutant areas. The airport (Diesel tugs) and Port (boats running all day during loading/unloading).

Dr. Sellassie: Yes also PES (greenhouse gas).

Mr. O'Neill: Also, be aware we are on the Ozone transport area.

Dr. Howarth: I understand the planes dump fuel as they are coming into the Airport.

Mr. O'Neill: That almost never happens.

Dr. Sellassie: Only in emergencies, if there is a fire, or they must land immediately after taking off .

Dr. Howarth: Recognizing those instances may be rare, in thinking about opportunities to reduce ozone, perhaps we should quantify the results to see how impactful it would be.

Dr. Sellassie: Yes, we did an airport study group in 2007. AMS proposed the "Next Generation" (NG) instrument. It is in stores now, installed and used at two airports. JFK International and Philadelphia International (PIA). Instead of the Tower communicating to the pilot, the pilot has all communication, which reduces the delay in "take-offs". That was a big emission.

Mr. O'Neill: Also, PIA has applied for some of the Volkswagen (VW) grant money to continue reducing emissions.

Dr. Sellassie: Yes, The VW money helps a lot.

Mr. Miller: The Ozone and the concentrations and existence of those molecules that you have listed on your map have nothing to do with anything that is within several hundred miles from here because ozone has to bake. That is the irony of ozone transport. Another thing is that ozone is stratified. Up North, there may be almost no ozone during the winter but in the South (a farm field in Georgia, and the process of that growth) is creating ozone, which is going out over the City several hundred feet up in the air at the rate of 120ppm. In a sense, the area for ozone eradiation would be the whole nation.

Dr. Sellassie: That is true but we are looking for ground level ozone. That is the most concerning.

Mr. Miller: Under program updates plans for 2019 what is meant by phase out of heavy fuels?

Dr. Sellassie: #4, #5, #6 fuel oils.

Mr. Miller: Is that changing the code?

Mr. O'Neill: Yes, we're changing the code.

4. REVIEW OF REGULATION II, SECTION IX, DUST CONTROL COMMENT RESPONSE DOCUMENT BY BOARD

AMS presented comment response document (see attached).

Questions/Comments:

Mr. Battle: There was a 30-day comment period for the regulation amendment of AMR I and II presented in July 2018. The Board has reviewed the document which is a report on the hearing.

Dr. Johnson: Can you clarify the Comment 3 (BIA) about the issue of permits?

Dr. Sellassie: Yes. There is only one permit needed. Not 2 or 3.

Mr. Yuen: AMS feels that construction demolition "Earthwork type" projects pose a significant enough risk for dust reduction that it warrants a separate review beyond what L & I requires. Recognizing there may be an increase in overhead because you may need to apply for an additional permit, the benefits from the review and the statements of the requirements that are in it are worth it. The question, "Do I need to apply for 2 permits if I am doing a demolition and clearing land?" The Dust Control Permit for Earthworks combines everything (into one permit).

Mr. Wiener: The one permit rule just applies to Dust Control portion of the Regulation (for clearing land). If a portable crusher is needed that would require a separate permit.

Mr. Miller: The visible dust; is that moving or stationary?

Mr. Yuen: Generally, moving. Clouds of dust leaving the work site. It is supposed to stay inside the fence. The requirement is if you're doing a construction project you're not allowed to have visible dust beyond your property line. The AMS requirement says anytime you have a worksite fence for job protection you need Dust Control fabric on it.

Chairman Battle asked for a motion to accept the Comment Response document, which was seconded and so moved.

5. PRESENTATION ABOUT RISK ASSESSMENT BACKGROUND DOCUMENT AND DRAFT REGULATION

by Ramesh Mahadevan (see attached)

Mr. Ed Wiener gave an overview of AMR VI and states that AMS is looking to establish a risk analysis procedure for pre-construction permits.
Mr. Mahadevan presented proposed amendments. The proposal is to replace the current guideline document with one that includes cancerous and non-cancerous risk assessments.

Questions/Comments:

Dr. Frank: I am pleased to see your doing the one in a million approach. It sounds good.

Mr. Minott: Did you do offsets?

Mr. Mahadevan: No, we did not, but you could. Alternatively, you could do an analysis where you sum up the air toxic risks.

Dr. Howarth: The National Air Toxics Assessment (NATA) already shows Philadelphia is over these kinds of risks that we are talking about so I would like to see a quantitative approach to incorporate chemicals for which we know that we are already out of the health range into the range we know are causing excess cancers. Then, the permits that would be given would be extraordinarily restrictive because of that reason.

Dr. Pepino: The growing trend is that risk assessment models are looking more into the population that is being exposed rather than what is in the air. There are environmental justice overtones (potential reactions may be very different in different populations).

Mr. Wiener: Another option is that you could do a facility wide assessment on the Title V renewal.

Dr. Frank: That is relative to the point I was going to suggest; with the idea of cumulative exposure, is there any way that the permits that are in place could reapply under the new regulations (once the risk assessment is set up and in place). That way, you could get people to reduce cumulatively.

Dr. Sellassie: What we will do is when they renew it will be according to the new regulation guidelines.

Ms. Andrews: Are industries regulated to the max (Maximum Achievable Control Technology Standards) as far as production of hazardous air pollutants (HAP's)? If so, are these HAP's coming from mobile source? How do you control that?

Mr. Mahadevan: There is case-by-case MACT, which looks like different source categories.

Mr. Minott: My understanding is that it's always done by source, not by a particular category.

Mr. Yuen: To the first part of the question, AMS does not have the authority to regulate mobile sources. Second, by industry or by source - the Federal government sets the MACT standards for HAP's under The National Emissions Standards for Hazardous Air Pollutants (NESHAP) and they have to comply with those.

Mr. Minott: The City could go beyond those.

Mr. Yuen: If the City chose to but that is the law now.

Mr. Miller: When you're talking about IRIS (Integrated Risk Information System) is that the Cincinnati lab? You could take the IRIS data & use the Harvard data and monetize/bio size the risks. Take the census track and create an index (create a money value of doing life-saving things) in that index. Then, indexes around the City would have a level of risks on a money basis and on a health basis that would allow you to put the effort to reduce the effect. For example, when you decide where to put police cars.

Dr. Sellassie: This is just a discussion and information for the Board on Risk assessment regulations.

Mr. Battle: Regarding the risk assessment procedure steps 1 through steps 3, what is the timeline?

Dr. Sellassie: The steps are immediate (Evaluate>analysis).

Mr. Koener: How are you determining the reporting thresholds for facilities? Are you sticking to the 99 pollutant list or extending it to the 188 EPA HAP's? Are you looking at County health department of 20 pollutants per year or health based standards or Federal standards to consider setting those thresholds?

Mr. Mahadevan: NJ did it by case-by case source category MACT.

6. PRESENTATION ON NOISE SENSORS

by Drs. Kathleen Lee and Eugenia South (see attached)

Doctors Lee and South explained their project and that they are looking to collaborate with the City of Philadelphia, Department of Public Health-AMS to collect noise data. They discussed some 2011World Health Organization (WHO) findings: traffic noise as the #2 environmental health threat, air pollution being the first; "environmental noise exposure has health effects such as disturbed sleep, cardiovascular issues, elevated heart rate and elevated blood pressure." "Cognitive impairments such as depressed mood, irritability/annoyance & low birth rate have also been quantified". They explained that environmental noise also known as urban traffic noise is on the rise. Drs. Lee and South state "one million is the amount of loss of healthy years of life in Western Europe due to traffic noise and environmental hazards estimated by the World Health Organization (WHO) in 2011". They state that nontraditional sources of noise pollution such as screaming, sirens, and gunshots have not yet been looked at and quantified. Their pilot is to see what the noise map would look like for Philadelphia. "What is that link to the social gradient, to the essential demographics of our population to the socio economic difference that we may see and how does that effect health."

Questions/Comments:

Mr. Miller: In collecting noise data are you staying within the hearing range of noise?

Mrs. Lee: Yes, we will stay within the range of audible sound; seeking to measure not only the degree of sound but variation as well.

Mr. Battle: Will it look at all age groups (children and seniors)?

Drs. Lee and South: yes

Dr. Frank: How big an area does the noise sensor pick up? How big are the units? For health disparities and effects, how are you going to tease out the issue of noise?

Dr. Lee: It would be limited but coupled with modeling it would measure the sources.

Mrs. South: Certainly, that is what we will explore with this pilot. It depends on how loud the sound, the signals and concentrations we pick up.

Mr. Koerner: Are you going to have community workshops on placement of sensors? Does the monitor take magnitude only or magnitude and direction?

Dr. Lee: Depending upon the budget, it depends on the model grade and quality selected. Some of the technology is sophisticated so there are endless possibilities. We have not settled on those details but regardless of the process selected, we will make our results public and educate the people in those communities about what we found.

Dr. Sellassie: It will be linked into the PAQS monitors (11 sites). 300 meters by 300 meters is the cell area. At the end we use Land use regression (LUR) modeling. Noise pollution can be quantified in similar way as air pollution.

Drs. Lee and South: Our pilot proposal is to document the spatial-temporal disparity of noise using noise monitors at the 11 PAQS sites and to measure health outcomes and then relate that to the noise that we are seeing. Our ultimate goal is to design & test various interventions to try to reduce links between noise and poor health.

Dr. Johnson: I think City Council would be very interested in this sort of thing.

7. OLD BUSINESS

There was no old business.

8. NEW BUSINESS

There was no new business.

9. ADJOURN

The meeting adjourned at approximately 3:47 pm.