

CITY OF PHILADELPHIA

DEPARTMENT OF PUBLIC HEALTH

AIR POLLUTION CONTROL BOARD

The virtual meeting of the Air Pollution Control Board was held Thursday, April 28, 2022.

Eddie R. Battle, Chairman, presided:

ATTENDING:

MEMBERS:

Eddie Battle, Chair of the APCB

Dr. Arthur Frank Member, APCB

Dr. Carol Ann Gross-Davis, Member, APCB

Thomas Edwards, Member, APCB

Terry Soule, Member, APCB

Dr. Cheryl Bettigole, M.D., M.P.H. Health Commissioner

DEPUTY COMMISSIONER:

Palak Raval-Nelson

STAFF:

Dr. Kassahun Sellassie, Director, Air Management Services

Edward Wiener, Source Registration Chief, AMS

Jiazheng (Jason) Li, Environmental Engineering Supervisor, AMS

Richard Annunziato, Asbestos Manager, AMS

India McGhee, City Solicitor, Environmental Law

Sarah Carroll, Graduate Engineer, AMS

Francis Steitz

Kenneth Ratzman

Ilyasha Murphy, AMS Central Admin Officer

Lisa Walker, AMS Central

Charlotte Hogan, AMS Central Adm Tech

Menelik Negash

Edward Braun

GUESTS:

Alford	Eliza
Barsley	Thomas
Bickel	Michael
Cheuse	Emma
Daukaus	Taylor
Hartung	Ben
Hicks	Russell
Howarth	Marilyn
Hwang	Jane
LaMarr LeMee	Genevieve
Lee	John
Mayes	Meredith
McCabe	Carol
Mehta	Paresh
Nines	Michael
Pepino	Richard
Persing	Paul
Rebarchak	James
Runge	Nathan
Schwarz	Scott
Shah	Nishant
Stahl	Cynthia
Vaccaro	Katherine
Walker	Matt
Wheeler	Maisha

Winslow Peter
Amin Shital

Chairman Battle: Announcement; instructions

Members introduction:

Chairman Battle

On behalf of the Ari Pollution Control Board, we are saddened to learn of the passing of our Lawyer, Patrick O'Neil. He will be missed. Our condolences to his family.

Everyone, welcome to the meeting today. Members, please introduce yourselves.

Terry Soule:

I 'm a retired Sunoco employee engineer and director of environmental health and safety. I have been on the board for about five years.

Arthur Frank:

I am an occupational physician by training, a professor of public health, medicine, civil architectural and environmental engineering at Drexel University.

Cheryl Bettigole:

I am the Health Commissioner for Philadelphia and a family physician.

Tom Edwards:

I am currently a professor at the College of Engineering at Temple University. Prior to that I had a long industry career including running an air pollution control supply business, thermal oxidizers, chemical plants and pharmaceutical plants as well as new product development for a corporation that included a number of environmental products.

Carol Ann Gross Davis:

I am an epidemiologist with the Philadelphia Office of US EPA. I am the air and radiation division, and the EPA liaison for the Health Department in the City of Philadelphia. I am also an adjunct Professor at the School of Public Health and Drexel University and Jefferson Unveristy.

Chairman Battle:

Thank you Members. We are on number 2 of your agenda Action on the minutes of January 27, 2022.

Members you have read your minutes. Are there any additions or corrections to the minutes?

Arthur Frank:

Motion to approve the Minutes

Chairman Battle:

Is there a second?

Terry Soule:

I second.

Chairman Battle:

All those in favor of approving the minutes, say Aye.

Members:

Aye.

Chairman Battle:

Those Opposed?

Motion Carries.

Number three of the agenda. Program Updates.

Dir. Sellassie (Agenda)

Good afternoon, Chairman, everyone and member and guest.

Kass Sellassie, Management Director

I would like to present updates since the last time we met was on January 27th, 2022.

The next presentation will be from New Jersey, Francis Steitz and Kenneth Ratzman. Both really help us a lot.

We work together because air pollution is in the transport position, always transporting from one city or state to another one. We work together with everything.

Thank you both for attending and presenting the assessment. AMS risk assessment presentation by program service and program service Social Manager, Jason. Both managers from Ed Weiner.

We have fifteen minutes and twenty minutes for DEP.

I believe, I am trusting today will be the final one to be approved because it has already been

Four years. So, once it is approved, there will be a process of recording, publishing comments from public hearings.

Next meeting will be in the summertime. Most of you, professors and others might be on vacation. So, I might also be on vacation. August planning, for the next meeting. Maybe August 18th will be the first day, around four o'clock we will adjourn.

Summary Updates

Summary Updates

- **Air Quality**
- **NAAQS**
- **State Implementation Plan (SIP)**
- **EPA Updates**
- **PA DEP Updates**
- **City Updates**
- **AMS Updates**
- **Laboratory**
- **Outreach**
- **Regulatory Services Activities**

Summary of this is air quality, NAAQS, Air quality is important. Healthy and unhealthy days. We saw a report from the American Lung Association. I think they have wrong data. PM2.5 especially, because PM2.5 is containment. I don't know, even they said hazardous and very unhealthy, which is around three hundred, four hundred, and five hundred. That has never been in Philadelphia. I have a color code. I will show you.

The State implementation plan. EPA updates, PA DEP updates, City updates, AMS Laboratory, outreach and regular outreach service.

Air Quality

AIR QUALITY

- From Jan 1st, 2022, to March 31st, 2022, there were **54** good days (**60%**), **36** moderate days (**40%**), and **0** unhealthy days (**0%**).
- Current 2022 1st, Quarter 8-hr O3 concentration is **54** ppb at NEA, with a 2022 design value of **71** ppb subject to change.

Air quality from January 1st, to March, the first three months. Fifty-four good days, which is sixty percent. We have zero unhealthy days.

Wintertime PM2.5 is high. We don't have any unhealthy days for the past many years. Only summertime we have one or two, which is from outliers, from west USA from Canada and West California and Seattle, the forest fire. After that we went back to normal. That's a few days. After that we went back to normal. Otherwise, we never had

A PM2.5. The current design volume, 2022 is seventy-one. So, it is supposed to be the standard.

There is a lot of work in the city, so the air quality corrected in part and others. I hope that there will be a lot of reductions.

Air Quality Index (AQI)

AQI Value	AQI Category	AQI Color
0 - 50	Good	Green
51 - 100	Moderate	Yellow
101 - 150	Unhealthy for Sensitive Groups	Orange
151 - 200	Unhealthy	Red
201 - 300	Very Unhealthy	Purple
301 - 500	Hazardous	Maroon

So, this is what I am talking about. The green one is good. So, we have sixty percent of what we have.

That means that all six air pollutants which is PM_{2.5} which is about any of the six. Is about the standard. So, we call it unhealthy.

NAAQS

•**February 4, 2022:** The Clean Air Scientific Advisory Committee (CASAC) members agree that the current level of the annual standard [12 micrograms per cubic meter, $\mu\text{g}/\text{m}^3$] is not sufficiently protective of public health and should be lowered

•**March 11, 2022:** The EPA released for public review and comment a proposed rule to address interstate transport pollution under Section 110(a)(2)(D) – the “good neighbor” provision – of the *Clean Air Act*.

Since 1997, the standard was 15 micrograms per for annual and sixty-five for twenty-four hours. In 2006, they reduce the twenty-fours from sixty -five to thirty-five hours.

2012 they reduced fifteen to twelve. So again, they want to reduce from twelve, from eight to ten. We are around eight and sometimes nine. It depends on the season.

Even in or performance measure, what we do is target for ten. A maximum of tenfor a long time . We are under ten but not eight.

March the EPA released for public review. That is a includes twenty-six neighboring states, all of those are upwind areas, so they effect the downwind. So, 2015 NAAQS or Ozone, we have to consider the transportation from others so we cannot affect the downwind side. It might be a bit difficult. We have to submit safe infrastructure, which requires monitors, enforcement and inspection.

SIP

•**March 4, 2022:** EPA published in the Federal Register (87 Fed. Reg. 12,404) the final rule approving a state implementation plan (SIP) revision submitted by the Commonwealth of Pennsylvania. The revision pertains to the reduction of the maximum allowable sulfur content limit for Number 2 (No. 2) and lighter commercial fuel oil from the current limit of 500 parts per million (ppm) to 15 ppm.

The State Implementation Plan. We passed this one maybe two years ago.

The number two fuel oil from around 2, 500 per million of sulfur to 15. Pennsylvania is doing from 500 per million to 15.

We also passed regulation on heavy oil. We ban any heavy fuel oil from using, selling, and storing.

EPA UPDATES

- **February 1, 2022:** EPA announced expanding its industry-standard building efficiency and carbon reduction tools and strategies to advance effective building performance policies. Commercial and multifamily buildings, which contribute 19 percent of U.S. greenhouse gas emissions, are a critical part of the solution.
- **February 3, 2022:** EPA published in the *FR* (87 Fed. Reg. 6,324) a proposed rule for particulate matter (PM) emission standards and test procedures applicable to certain classes of engines used by civil subsonic jet airplanes (those engines with rated output of greater than 26.7 kilonewtons) to replace the existing smoke standard for aircraft.
- **February 22, 2022:** The EPA's Office of Inspector General (OIG) will soon begin fieldwork on an audit of EPA's benzene fence line monitoring program for refineries.
-

The EPA updates is announced its end, this is for greenhouse gas. From building to move to commercial and multifamily buildings. It also reduced other pollutants like nitrogen oxide, PM2.5 and others.

Feb. 23, 2022, EPA published a proposal for this mode emission. This is a subsonic jet. I don't believe there are anymore in this country. I think NASA had it in the past TU144, they ended usage in 1999.

February 22, 2022, The EPA Office of Inspector General started to check things like monitors throughout the USA. They started with the PA refinery, and they asked about the fence line monitors. If it is more than nine, they have to conduct a root cause analysis and provide corrective action. The standard policy they are supposed to send to the EPA and us on June 28th. They sent me all the corrective actions on June 24th.

Some of the problems were like the tank covers, there was a leak. Some pipes and separators.

They fixed it and it cost more than four hundred thousand dollars. The big issue is when they submitted the June 24th corrective actions, there was an explosion. So, the corrective actions were reduced after that. The refinery shut down for one or two months. The residual risk we explained to them. If anything, we helped the community. We created the fence line monitor upwind and downwind for the criteria pollutants. We have five locations which measure benzene and other toxics., throughout the city. We work especially around the refinery area.

We have a lot of work to help the community to show how the air pollution concentration and toxins. That was one of the questions, we also submit the root cause analysis and the corrective actions.

EPA UPDATES

- **February 8, 2022:** EPA's Office of Research and Development announced in the *Federal Register* (87 Fed. Reg. 7172) that it has designated a new federal reference method (FRM) for measuring concentrations of nitrogen dioxide (NO₂) in the ambient air. The KENTEK Inc. Model MEZUS 210 NO₂ Analyzer is a continuous analyzer that utilizes gas-phase chemiluminescence to measure NO₂ concentrations
- **March 2, 2022:** The EPA has released AirToxScreen, which is a new air toxics risk screening tool that provides estimates of cancer risk related to air toxics and, along with EJScreen 2.0 (released on February 18, 2022), replaces EPA's National Air Toxics Assessment (NATA).

Feb 8th is about the new analyzer for nitrogen oxide. If it is good we will look and may buy in the future for nitrogen oxide.

March 2nd EPA has released air toxin screen. This is very important, especially when we do a risk assessment. We check the area where it has the highest concentration of air toxins. We have maps based on census track the air toxin concentration. We also took at other meters to find whatever air toxins we have. We might check with other toxin monitors. We will look throughout the area where the maximum concentration is. We have a lot of resources. We will check and do the risk assessment with all those resources. March 2nd EPA toxic risk is reduced by nine percent from last year, 2020, which is a fifty-two million pounds reduction.

EPA UPDATES

- **March 3, 2022:** The EPA announced the 2020 Toxics Release Inventory (TRI) analysis showing that air releases of pollutants included in the TRI decreased by 9 percent (52 million pounds) from the previous year, continuing a long-standing trend of reductions.
- **March 28, 2022:** EPA published in the Federal Register (87 Fed. Reg. 17,414) a proposed rule that would reduce air pollution from highway heavy-duty vehicles and engines, including ozone, particulate matter, and greenhouse gases.
- **March 28, 2022:** The Biden Administration issued its proposed FY2023 budget for the federal government, which will now be sent to Congress for consideration. The proposed EPA budget calls for \$322.2 million for state and local air quality grants under Sections 103 and 105 of the Clean Air Act, which would be an increase of \$92.7 million over the FY2022

March 28, 2022, The EPA published proposed rules that would reduce air pollution from highway. It was implemented in 2006. More than ten years ago. The EPA didn't use it. We asked if we could include in our regulation by reference. That is what we are working on. They gave us some sources, like idling and construction equipment. We are still looking for more like reducing diesel trucks and buses; that's our most concern. We discarded around one hundred trucks in Delaware and Philadelphia.

The Biden Administration added \$92.7 million. This is 103 and 105 grant. 103 grants is for PM2.5. We asked for some money to hire more people and buy more instruments.

EPA UPDATES

- **March 28, 2022:** EPA issued its final FY 2022-2026 Strategic Plan on the same day the Administration released its proposed budget for FY 2023. Goal 4 of the plan is "Ensure Clean and Healthy Air for All Communities" with the following objectives: "Improve Air Quality and Reduce Localized Pollution and Health Impacts"
- **April 5, 2022:** EPA is taking action to protect people from asbestos exposure by releasing a proposed rule to prohibit ongoing uses of the only known form of asbestos currently imported into the U.S.

EPA issues its final 2026 Strategic Plan on the same day. This is cities working and improving air quality throughout the nation. We are working as a group to reduce and improve air quality. The commissioner is also in that group.

April 5th The EPA is taking action to protect people from asbestos. This is for imported like breaks, and gaskets.

In 1989 asbestos ban from USA. So, after 1990 the port rejected the importing from outside. Now they cannot import anymore.

PA EPA UPDATES

- **March 12, 2022:** PA DEP posted on the Pennsylvania Bulletin the proposed updates to the Department's Environmental Justice Policy. The proposed policy includes components that involve permit review process, community input, inspection and enforcement.
- **April 7, 2022:** At the Pennsylvania Air Quality Technical Advisory Committee (AQTAC) meeting, PA DEP presented the draft final-form rulemaking for additional Reasonably Available Control Technology (RACT) requirements for major sources of NO_x and VOCs for the 2015 NAAQS (also known as RACT III Rule).

April 7th 2022 is for RACT, PA DEP for 2015 ozone RACT standard. It is really stringent. If one is approved they will use that one from the 2015. So it is reduced by a lot. NO_x, we might obtain ozone standard if we use that one.

City Updates

- **January 27, 2022:** The Philadelphia City Council adopted a resolution (Resolution No. 220058) to recognize February 2022 as Environmental Justice Month in the City of Philadelphia.
- **February 3, 2022:** The Philadelphia City Council introduced Bill No. 220078. This bill would amend Title 6 of The Philadelphia Code, entitled "Health Code," to add a new Chapter 6-1400, entitled "Cumulative Impacts Assessment," to provide for the identification of environmental justice communities and inclusion of cumulative impacts assessment

Environmental Justice month, which is February 2022. They are still working on Environmental Justice Month assessment. The commissioner's office is also involved. We are working for EJ Community.

OTHER UPDATES

- **January 11, 2022:** Independent analyses by the National Air and Space Administration (NASA) and the National Oceanic and Atmospheric Administration (NOAA) place 2021 as tied with 2018 as the sixth warmest on year record.
- **March 21, 2022:** New research confirms earlier studies showing that the rebound in global greenhouse gas (GHG) emissions in 2021 has largely offset the global temperature benefits that may have accrued thanks to sharp emission reductions caused by the pandemic in 2020, and that emissions grew far more rapidly than in 2019.

Independent analyses by the national Air and Space. 2021 was very hard. With 2018, which is a sixth warmest on your report.

March 21st, 2022, new research confirm earlier. I should you the data of NOx reduction during peek pandemic time, 2020. Twenty-one percent NOx. Now its twenty-three percent of PM2.5, and twenty-nine percent of CO there was a reduction. Maybe people were inside. Most industries shutdown, or closed temporary.

Now the temperature reduces. So now going back up. Pandemic time 2020 was good but now I think we go back. A lot of people are out driving which is a lot of emission.

AMS LAB (Engineering)

AMS lab (Engineering) - Community Scale Grant project will resume for five sites from 04/06/2022 measuring BTEX, 1-3 Butadiene, Naphthalene, Aldehydes with passive sampling

Philadelphia Air Quality Survey project (PAQS) enhance by purchasing additional 14 samplers and deployed to additional sites

AMS lab (Chemistry)- TD-GCMS training done on week of March 21st, 2022, Method development for EPA 325A/B on-going



AMS Lab has a community scale grant. WE started it already. We installed, trained, and started measuring the refinery.

Air Quality once were done the refinery my plan is to move to another section of the city. Maybe North Philadelphia, wherever the highest EJ community is. That is why we have a long-term program.

Philadelphia Air quality, we act now. This is a good surplus. Each one cost fifteen thousand dollars. So, we added more like in Septa Nice town, we had a lot of problems and complaints. So, we put on there in that area and we will see in North Philadelphia, and where the highest air concentration is.

AMS Lab Chemistry, TD-GCMS, I think from this Chromatography training.

I think this one is also for the community air toxics that we are measuring now in the refinery area.

AMS LABORATORY- CHEMISTRY

- **PAQS: Philadelphia Air Quality Survey (PAQS)** - The PAQS session is in progress. Laboratory operations for weighing and conducting Black Carbon measurements are ongoing. We purchased an Ion Chromatography system to analyze Ogawa pads used in the Harvard impactors.
- **Village Green Monitor:** The Village Green monitors continue to collect continuous meteorological, ozone 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
- **2020 Community Scale Air Toxics Grant** – a four-day training for Thermo Desorption Gas Chromatograph Mass Spectrometer (TD-GC/MS) was performed by Markes International. Staff learned

AMS Lab Chemistry, PAQS, I think this is the third year. We are measuring still. Village Green Monitors, measuring the ozone particularly nitrogen oxide and others. There is a lot of risk. It is Realtime with the monitor. With the solar system and the wind system we use that one. We can check concentration, temperature, and everything.

National Air Toxics Trends that we are doing for DC. Fuel oil sampling, we are doing the coding and paint analysis in the laboratory.

REGULATORY SERVICES ACTIVITIES

•From Jan 1st, 2022 to March 31st, 2022:

- AMS issued 232 permits (179 air and 53 asbestos)
- AMS serviced 65 citizen complaints (34 Air, 8 Asbestos, 23 Noise)
- AMS also performed 793 inspections (320 air, 473 asbestos)
- AMS observed 7 vehicles at 2 locations, issued 1 citation for violations of the City's anti-idling rules.
- AMS issued 54 new NOVs, (C&E 51, Asbestos 3)
- Resolved 150 NOVs (C&E 129, Asbestos 21).
- AMS collected \$ 69,129 (C&E \$49,379, Asbestos \$19,750) in Fines and Penalties

This is a lot more, close to two thousand, maybe because we found permits. It was more than three thousand. The first one was seven thousand. Some were minor. Now we need more resources, like Inspectors, they go every place, now people are operating. So, they submit permits. It is good because of emission reduction. They don't use anymore fuel, oil, which is more than fifteen per million. That is what we measure. They don't use heavy fuel oil. They have to do maintenance. It reduced a lot of emission.

- Chairman Battle: Members, do you have any questions or comments on the program updates?
No response.
- Public, are there any questions?
- Dr. Marilyn Howard Those monitors that you have up around the refinery. Is that data available to the public?
- Director Sellassie Yes. Everything will be available to the public. We are very transparent. Once we measure, you will see. We do quality assurance and quality control. It will be available.
- Dr. Marilyn Howard When will that be?
- Director Sellassie I am sure by the next Air Pollution Control Board I will let you know the status, the data and everything.
- Dr. Marilyn Howard Okay. Thanks.
- Mr. Winslow: This is Peter Winslow
First, let me express my condolences to the Air Pollution Control Board and Air Management Services on the death of Pat O'Neil.

Of the five monitors that you have put in place, are they replacements or is it a supplement?

What is happening with the requirement that this has had since the former refinery now?

Director Sellassie: That's completely different. The fence line monitor is just to see any location, which surround the fence line. So if one monitor has the highest, we do root cause analysis and corrective action.

This one is different. This not for public health or for the community. This one is to show the community after there is any residual risk remaining. And show the public the concentration, not only benzine. This one has other criteria and toxics plus benzine.

Peter Winslow: Thanks for that information Kass.
This new Kentect monitor for NOx is the something that AMS is going to be getting or is Mobile vehicle?

Director Sellassie: Yes. The one I mentioned, the new one EPA approved. For NOx measurement and analysis, we might buy that one. The other is the mobile one. The mobile one has both. It measures eight toxins and six criteria pollutants. In real-time.

Chairman Battle: Are there any other questions from the Public?
Matt Walker: I wanted to offer my condolence about Pat O'Neil as well.

My question is sort of a follow up on Peters about the fence line monitoring around the refinery the plans for that, my understanding with the permits, the one for demolition and the continuing operation, potentially lead to the fence line monitoring are no longer being required for the tanks, specifically the Schuylkill River tanks. I just wanted to see if you can speak to that at all?

Ed Weiner: We are in the process of working on the fence line related to an operating program that is in the public comment period. We are working on the comment response document. I suspect that our lawyers do not want us to give an answer to that right now.

Carol Ann Gross Davis: Just for the clarification that the fence line monitoring is under the refinery rule. So, if it is no longer operation as a refinery, based on PA regulation, they would not be required to continue that existing fence line monitoring since it was part of the permit. The EPA regulations do not require that.

Chairman Battle: Okay. Thank you. Lest move on to number 4 of the agenda.
Presentation about risk assessment. Frank Steitz and Kenneth Ratzman.

Mr. Steitz: Chairman Battle, Board, Air Pollution Control Board, commissioner Bettigole and AMS staff. Thanks for inviting us here today. I just want to express my sympathy for Patrick O'Neil.



- Demonstrate compliance with N.J.A.C. 7:27-8.3(j) and N.J.A.C. 7:27-22.3(cc)
 - Permit application may not be approved if it will cause adverse health effects
 - While not limited to Inhalation health risk, Other pathways are generally beyond our program's capacity (ingestion, dermal contact, etc.)
 - Limited to facilities requiring actions requiring an air permit
 - NJ has strict permit applicability thresholds established by rule and does not include sources not permitted including mobile (cars, trucks), small area sources, biogenic, water quality, food, etc.

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The regulatory basis for our rule is our subchapter 8 and 22, which is our minor and major source program. The permit application may not be approved if it will cause and adverse health affect. If it has no risk factor, we will put it through the modeling if necessary.

While limited to inhalation risk. That is the general pathway we do look at.

This is not a cumulative risk. This is an incremental risk analysis from that facility.

If it is under renewal or a modification being made or if it is a new facility, we may have not be evaluating it.

As far as permit for the facility itself, we are looking at those pieces of equipment that we know about. Significant piece of equipment and for major facilities the fugitive source of submissions.

It is not a comprehensive but is more robust than anything else.

Air Quality Risk Assessment

The air quality risk assessment performed for NJ facilities is an **incremental risk analysis** conducted using

- Increased pollutant concentrations derived from specific sources
- Air dispersion modeling and comparing those concentrations to know health impact levels (IRIS, CalEPA, etc.)

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Quantifiable numbers but it does not include

- Offsite sources of those pollutants
- Most other pathways are beyond our program's capacity (exception Mercury uptake in fish is evaluated).

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So, what's involved in Air Quality Risk Assessment? It is performed for New Jersey Facilities. Its an incremental risk analysis. Increased pollutant concentration derived from specific source or specific facilities. We do analyze facility-wide analysis for major facilities. We compare those concentrations to known impact levels.

We do analyze facility wide analysis for major facilities. We do air dispersion modeling. We compare those concentration t known impact levels.

We do not have to model every single facility.

The quantifiable numbers that do not include offsite sources. It is going to look at inhalation primarily.

Risk Assessment Determination

- Types of air quality applications that may be subject:
 - Initial Permit (new construction)
 - Modification
 - Renewal of Title V Permit
- Factors to consider:
 - Air toxics in permit?
 - New/Increased air toxic emissions?
 - Was risk performed previously?
 - Changes to stack parameters?
 - Changes to Unit Risk Factor/Reference Concentration?

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Three types of permits we are looking at for major facilities; the initial permit application, anything that is modified. We look at renewals. May have to do a facility wide risk analysis if a risk factor has changed.

Facts we consider when doing the analysis is how many air toxics are in the permit? Are they new and increased and was the risk performed just within the last year. Did they change stack parameters, increased velocity, stack height?

Types of Risk Assessment Tech Manual 1003

- Risk Screening (Excel Worksheet)
- Refined Risk Assessment
- Facility Wide Risk Assessment



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Types of Risk Assessment

We have a tech manual that defines the risk screening worksheet.

Essentially many facilities can pass risk or at least analysis risk and determine if they have a problem by simply having a stack height and the distance of the property line.

With that you can get a risk screening. It's conservative to determine if there is an off-site impact.

There could be a small area in the middle where it's really effected and as you get out further, it's less effected. The key point is it's effected.

In the community's mind there is no such thing as no risk. We say negligible risk and we say minimal risk. We never say no risk.

RISK SCREENING (EXCEL WORKSHEET) Tech Manual 1003

- Embedded with formulas and analyses from both TM1002 and 1003
- Risk Screening Worksheet risk level based on
 - Ambient air toxic concentrations derived from air quality models
 - URF (carcinogenic risk)
 - RFC (non-carcinogenic risk)
- Two possible outcome: "Negligible" or "Further Consideration Required"

Air Toxic	LONG-TERM EFFECTS										SHORT-TERM EFFECTS				
	Q (lbm/yr)	C (ug/m ³)	URF ((ug/m ³) ⁻¹)	IR	Rskt	RFC (ug/m ³)	HQ	Rskt	O ₆ (lb/yr)	C ₆ (ug/m ³)	RFC ₆ (ug/m ³)	HQ ₆	Rskt		
nitrobenzene	1.0E+01	4.8E+02	2.2E-04	1.0E-03	FER	9	5.3E+01	FER	5.0E+00	12243.75	470	2.6E+01	FER		
stamide	0.0E+00	0.0E+00	2.0E-05	0.0E+00	Negl.				5.0E+00	12243.75					
tone	1.0E+01	4.8E+02				31000	1.5E-02	Negl.	5.0E+00	4897.5	62000	7.9E-02	Negl.		
tone cyanohydrin	0.0E+00	0.0E+00				2	0.0E+00	Negl.	5.0E+00	12243.75					
tonitria	1.0E+01	4.8E+02				60	7.9E+00	FER	5.0E+00	12243.75					
nylaminofluorene (2-)	0.0E+00	0.0E+00	1.3E-03	0.0E+00	Negl.		0.02	2.4E+04	FER	5.0E+00	12243.75				
ylamide	0.0E+00	0.0E+00					0.02	0.0E+00	Negl.	5.0E+00	12243.75	2.5	4.9E+03	FER	
ylic acid			1.0E-04				6								
							1				6000				

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Risk screening worksheet. You put in the stack height, and you put in the property distance line in what the emissions are and through the meteorology, most conservative, through landscaping concerns, most conservative. It comes out as a risk factor; pass or does it not pass? Some of the challenges with risk is that it takes time. Its not easy. We have done a risk screen worksheet to address a lot of them. If you look closely at permits, you might find that there is wrong information in the applications.



Challenges

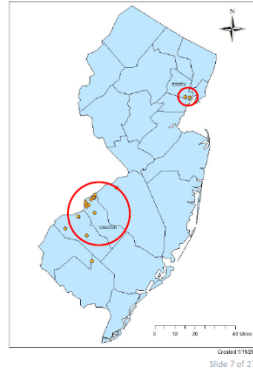
- Timeliness
- Permit Reconciliation
- Storage Tanks
- Fumigation

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Therefore, the permits reconciliation of that information is a challenge. If you have bulk terminals; they are hard to figure out. When you are looking at breathing losses, that is easy. When you are looking at filling losses, that's a known. When you start getting tank landings, clean out and things of that nature, it becomes problematic.

LOCATION OF FUMIGATION FACILITIES IN NJ

ENVIRONMENTAL JUSTICE!!!

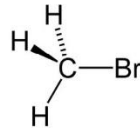


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Fumigation has been a really challenging point. We just adopted our air toxics rule part two. Fumigation is an issue in New Jersey. It occurs predominately not entirely, around the ports. What else is in and around port facilities? EJ communities. This is an Environmental Justice issue. You must address fumigation if you want to do it right.

70 ft Discharging Stack



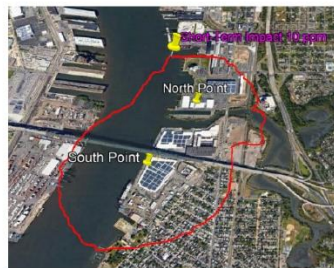
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This is a seventy-foot stack that you can probably see from the Philadelphia side of the river. There is a high-level risk identified.

Five years later they are still using it. They put it in place every evening and they take it down or more it to another area in the facility during the day.

Modeled Short-Term & Long-Term Impacts Before Mitigation (Ground Level Discharge)



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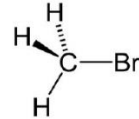
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When we first went in there the long-term risk. Look at the units. It was a 10-ppm short term and a 13 ppb in the long term. Well about the acceptable risk use.

Modeled Short-Term & Long-Term Methyl Bromide Impacts After Risk Mitigation (70 ft Stack)



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The seventy-foot stack was able to lower the impact down to 1ppm and 1.3 ppb.

What Is Wrong With This Picture?



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This photo shows that the facility deciding they are not going to fumigate. The essentially took a trunk hose out and they dumped it out of the back door. The problem is little Billy playing wiffle ball in his back yard that evening or weekend when they do this fumigation release. When we identified the risk at this facility, they facility immediately shut down.

These facilities are in and around neighborhoods. They are really critical to take a closer look at.

These are large operations; this facility is a port. Those are large boats coming in with large amounts of quantities of fruits that are being fumigated.

Challenging Industry

- Variable Operations
 - Frequent relocations
 - Intermittent use (once every other year)
- New fumigants – some not specifically regulated
 - Not a HAP?
 - Not a VOC?



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Fumigation is a challenging industry. They have variable operations. They have frequent relocations. They may not use it more than once every couple year. Other that are importers do it every day.

Short term risk is always an issue even if you are do it once. Some of the new fumigates are not specifically regulated.

Example: Fluoride is a replacement for Meth bromide. Meth bromide is a VOC. It is an ozone deplete Sulfuryl Fluoride is none of these things. But it is extremely toxic.

Air Toxics Rule Overview

- **New listed air toxics – (Sulfuryl Fluoride, n-propyl Bromide, Hydrogen Sulfide)**
- **New substances to be reported in Emission Statement**
- **Fumigation Clarification**
- **Published on April 4, 2022, Effective June 3, 2022**

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We did our new rule. It was published April 4th. It is effective June 3rd. We added Sulfuryl Fluoride, n-propyl bromide, and hydrogen sulfide to our air toxics list.

Newly Added NJ Air Toxics

- **Sulfuryl Fluoride – added as a NJ Hazardous Air Pollutant with a reporting threshold of 90 lbs/yr**
- **Hydrogen Sulfide – added as a NJ Hazardous Air Pollutant with a reporting threshold of 90 lbs/yr**
- **1-Bromopropane (aka n-propyl bromide, nPB) - proposed as a NJ Hazardous Air Pollutant, BUT adopted as a FEDERAL Hazardous Air Pollutant as EPA adopted substance as a HAP during NJ rule making process**

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Sulfuryl fluoride, hydrogen sulfide are reportable values that re very low. Ninety pounds per year could cause a health offsite impact from sulfuryl fluoride.

These are the valued where we have to determine their significant issues. That is where we are setting our reporting threshold.

Fumigation

- Emergency Fumigation Provision N.J.A.C. 7:28-8.2(g)
 - One time allowance within 5 years
 - Notification and Reporting Requirements
 - Signage
- CLARIFIED that fumigation operations are covered N.J.A.C 7:27-8.2(c)22, was previously covered under N.J.A.C 7:27-8.2(c)19,
 - "Any fumigation of a commodity or industrial structure that has the potential to emit any fumigant or combination of fumigants at a rate greater than 0.1 pounds per hour (45.4 grams per hour), except as provided at (g) below."

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We made an allowance for an emergency fumigation provision in our rule. They get it once, every five years at the max. Even with this, it is a notification and reporting requirement. There must be signage. They have to let the neighborhood know what they are doing.

WE clarify that fumigation is a clearly covered activity. Region 1, 2 and all the way down to Florida, along with the EPA and all the states in-between had a conservative effort to consistently regulate fumigation in the same way in the same fashion.

Anything that omits over 0.1 pounds per hour of any of these fumigates is a covered facility. That is 0.1 pounds per hour any time during the year. These poisons are designed to kill things. Its probably not going to be good for the human body.

Question A. Frank: What do you do in an area that multiple facilities in a small area give off measured material when looking at potential health impact and about renewing permit issues?

Answer: Mr. Ratzman: Outside of the criteria pollutants NOX, VOCs and SO₂, there is no practical way to do a cumulative analysis. It's extremely impractical.

Answer: Mr. Steitz: One of the things I want to talk about is just what we are trying to do in lieu of the cumulative impact analysis based on New Jersey's Environmental Justice Law. It's an Environmental Justice Analysis.

Answer: Mr. Ratzman: And the other piece author, even within a facility, each chemical of concern is evaluated independently. So, if you are releasing both toluene and xylene, they are two different animals. They might affect different organs. They have different pathway receptors. We can't access the risk together. This is an incremental risk analysis.

A. Frank: Clearly the two you pick out the toluene and xylene, they are the same actually. They would have the same effect on the same organ.

Mr. Ratzman: Right. Bad Example.

Mr. Steitz: I think the analysis that everyone is talking about isn't quite there yet. The methodology still has to be dealt. The biggest issue is the context of the regulatory decision. It becomes very problematic at this point to do a true cumulative impact analysis where you look at multiple pathways with multiple sources. It's a question of balancing public health impact and taking a real regulatory approach to minimizing those known impacts versus coming up with a singular number.

Presentation continues

Mr. Steitz: Environmental law

S232/A2212 – NJ ENVIRONMENTAL JUSTICE LAW

- Law was passed by NJ Legislature on August 27, 2020
- Signed by Governor Murphy September 18, 2020
- Rules are being drafted as we speak

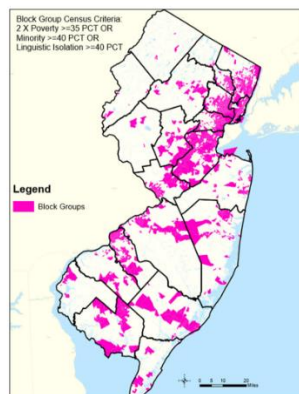
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New Jersey passes Environmental Justice law in August of 2020. It has taken nearly eighteen months to fully draft these rules. We have done numerous stakeholder sessions to get to where we are.

Defining “Overburdened Community”

- Low-Income: At least 35% of households qualify as low-income households; or
- Minority: at least 40% of the residents identify as minority or as members of a state recognized tribal community; or
- Limited English proficiency: at least 40% of the households have limited English proficiency



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We are at the very beginning point in dealing with impacts in overburdened communities. New Jersey's law defines what an overburdened community is. It is low income, minority it has limited English proficiency. This is part of the law. By defining it, it made fairly uniform standard.

It covers eight types of facilities, major sources of air pollution. Those are your traditional title five sources, power plants, cogeneration, mass burn incinerators.

It specifically calls up any resource recoveries specifically incinerators, large sewage plants, if they possess more than fifty million gallons per day. Transfer stations and solid wastes facilities, recycling facilities, they receive at least one hundred tons of recyclable material.

Facilities and Permits Covered

- **One of eight (8) types of facilities:**
 - major sources of air pollution (e.g., power plants, cogeneration facilities);
 - incinerators or resource recovery facilities;
 - large sewage treatment plants (more than 50 million gallons per day);
 - transfer stations or solid waste facilities;
 - recycling facilities that receive at least 100 tons of recyclable material per day;
 - scrap metal facilities;
 - landfills; or
 - medical waste incinerators, except those attendant to hospital and universities.
- **Seeking a specific permit**
 - Including solid waste and recycling, development (wetlands, CAFRA, Flood Hazard), water supply and pollution, air pollution and pesticides

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Scrap metal facilities, landfills, medical waste incinerators, except those attending hospitals or universities. Those are the types of facilities that are covered under the law and will be covered under the regulations. It only covers the facilities that are seeking to obtain a solid waste recycling permit development for our land use, wetlands, flood hazard rules, water supply or water pollution, air pollution or pesticides program.

This law defined the universal sources and the communities that would be subject to the law.

There is a fair amount of subjectivity. The laws were crafted in conjunction with the environmental Justice Communities. Their stakeholders and our legislators.

Environmental and Public Health Stressors

- **Public health stressors are “conditions that may cause potential public health impacts in the overburdened community**
- **Public health impacts include, but are not limited to:**
 - Asthma
 - Cancer
 - Elevated blood lead levels
 - Cardiovascular disease
 - Developmental problems
- **Environmental stressors to include, but not be limited to:**
 - Concentrated areas of air pollution;
 - Mobile sources of air pollution;
 - Contaminated sites;
 - Transfer stations or other solid waste facilities;
 - Recycling facilities;
 - Scrap yards, and
 - Point-sources of water pollution including, but not limited to, water pollution from facilities or combined sewer overflows.

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The law asks that the department and the facilities look at the environmental and public health stressors. It is defined as condition that may cause potential public health impacts in an overburdened community.

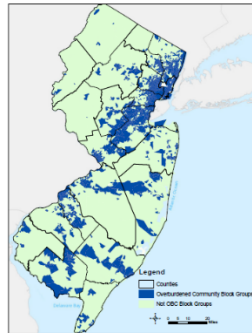
Those public health impacts include things like asthma, cancer, blood lead levels, cardiovascular disease,

developmental issues. The environmental stressors that we are looking at but not limited to are concentrated areas of air pollution.

Global sources of air pollution, contaminated sites, preponderance of different types of facilities. A lot of these facilities have a preponderance of being in overburdened communities. Also, other things like source of water pollution, including facilities and combined sewer outflows.

Geographic Point of Comparison

- The Law requires the Department to determine whether environmental or public health stressors are disproportionate to those borne by other communities within the State, county, or other geographic unit of analysis as determined by the department.
- What is the appropriate geographic unit?
 - County?
 - State?
 - Region?



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The law asks us to compare whether those stressors, the environmental public health stressors, are disproportionate in the communities that are defined as overburdened already. Are they disproportionate that other communities that are not defined as overburdened. To determine if the comparison should be at the state, country, or other geographic unit of analysis.

Key Issues

- **Public Process**
 - Elements of an environmental justice impact statement (EJIS)
 - Public hearings – meaningful public participation/coordination with other requirements
- **Defining Conditions:**
 - Clarity to environmental and public health stressors
 - What is a compelling public interest?
- **Quantification of Impacts:**
 - Appropriate methodology to ensure predictability and objectivity
- **Conditions to reduce impacts to environmental and public health stressors**
- **Geographic points of comparison**

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We pretty much come down to what ever is most protective of public health. One of the very key issues that the law lines out, and the regulations will specific is, there has to be a public process.

Facility Responsibilities

- **Requires submission of an environmental justice impact statement by facility for Department Review**
- **Conduct public process for any application to expand, construct or renew the authorization to operate.**
- **Environmental justice impact statement identifies existing public health and environmental stressors in the EJ community and compares to stressors other non-EJ communities.**

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There must be analysis of those impacts and there has to be a meaningful public coordination participation. There has to be engagement by the facilities with their host community, because that the conversation in our minds that has largely been missing. A lot of the times, the regulatory agencies come to talk with the community after the draft decision has already been made. The process needs to be done at the facility level, speaking with their host communities. They have to define what are the environmental and public health stressors and what are the compelling public interest of those communities.

There has to be appropriate ways to measure what those impacts are. All of that has to be done by the facility and presented to and explained to the community. They have to have an opportunity to comment, engage and be heard.

NJ DEP Responsibilities

- **EJIA will be reviewed prior to any application review to determine whether there is a disproportionate impact from stressors that cannot be avoided through additional controls.**
- **If there is a disproportionate impact that cannot be avoided for a new facility, DEP is authorized to deny the application unless there is a compelling public interest.**
- **For renewals and expansions, DEP can only apply additional conditions but cannot deny a permit.**

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There has to be a department side, that recognize what those environmental and public health stressors are and condition sand permits to reduce those impacts. Geographic point of comparison. That is still a very key issue.

If the facility is subject, they are required to develop and submit an Environmental Justice Impact Statement to the department for its review.

Conduct a public process for any applications to expand, construct, or renew the authorization to operation that facility.

Identify the existing public health and environmental health stressors in the community and compare those to the other non-EJ communities.

Raise that awareness.

Why are these stressors higher?

What contribution are they making to those stressors.

The departments responsibilities, we are to review that environmental justice analysis along with the public comments that the facility receives and responds to. To see if there is a disproportion impact from the stressors that cannot be avoided through additional controls. If so, we are authorized to deny that application. Unless, however, there is some overwhelming compelling public interest.

For existing facilities, the law did not authorize us to deny that application. We can only put additional conditions to reduce the stressor impacts at those facilities.

Environmental Justice Analysis vs Cumulative Health Impact Analysis

- **In NJ EJ Law and forthcoming regulations, facilities applying for a permit or other authorization listed in the law will be required perform an Environmental Justice Impact Analysis (EJIA)**
- **While EJIA will include analysis of multiple environmental stressors and health stressors, it is NOT a “Cumulative Health Impact Analysis”**

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In our law, and our forthcoming regulations, facilities are applying for a permit or other authorization listed in the law performing an environmental justice impact analysis.

This analysis does include a list of multiple an analysis of multiple environmental stressors, health environmental stressors. it is not a cumulative health impact analysis.

Challenges to Perform a Cumulative Health Impact

- **Lack of a robust methodology**
 - Multiple Pathways (inhalation, ingestion, dermal contact, etc.) for multiple environmental stressors and incorporate existing health stressors for each is incredibly complex and would require significant time and resources to develop.
- **Most methodologies consider multiple stressors, but not in a quantitative form**
 - Multiple stressors (environmental & health) present in each community are listed (South Coast & EPA EJ Screen)
 - List of total stressors present in a community not necessarily the total risk from each stressor
 - Not a quantitative approach that evaluates risk.

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Right now, we don't believe that it is a robust methodology to look at multiple pathways for multiple environmental stressors and incorporate existing health stressors. We are trying to develop a methodology that will allow for meaningful public engagement and meaningful quantification if only in a quantitative way what the impacts are.

Now most methodologies do consider multiple stressors. Not necessarily quantitative.

Multiple stressors are present in each community.

Listing the total stressors present in each community is not a total risk from each stressor. So it is not a quantitative approach that evaluates risk. We do evaluate that incremental risk as part of our air applications. It's part of our departmental responsibilities. We will continue to compare the number of stressors and look at ways to mitigate those stressors, require conditions to do so in our permitting decisions.

Questions and Answers

Mr. Soule: Who determines and what criteria is used to determine if it's a public interest?

Mr. Steitz: I can tell you that part of our process we are developing specific language around what is a compelling public interest. I cannot share that with you right now. One thing that we did reach a consensus on is that compelling public interest has to be to the benefit of the host community. That can't be a compelling public interest for the surrounding areas and not the community itself.

Mr. Soule: Got you. That's where I was going.

Dr. Howard: Have you yet set any methods for how these environmental stressors are to be quantified? And do you plan to do that?

Mr. Steitz: As part of the rule making release, we will be releasing a technical manual which numerate how to perform that analysis and which stressor should be considered in that analysis.

Mr. Howard: Great. Thank you.

Clerk/Richard: What is the most common stakeholder concerns that you hear during public meetings?

Mr. Steitz: 1. It usually has to do with the recognition that the host communities are bearing the burden for somebody else's economic gain.
2. Having the authority and ability to compel sources to not build there.
3. For those sources that are in that community while there is a very strong desire to shut those facilities down there is a recognition that long term mitigation and reduction and remissions need to happen. Sources have to recognize that they have to be a good neighbor to their host community.

Mr. Walker: Is the first one you said really about trust?

Mr. Steitz: There has always been challenge of trust. I would say that trust in government has always been of concern. There is always a question of whose interest are you representing. The facility or the residents. I am hoping that with this rule making there's a recognition that the department has heard those concerned and is doing their best in the context of the laws and the limitations in what we can do on our regulations. That we are listening to the community and trying to do what is best.

Mr. Walker: Could a criteria be the existing public health of the affected community? We look at stressors and so many things. What I am saying, is it a valid thing to say the criterion of the existing public health.

Mr. Steitz: What do you mean by that? Like maternity birth weight or do you want to talk about preponderance of cardiovascular disease?

Mr. Walker: I am thinking different. I think it's an eight statistic. The health district nine in the City of Philadelphia has the highest rate of cancers in people under thirty. Specific to a very specific geographic.

Mr. Steitz: This may or may not be in the final proposal, but one of the stressors that we are looking at one of the stressors we already evaluate on a source-by-source basis, incrementally, is the public health impacts from carcinogenic causing air emissions.

So, whether or not we specifically address a given communities' exposure of carcinogens. EPA has developed some national air toxics assessments. When looking at census track level, concentrations of given cancer-causing materials. There is no current linkage between incidents of cancer but exposure to materials that cause cancer and what level. That data will certainly be a part of our stressor analysis.

Chairman Battle:

Any final questions or comments from the public? Please speak up.

No response.

Members lets move onto number five on the agenda.

Risk Assessment presentation by Program Services and Sources

JiaZheng Li

We are proposing the AMR 6 amendments and the air toxics health risk assessment.

Outline

- Proposed AMR VI amendments – Risk Assessment
- What's involved in risk assessment – Hazardous Air Pollutants (HAPs, i.e. Toxic Air Contaminants, Air Toxics) Reporting Thresholds (RT); Risk Screening



image from CDC <https://www.cdc.gov/airquality/toxics/airtoxics/2018/ama1018.htm>

2

Proposed: Risk Assessment as Part of Pre-construction Permit and Title V Operating Permit Processes

- Applications satisfy Notification Requirement.
- Applications include Potential HAP Emissions for new or modified sources.
- If the Potential Emission of any HAP is above a Reporting Threshold, a Risk Assessment is required.
- Cannot approve an application if it is above a certain risk level.
- Plan Approval / Title V: review existing air toxics concentrations and risks in neighborhoods surrounding the emission source at issue prior to permit approval

3

The big parts of the proposed amendment are to add a risk assessment as part of preconstruction permit in Title 5 operative permit process.

The applications will satisfy a notification requirement in the regulation.

It will include potential HAP emissions for new or modified sources. HAP is hazardous air pollutants.

Its essentially EPA's term for these types of balloons. The regulations use toxic air contaminants.

Ultimately for making sure all HAPs all contaminants were kind of, we tend to mix and match terms sometimes. Each of these types of air containments are HAPs as a reporting threshold.

Potential emissions is about reporting threshold and a risk assessment is required. We cannot approve An application if the risk is above a certain level.

For plan approvals wich is a type of a bigger pre construction permit application, for title 5

Which are the operating permits for the big guys. We are reviewing those. We also include existing air toxic concentrations and risks in neighborhoods surrounding the emission Source will be considered prior to the permit approval.

Because we have so many and receive so many applications every year. A lot of them are for small sources for facilities that aren't very sophisticated, we are trying to come up with a pre-determined, certain types of categories for risk evaluations not required.

Either because we know the potential emissions for these sources are below the threshold of the Hazardous air pollutants or because we pre evaluated risk for certain types of categories.

Risk Evaluation Not Required:

Certain sources need not perform a risk assessment as AMS has determined that their potential HAP emissions are below reporting threshold levels or AMS has pre-evaluated the risk:

- Gas stations: no more than 1,900,000 gallons/year throughput
- Internal combustion engines: no more than 2,500 HP, burning No. 2 fuel oil (including diesel), limited to 500 hrs/yr
- Spray paint booths: no more than 250 gallons per year coatings and solvents combined, not emitting more than 21 pounds ethyl benzene per year.
- Boilers and heaters: no more than 50 million BTU/hour, burning natural gas, exhaust stack at least 20-foot tall, at least 10 feet away from property line.

Gas Stations, internal combustion engines, spray paint booths, meeting the criteria of those listed.

Gas fired boilers and heaters up to fifty million BTU within a certain level from the property line we have done an initial risk analysis and believe that the risks are acceptable. Boilers we are going to ultimately come up with one. We automatically allow those under the same parameters.

Mr. Li;

HAP List

- Current AMR VI: 99 chemical compounds – established in 1981
- Proposed: 217 individual compounds and compound groups
 - A compound group contains multiple chemically similar or related individual compounds
- This covers nearly all of the 188 HAPs under CAA, and more

The HAPs were talking about here in the current AMR 6, which was established in 1981. It has a HAP List of ninety-nine chemical compounds. They proposed amendments.

We included two hundred and seventeen individual compounds and the compound groups. So, this covers nearly all one hundred and eighty-eight HAPs under Clean Air Act, plus more.

HAP Reporting Thresholds

- Current AMR VI does not have HAP reporting thresholds
- Proposed: establishing a **Reporting Threshold** for each HAP (Toxic Air Contaminant)
- Reporting Threshold – A pollutant emission rate (tons per year, or pounds per year) where the Philadelphia Department of Public Health has determined a health risk analysis is necessary due to health concerns.
- Facilities/sources **report** potential HAP emissions on a permit application
 - When a source operation's potential to emit > Reporting Threshold: **conduct risk assessment**

Reporting threshold, the current version of AMR 6 does not have HAP reporting thresholds. Now we are proposing establishing a reporting threshold for each HAP. The reporting threshold is a pollutant emission rate where the Philadelphia Department of public health has determined a risk analysis is necessary to help concerns.

Basically we are talking about two aspects. One is facilities or sources when they apply for a permit they need to report the HAPs. If the least HAP has potential to be met greater than the reporting threshold then they need to do a risk assessment.

Our Goals

- To be more protective of human health considering the latest scientific knowledge
- To have HAP reporting thresholds, as well as risk screening, based on highly conservative estimates of ambient concentrations, using air quality modeling with conditions specific to Philadelphia
- To simplify screening process for permit applicants - using an Excel based Screening Workbook
- For a HAP:

Cancer Risk

- Non-Title V / individual source: ≤ 1 in a million (1×10^{-6})
- Title V / facility-wide: ≤ 10 in a million (1×10^{-5})

AND

Non-cancer Hazard Quotient ≤ 1

Our goal is to be more protective of human health considering the latest scientific knowledge. In the amendment we establish the reporting threshold. We consider the latest Scientific findings of the cancer risk factors, non-cancer risk factors.

Also, when we establish the reporting threshold, when we establish the risk screen procedures, we based our method on. Very conservative estimated of air concentrations of HAPs.

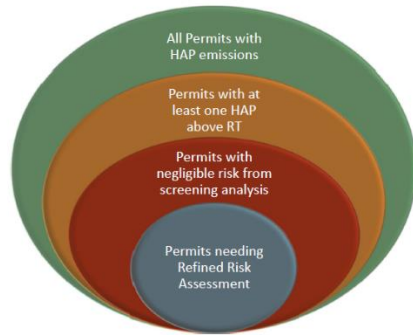
We are using air quality modeling and they used very conservative modeling for values. It is Philadelphia specific. Also, by creating an excel based screen workbook to simplify the screening process for permit applicants.

For example, a HAP or Health toxic, we follow this process. For non-title 5 or a single source it should have a risk of no more than a million.

With Title 5 and facility -wide assessment combined all of the sources that they have in the facility. The risk should be no more than ten in a million. For non -cancer, it should be no more than one.

The million means basically they are followed by experts and the EPA guidelines. One in a million is considered to be pretty low or negligible risk level.

Levels of Risk Assessment for Permit Applications Including HAPs



The next one is basically a graph that show the scope of the permit. So, or permits, with HAP emissions are her. Some of the have at least one HAP above the reporting threshold. Then they would need to do a risk assessment screening. The risk screening shows on each HAP it has negligible risk then they can move on to the next permit review. Otherwise, they you need to do a refined risk assessment.

Facility-wide Risk Assessment

- Consists of a refined modeling analysis that includes all source operations of the facility
- Applies to Title V facilities
- Risk Guidelines for each HAP emitted **by all sources**:
 - Cancer Risk ≤ 10 in a million (1×10^{-5}) AND Non-cancer HQ ≤ 1 : Negligible
 - Otherwise, Case-by-case review or permit application unacceptable

The facility wide Risk Assessment applies to large facilities, title 5 facilities. It consists of a refined modeling, which means thy use sources specific permitters, EPA air quality models to do an assessment for the entire facility. With all of the sources combined, looking at one HAP at a time the cancer risk should be not mor than ten in a million. Otherwise, they would be required to do a case by case review or the permit application is unacceptable.

The benefits of doing this first, this is a much more stringent regulation than the 1981 impacts of the air toxics. We are look at the lower level than in the past.

Benefits

- Impacts of air toxics at lower levels than in the past - due to risk assessment requirements and low levels of reporting thresholds: e.g. **Benzene reporting threshold 7 lbs/year, Formaldehyde reporting threshold 4 lbs/year.**
- Many other air toxics (e.g. hydrogen fluoride) were not listed in the compound list in the 1981 AMR VI but now would be subject to emission limits and risk assessments.
- One Big Step Forward: **1981 → 2022**

One of the things we wanted to point out. Its getting used to looking at things at a much lower level than before. We didn't have anything like this.

There are times when we are looking to control an emission. A lot of times its because the EPA has a mass regulation for specific source category, like refinery met regulations.

We look to establish different types of controls for these types of pollutants. The issue there is regulations only applicable to typically major sources. The have to be able to emit ten tons of an individual or twenty-five tons of all HABS combined.

EPA also came out with what we called gas regulations, which are kind of the same principal. They aren't necessarily for a huge amount of emissions.

What these forces us to look at a variety of things and certain type of sources that we may have not actually paid too much attention to because the emissions were low.

There might be other types of sources where we haven't been looking at closely. This is going to trigger us to take a look at.

Questions

Chairman Battle: Members do you have any comments on the presentation:
No Response.
To the Public, are there any questions or comments on the presentation?
Please speak up!

Mr. Soule: You can have numerous heaters and boilers under the fifty that wouldn't trigger anything. Is there a way that you can capture that?

Mr. Weiner: That may be something we need to work out. We need to clarify that if you are installing a forty million BTUs, it may not be automatically considered.

Mr. Soule: Yeah, that is something that needs to be looked at.

MR. Frank: Or if you wanted to put in one large boiler, you might cut it into two pieces if you can be exact.

Deputy Raval: Will there be a vote on our proposed regulation?

Chairman Battle: I am unaware of a need for a vote on the presentation. Is that the case, Kass?

Director. Sellassie: Yes, Sir.

Chairman Battle: Okay.

Deputy Raval: I believe, sir, the regulation has to be voted on so we an move forward with it.

Chairman Battle: No Problem at all.

Mr. Frank: I make a motion to approve.

Chairman Battle: Is there a second?

Mr. Soule: I second.

Chairman Battle: All those in favor of approving the motion say Aye!

Response: AYE!

Chairman Battle: Those opposed?

No response.

Alright. The motion carries.

Dr. Raval: Thank you very much Chairman.

Chairman Battle: Number 6.

Arthur, you made a suggestion that we have it later. I am for that as well.

So, members, what are your suggestions?

Director Sellassie: Chairman, it is not a must every three months.
We have a requirement minimum of one in a year.
The summer is not okay. We will postpone for the next one. Soe we can do that.

Chairman Battle: That sounds good to me. Other comments on moving it back? Okay Kass, I think we are good. Use your good judgement and just update us on what you suggest as the next meeting date and time.

Director Sellassie: I will do that.

Mr. Gross Davis: Jut perhaps or a few months is a long time. If anything comes up that you want to share with the board, I will just recommend just sending it to us.

Chairman Battle: Good point. Yes!
Arthur?

Mr. Frank: I have a motion that the Air Pollution Control Board official put on the record Recognition of the great work done by Patrick O'Neil on behalf of the Air Pollution Control Board and convey his sentiments to his family.

Chairman Battle: Yes. Is there a second:

Mr. Soule: I second

Chairman Battle: All in favor of the motion on the floor, say AYE!.

Members: AYE!

Chairman Battle: Opposed?
No response.
Thank you Arthur. Well said.
Is there a motion to adjourn?

Mr. Frank: So moved.

Mr. Soule: I second.

Chairman Battle: Okay, all in favor of adjournment say aye.

Members: Aye!

Chairman Battle: Those opposed?
No response.
Motioned carried.

Meeting adjourned approximately 3:53pm.