CITY OF PHILADELPHIA

DEPARTMENT OF PUBLIC HEALTH

AIR POLLUTION CONTROL BOARD

The virtual meeting of the Air Pollution Control Board was held Thursday, October 22, 2020.

Eddie R. Battle, Chairman, presided:

ATTENDING:

MEMBERS: Eddie Battle, Chair of the APCB

Dr. Arthur Frank Member, APCB

Joseph O. Minott, Member, APCB

Dr. Caroline Johnson, Member, APCB

Dr. Carol Ann Gross-Davis, Member, APCB

Terry Soule, Member, APCB

Dr. Thomas V. Edwards, Jr., APCB

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

Hallie Weiss, Program Manager, AMS Laboratory

Henry Kim, Program Services Chief, AMS

Edward Wiener, Source Registration Chief, AMS

Thomas Barsley, Fac, Comp & Comp Chief, AMS

Maisha Wheeler, Acting Administrative Scientist, AMS Laboratory

Jiazheng (Jason) Li, Environmental Engineering Supervisor, AMS

Richard Annunziato, Asbestos Manager, AMS

Vanessa Accime, Analytical Chemist Supervisor, AMS Laboratory

Ashraf Ahmed, Environmental Engineer, AMS

Shital Amin, Mass Spectrometrist, AMS

Edward Braun, AMS

Abdessalem Cherifi, Electronic Technician, AMS Laboratory

Julia DellaPorta, Air Pollution Control Inspector, AMS

Daniel Henkin, Acting Environmental Engineering Supervisor, AMS

Paresh Mehta, Environmental Engineering Supervisor, AMS Laboratory

Corey Quinn, Analytical Chemist, AMS Laboratory

Nishant Shah, Electronic Technician, AMS Laboratory

Alissa Renning, Air Pollution Control Inspector, AMS

Michael Robinson, Air Pollution Control Inspector, AMS

Morgan Robinson, Analytical Chemist, AMS Laboratory

Aadarsh Shah, Environmental Engineer, AMS Laboratory

Robert Thomas, Electronic Technician, AMS Laboratory

Alexa Weaver, Administrative Services Supervisor, AMS

Ashagre Mengistu, Systems Programmer, AMS Laboratory

Loren Williams, Analytical Chemist, 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

Cheryl Bettigole, DPH-DCD

GUESTS: Emma Cheuse, Earth Justice

Mike Ewall, Energy Justice

Alex Gay, Earth Justice

Ebony Griffin

Craig Johnson, Interpret Green

John Krueger, PADEP

John Lee, Clean Air Council
Charles McPhedran, Earth Justice

Akmal Pasha

Richard Pepino, UPenn

Matt Walker, Clean Air Council

Tom Weir

Peter Winslow

Adrian Wood, UPenn

Peter DeCarlo

1. WELCOME

The proceedings commenced at approximately 2:07 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 January 23rd, 2020. Chairman Battle asked if there are enough board members to vote to approve the minutes. Due to technical issues, there didn't seem to be enough members present. The motion was moved later in the meeting.

3. PROGRAM UPDATE

Presented by Air Management Services Director Kassahun Sellassie

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

Air Quality – From January 1st through September 30th, 2020 – 221 good days (77%), 59 moderate days (22%), and 4 unhealthy days (1%). Philadelphia has been classified as a marginal nonattainment area for the 2008 8-hour ozone standard (standard = 0.075ppm). Current 2020 4th 8-hr O3, concentration is 70ppb at NEA with a 2020 design value of 73ppb. Current 2020 4th 8-hr O3, concentration is 68 ppb at NEW with a 2020 design value of 72ppb.

NAAQS – April 30, 2020 – EPA Administrator Andrew Wheeler's proposed decision to retain the current National Ambient Air Quality Standards (NAAQS) for particulate matter (PM) without revision was published. August 14, 2020 – EPA published in the FR the primary and secondary ozone National Ambient Air Quality Standards (NAAQS): to retain the current standards without revision. The current NAAQS, established in 2015, are 70 parts per billion.

SIP – May 5, 2020 – The Environmental Protection Agency (EPA) is proposing to approve multiple state implementation plan (SIP) revisions submitted by the Commonwealth of Pennsylvania. July 27, 2020 – EPA is proposing to approve negative declarations submitted to satisfy the requirements of the Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills for the City of Philadelphia, located in the Commonwealth of Pennsylvania, and the District of Columbia. Philadelphia does not have any landfills.

EPA Updates – January 9, 2020 – EPA released a draft guidance document to assist state, local and tribal air agencies in the preparation of technical demonstrations under Clean Air Act Section 179B to show that an area would be able to attain NAAQS National for emissions from outside the U.S. March 11, 2020 – EPA announced the availability of TO-15A, an updated canister sampling and analysis method for the determination of toxic organic compounds in ambient air. April 13, 2020 – EPA released data showing that US. Economy-wide emissions of greenhouse gases (GHG) by over 3 percent in 2018, the largest increase in the last decade, coming after five years of annual declines. May 26, 2020 – EPA's Assistant Administrator for the Office of Enforcement and Compliance Assurance issued a memorandum detailing the agency's intent to effect enforcement discretion during the COVID-19 pandemic. June 29, 2020 – In a new memorandum, Assistant Administrator Susan Bodine, head of EPA's Office of Enforcement and Compliance Assurance (OECA), has announced that the temporary pandemic enforcement policy outlined in March 26, 2020 memo, will terminate on August 31, 2020.

PA EPA Updates – February 13, 2020 – At the PA DEP AQTAC meeting, DEP presented a draft proposed rulemaking for RACT III requirements. This rule would meet EPA emission control requirements for the Ozone Transport Region, which includes the entire Commonwealth of Pennsylvania

City Updates – February 20, 2020 – The Philadelphia City Council adopted a resolution (No. 200164) authorizing the Committee on the Environment and the Committee on Transportation and Public Utilities to hold hearings to examine the impact of the sale of the Philadelphia Energy Solutions (PES). June 25, 2020 – The City Council introduced a resolution (No. 200409, currently in Final Passage stage) calling on the Pennsylvania General Assembly to reverse the legalization of the sale of "consumer fireworks" in Pennsylvania. September 17, 2020 – The City Council adopted a resolution (No. 200429) to permanently recognize the third week in August as Solar Week in the City of Philadelphia.

Other updates – March 2, 2020 – According to a study published in Cardiovascular Research, ambient air pollution is leading global health risk, causing an estimated 8.8 million premature deaths per year, especially through cardiovascular diseases. April 5, 2020 – Researchers at the Harvard University T.H. Chan School of Public Health found that a small increase in long-term exposure to fine particulate matter (PM2.5) leads o a large increase in the COVID-19 death rate. April 21, 2020 – The American Lung Association (ALA) issued State of the Air (SOTA) 2020 annual report of national air quality. September 11, 2020 – Authors of a peer-reviewed study published in the journal Environmental Research Letters found that exposure to hazardous air pollutants (HAPs) could be associated with a 9-percent increase in COVID-related mortality. Emissions before and after COVID-19 – March 17, 2020 'stay-at-home' order was implemented by the Mayor. Mobile sources of pollutant went down because people were staying home. Decrease percentages: PM2.5 – 18%, NO2 – 22%, CO – 24%.

PES emissions before and after explosion – Emissions before and after PES Refinery shutdown/explosion. Ambient air quality data were analyzed for comparisons of two time periods: 1 - 6/21/29 – 3/17/20: after the refinery shutdown until the COVID-19 mitigations and 2 – 6/21/18 – 3/17/19: before the refinery shutdown. This analysis involves citywide monitoring data, with more focus on the RIT site – it is the site closest to the PES refinery. RIT site decreases after refinery shutdown: PM2.5 - 11%, SO2 – 8%, benzene average concentration went from 8.8 ppb carbon to 2.6 ppb carbon, which represents a 70% decrease.

AMS Laboratory Chemistry updates – Starting 3/18/2020, air monitoring and lab operations, as part of the Health Department, were deemed essential operations. Noise monitors were installed, and a demo was held in the Lab parking lot during June for the project with the University of Pennsylvania researchers. The 2020-2021 Air Monitoring Network Plan and 2020 5-Year Network Assessment went to public notice on 5/8/2020 for a 30 day comment period and were submitted to EPA on 6/18/2020. As of 3/27/2020, the AMS Lab now has the infrastructure for 6 electric vehicle charging stations in the Lab parking lot. AMS is working with PWD and Jefferson University as they plan a Green Stormwater Infrastructure Heat Mitigation project to deploy sensors to monitor temperature and humidity (now through the summer of 2021) to study the urban heat island effect. AMS was selected to receive the 2020 Community Scale Air Toxics Ambient Monitoring grant in the amount of $352,208, announced on September 28, 2020. PAQS: AMS has completed 29 months of sampling in October 2020. 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.

Outreach – 2/19/2020 - Hallie Weiss provided a presentation on Air Management and the PAQS project as part of a panel at the Public Health Grand Rounds. March 2, 2020 – Hallie Weiss and Maisha Wheeler provided a presentation at G. W. Carver High School of Engineering and Science to an Environmental Science class. 7/1/2020 – Hallie Weiss, Maisha Wheeler and Paresh Mehta provided a virtual outreach presentation to the University of Pennsylvania 2020 STEER summer class on air monitoring and lab operations. 10/8/2020 – 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 – ENVS 411: Air Pollution: Sources & Effects in Urban Environments, taught by Professor Maria Andrews.

Regulatory Services Activities – From January 1, 2020 – September 30, 2020: AMS issued 563 permits (422 air and 141 asbestos); serviced 312 citizen complaints (286 air, 26 asbestos, 70 noise); performed 2377 inspections (1416 air, 961 asbestos); observed 28 vehicles at 241 locations; issued 11 citations for violations of the City's anti-idling rules; issued 356 new NOVs (FC&E 334, Asbestos 22); resolved 329 NOVs (FC&E 313, Asbestos 16) collected $156,503 (FC&E $129,953, Asbestos $26,550) in Fines and Penalties.

Questions / Comments:

Ms. Gross-Davis congratulated AMS on being awarded the Community Scale Air Toxics Ambient Monitoring grant

4. Presentation on Proposed AMR VI Amendments and Air Toxics Health Risk Assessment

Presented by Air Management Services Program Services, Environmental Engineering Supervisor Jiazheng Li and Edward Wiener, Source Registration Chief

Proposed: Risk Assessment as part of the pre-construction permit process – Applications satisfy existing 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.

Exemptions – AMR VI currently exempts certain processes: example – combustion sources burning commercial fuel. Proposed exemptions based on risk assessment: Gas Stations – no more than 1,900,000 gallons/year throughput; ICE Engines: Emergency engine or fire pumps no more than 650 HP, limited to 500 hrs/yr; Boilers – 50MMBTU/hr burning #2 oil or natural gas (NG) with a minimum of 20-foot stack and 10 feet from the property line; Small spray booths: - that can accept limits below the risk thresholds.

Levels of Risk Assessment for Permit Application Including HAPs – All Permits with HAP emissions; Permits with at least one HAP above RT; Permits with negligible risk from Worksheet analysis; Permits needing Refined Risk Assessment.

HAP List – Current AMR VI: 99 chemical compounds – established in 1981; Proposed: 199 individual compounds and compound groups: A compound group contains multiple chemically similar or related individual compounds, e.g. “beryllium salts” group can contain Beryllium Nitrate, Beryllium Sulfate,…; This covers vast majority of the 187 HAPs under CAA, and more.

HAP Reporting Thresholds – The current AMR VI does not have HAP reporting thresholds. Proposed: establishing a Reporting Threshold for each HAP. 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 HAP emissions on a permit application; When a source operation’s potential to emit > Reporting Threshold: conduct risk assessment.

Our Goals on Establishing Reporting Thresholds – To be more protective on human health considering the latest scientific knowledge. To have HAP reporting thresholds based on conservative estimates of ambient concentration – by a range of stack heights and property line distances, using air quality modeling. To simplify screening process for permit applicants.

Methodology – HAP Reporting Thresholds: Observed meteorological date; Most current toxicology data and findings (USEPA, CalEPA, ATSDR); Current atmospheric dispersion science (AERMOD modeling); Representative stack parameters and property line distances.

Step 1: Modeling Representative Stacks – AERMOD (EPA designated air quality model) – Land Use / Dispersion Environments: Urban & Rural; Meteorology: 5 years of MET data; 11 stack heights: 15 – 250 ft with building downwash; Normalized emission rates: 1 ton/year; 1 lb/hour; Relatively low stack gas velocity and temperature: Small plume rise, erring on conservative side; 864 receptors (modeled ground-level spots) – with distances in a circular area of 3000 ft radius centered on a modeled stack. Modeling results – Max annual concentration per ton of HAP emitted: The higher concentrations occur closer to the source with shorter stacks.

Step 2: Normalized Statistical Evaluation –

Modeling Results – Modeling results (Annual Concentration Per Ton of HAP Emitted) – HAP reporting thresholds to be based on concentrations from stacks no more than 40 feet high and within a distance of 150 feet – conservative estimates.

Stack Height (ft)																										
Distance (ft)	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
20	43.85	41.75	39.65	37.55	35.45	33.36	33.93	34.50	35.07	35.64	36.21	34.87	33.52	32.18	30.84	29.50	28.56	27.63	26.69	25.76	24.82	23.89	22.95	22.01	21.08	20.14
25	42.50	40.50	38.49	36.48	34.48	32.47	33.01	33.54	34.08	34.62	35.16	33.87	32.58	31.30	30.01	28.72	27.82	26.91	26.00	25.10	24.19	23.28	22.38	21.47	20.56	19.66
30	41.16	39.24	37.33	35.41	33.50	31.58	32.09	32.59	33.10	33.60	34.11	32.87	31.64	30.41	29.18	27.95	27.07	26.19	25.31	24.44	23.56	22.68	21.81	20.93	20.05	19.17
35	39.48	37.68	35.87	34.06	32.25	30.45	30.91	31.38	31.85	32.32	32.79	31.62	30.45	29.28	28.12	26.95	26.11	25.27	24.43	23.59	22.75	21.91	21.06	20.22	19.38	18.54
40	37.81	36.11	34.41	32.71	31.01	29.31	29.74	30.17	30.60	31.03	31.46	30.36	29.26	28.16	27.06	25.95	25.15	24.35	23.54	22.74	21.93	21.13	20.32	19.52	18.71	17.91
45	36.04	34.45	32.86	31.27	29.67	28.08	28.48	28.87	29.26	29.66	30.05	29.02	27.98	26.94	25.91	24.87	24.11	23.34	22.57	21.81	21.04	20.28	19.51	18.74	17.98	17.21
50	34.28	32.79	31.31	29.82	28.33	26.85	27.21	27.57	27.93	28.28	28.64	27.67	26.70	25.73	24.76	23.79	23.06	22.33	21.61	20.88	20.15	19.42	18.70	17.97	17.24	16.51
55	32.60	31.21	29.82	28.42	27.03	25.64	25.97	26.30	26.63	26.96	27.29	26.37	25.46	24.55	23.64	22.72	22.03	21.34	20.65	19.96	19.27	18.58	17.89	17.20	16.51	15.82
60	30.92	29.62	28.32	27.03	25.73	24.44	24.74	25.03	25.33	25.63	25.93	25.07	24.22	23.37	22.51	21.66	21.01	20.35	19.70	19.05	18.39	17.74	17.08	16.43	15.78	15.12
65	29.42	28.21	26.99	25.78	24.56	23.35	23.62	23.89	24.16	24.44	24.71	23.91	23.10	22.30	21.49	20.69	20.07	19.45	18.82	18.20	17.58	16.96	16.34	15.72	15.10	14.47
70	27.93	26.80	25.66	24.53	23.39	22.26	22.50	22.75	23.00	23.24	23.49	22.74	21.98	21.23	20.47	19.72	19.13	18.54	17.95	17.36	16.77	16.18	15.59	15.00	14.42	13.83
75	26.69	25.61	24.54	23.47	22.39	21.32	21.55	21.77	22.00	22.22	22.45	21.73	21.02	20.30	19.58	18.87	18.31	17.74	17.18	16.62	16.06	15.50	14.94	14.38	13.81	13.25
80	25.44	24.43	23.42	22.41	21.40	20.39	20.59	20.79	21.00	21.20	21.41	20.73	20.05	19.37	18.70	18.02	17.48	16.95	16.42	15.88	15.35	14.81	14.28	13.75	13.21	12.68
85	24.40	23.43	22.47	21.51	20.54	19.58	19.77	19.96	20.15	20.34	20.53	19.88	19.24	18.59	17.94	17.29	16.78	16.27	15.76	15.25	14.74	14.23	13.72	13.20	12.69	12.18
90	23.36	22.44	21.52	20.60	19.69	18.77	18.95	19.12	19.30	19.48	19.66	19.04	18.42	17.80	17.19	16.57	16.08	15.59	15.10	14.62	14.13	13.64	13.15	12.66	12.17	11.69
95	22.47	21.58	20.70	19.82	18.94	18.05	18.22	18.39	18.56	18.73	18.90	18.31	17.72	17.13	16.53	15.94	15.47	15.00	14.53	14.06	13.59	13.13	12.66	12.19	11.72	11.25
100	21.58	20.73	19.88	19.04	18.19	17.34	17.50	17.66	17.83	17.99	18.15	17.58	17.01	16.45	15.88	15.31	14.86	14.41	13.96	13.51	13.06	12.61	12.16	11.71	11.26	10.81
110	20.36	19.57	18.77	17.97	17.18	16.38	16.52	16.66	16.80	16.94	17.07	16.54	16.01	15.48	14.95	14.41	13.99	13.56	13.14	12.72	12.29	11.87	11.44	11.02	10.59	10.17
120	19.15	18.40	17.66	16.91	16.17	15.42	15.54	15.65	15.77	15.88	16.00	15.50	15.01	14.51	14.01	13.52	13.12	12.72	12.32	11.92	11.52	11.12	10.72	10.32	9.92	9.52
130	17.93	17.24	16.55	15.85	15.16	14.46	14.56	14.65	14.74	14.83	14.92	14.46	14.00	13.54	13.08	12.62	12.25	11.87	11.50	11.12	10.75	10.38	10.00	9.63	9.25	8.88
140	16.72	16.08	15.43	14.79	14.15	13.51	13.57	13.64	13.71	13.78	13.85	13.42	13.00	12.57	12.15	11.72	11.37	11.03	10.68	10.33	9.98	9.63	9.28	8.93	8.59	8.24
150	15.50	14.91	14.32	13.73	13.14	12.55	12.59	12.64	12.68	12.73	12.77	12.38	11.99	11.60	11.22	10.83	10.50	10.18	9.86	9.53	9.21	8.89	8.56	8.24	7.92	7.59

Percentile:	
98%	37.68
95%	34.28
90%	31.62
85%	29.31

Step 3: Applying HAP-specific toxicology factors – Assuming risk is "negligible" at these levels for a single HAP: Cancer Health Risk Benchmark: 1 in a million; Non-Cancer Health Risk Benchmark: Hazard Quotient (HQ) = 1.

What is the threshold value?

Cancer based Threshold

Equation 1: $Q = \frac{CR}{URF \times C'}$

Non-Cancer based Threshold

Equation 2: $Q = \frac{HQ \times RfC}{C'}$

where:

Q = maximum annual emission rate, ton/yr – Threshold

CR = cancer risk; capped at 1×10^{-6}

URF = pollutant-specific inhalation Unit Risk Factor, $(\mu g/m^3)^{-1}$

HQ = non-cancer risk Hazard Quotient; capped at 1

RfC = pollutant-specific Reference Concentration, $\mu g/m^3$

C' = normalized annual concentration, $(\mu g/m^3)/(ton/yr)$; for example, use the value at 95th percentile.

Threshold Selection Guidelines – URF and RfC values: latest data from EPA IRIS, CalEPA, NJ; The limiting health risk factor (URF vs. RfC) and averaging time (annual vs. hourly) were selected for each HAP; Multiple percentiles (85th, 90th, 95th & 98th) were evaluated, most thresholds based on 98th percentile concentrations; Any threshold value was capped at 2000 lb/yr; 13 HAP thresholds were based on short-term toxicity data (no long-term toxicity data available, or short-term risk factor makes threshold more stringent).

Thresholds resulting in a negligible risk – Percentile Analysis (examples) –

HAP	Percentile Based Thresholds (lbs/year)				Candidate Value for Reporting Threshold (lbs/year)
	85th	90th	95th	98th	
Benzene	8.7	8.1	7.5	6.8	7.0
Carbon Tetrachloride	11.4	10.5	9.7	8.8	9.0
Chloroform	3	2.75	2.5	2.3	2.3
Formaldehyde	5.3	4.9	4.5	4.1	4.0
Hydrogen Fluoride	955	885	816	743	740
Methyl Bromide	341	316	292	265	265
Vinyl Chloride	7.8	7.2	6.6	6.0	6.0
Vinyl Acetate	13647	12650	11669	10616	2000

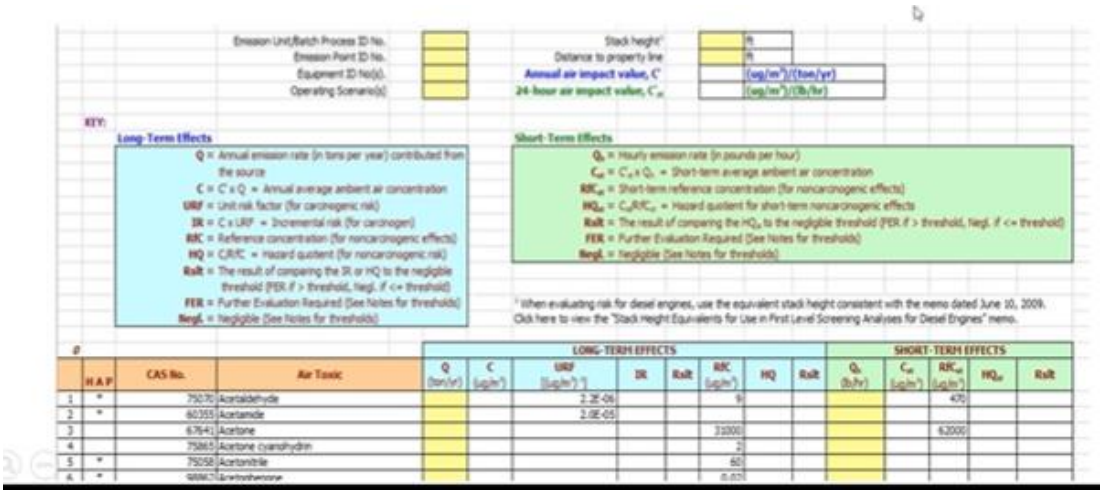
How do they compare with current AMR VI (examples) – New method is much more stringent. New reporting thresholds will not cause backsliding.

HAP	Current AMR VI - Reccommended Annual Ambient Concentration		Max. Allowed Annual Concentration (µg/m3) based on new methodology -- cancer risk at 1/million & non-cancer HQ at 1
	(ppb)	(µg/m3)	
Benzene	24	76.6	0.13
Methyl Bromide	120	466	5.0
Formaldehyde	4.8	5.9	0.077
Carbon tetrachloride	12	75.6	0.17
Chloroform	24	116.8	0.043
Vinyl chloride	2.4	6.1	0.11
Chromium/compounds (VI)		0.12	0.00008

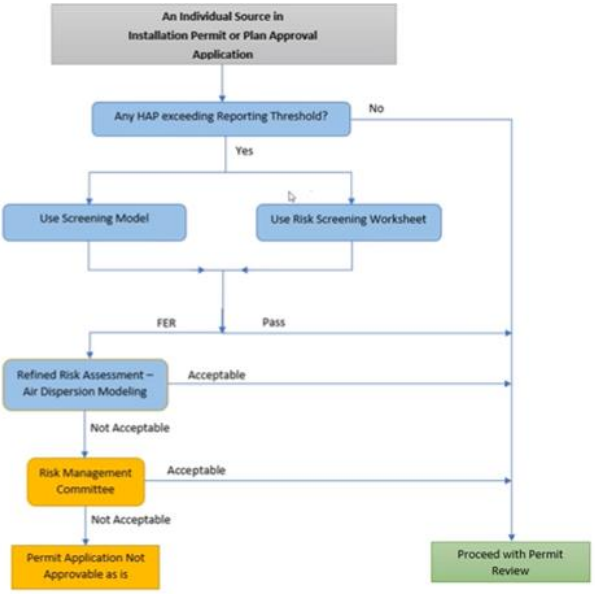
Compared with New Jersey reporting thresholds values (examples)

HAP	Threshold Value based on Philadelphia Scenarios (lbs/year, at 98th percentile)	New Jersey Reporting Threshold (lbs/year)
Benzene	6.8	6
Methyl bromide	265	230
Formaldehyde	4.1	3.5
Hydrogen fluoride	743	600
Carbon tetrachloride	8.8	8
Chloroform	2.3	2
Vinyl Acetate	2000	2000
Vinyl Chloride	6	5
Acetaldehyde	24	21

Using Reporting Thresholds in Permitting – Risk Screening Worksheet developed using same methodology described above: Applicant has at least 1 HAP with proposed emission rate above RT: Risk Screening required. Enter emission rate, stack height and closest stack-to-fenceline distance: worst-case scenario cancer and non-cancer risks are calculated. If risk exceeds benchmark, further evaluation (facility-specific modeling) is required, otherwise, no further evaluation.

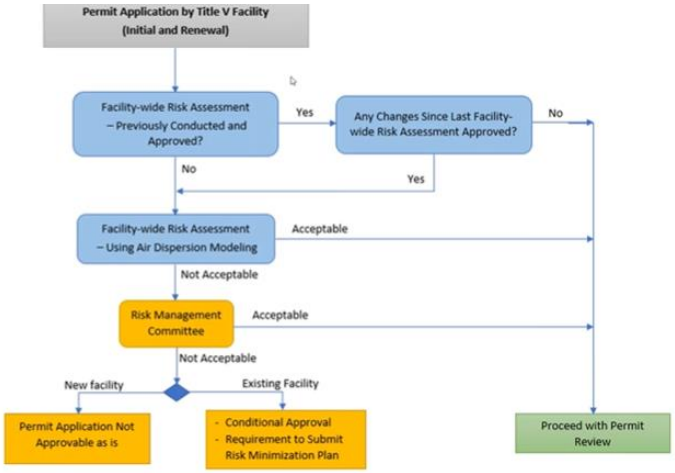


Workflow for individual source, individual HAP:



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: Cancer Risk greater or equal to 10 in a million and Non-cancer HQ less than or equal to 1: Negligible. Otherwise, Case-by-case review or permit application unacceptable.

Workflow for Facility-wide Risk Assessment



Questions / Comments:

Q: What exit velocity and temperature was assumed in calculations?
A: Temperatures were assumed slightly higher than ambient temperatures
Jason will get back to board with the exact numbers.

Tom: Vinyl Acetate on slide 16 – The methodology calculated a number that you don't believe. Does that cast dispersions on the methodology?

Jason: It was the same methodology used to calculate the other values. The difference for each compound is the cancer unit risk factor and non-cancer reference concentration. We used the same methodology New Jersey EAP used and got the numbers from EPA and California EPA.

Tom: I'm not challenging how you did the calculations. I'm trying to understand why 7 times you trusted the results and 1 time you didn't. I'm trying to understand the thought process.

Jason: It's not that we don't believe the results. The risk factors can always change. When new scientific knowledge comes out, they may update those numbers. So periodically we would change those designs and numbers and recalculate the results. We try to be consistent with New Jersey.

Carol Ann: It sounds like you have a cap on 2000lbs/ a ton a year, that's the maximum for any particular HAP.

Jason: We try to stay consistent with New Jersey. They may have that same debate.

Tom: Is there an opportunity to piggyback on Title V reporting limits and what we're asking people to do?

Jason: You could still start from 1 single HAP, but eventually you have to combine multiple sources or multiple stacks and to do that you would have to use HAP dispersion model.

Kass: That is the limit. If facility has more than that, we will not issue a permit. If you have a Title V facility, you have to give AMS all inventory. Once we have inventory, if the inventory is more than what we have we have to run the model. It should be 1 in a million because that is the EPA standard.

Carol Ann: Besides New Jersey, have you talked with any other region 3 air modelers that run air modeling just for consultation.

Jason: We just had discussions with New Jersey EAP.

Carol Ann: That may be an option since we have a few in region 3.

Carol Ann: If they have to do refined air dispersion modeling, who is going to review that, the City? And how many permits might fall into that realm and what is the workload? How many Title V permits might fall into that? Does AMS have the capability to handle that?

Jason: We've been thinking about that question ourselves.

Ed W: We don't have great estimates. We get about 600 permits applications a year, most of which we shouldn't have to do risk assessments for. There may be about 200 a year that may trigger a risk assessment. We have about 28 Title V that may become more involved. We're not there yet with estimates

Carol Ann: The way the Title V regulations work, it's going to be different to know which permits are going to trigger this process. This is not a process that EPA has done. Be aware of the expertise you're going to need, does staff need to be trained and/or need assistance? Think about it.

Matt (for Joe Minott): AMS based a lot of methodology on New Jersey. California has more protective standards. Has AMS looked into this?

Kass: We are doing quantitative risk assessment. Hazard identification, ex Title V how many toxics do they have and how many pounds. We identify each source. Exposure assessment, once we run the model, we have to find the maximum ground level concentration by the model and determine exposure intake. How much concentration is in the air and how much do we take in. then we have to do the calculations. This includes how many days are in the year and we have to look at 70 years for cancer risk.

Matt: Besides inhalation, do you look at other pathways of exposure?

Kass: We only take inhalation.

Matt: We're asking that AMS go a little above and beyond. Is there anything that prohibits AMS from looking into other pathways of exposure.

Kass: No, we are not permitted to. We don't do anything other than air.

Matt: Has this model considered multiple type of pollutants. Did this analysis take other pollutants into account?

Jason: You can take this model and apply it to individual pollutants. We don't add different pollutants together because they may impact our organs differently.

Matt: You may be underestimating the cumulative risks.

Matt: Cumulative impacts – Were attempts made to look at other existing sources that may be in close proximity?

Kass: If we find hot spots, we have to go to nearby facilities and test them. Maybe in the future we test cumulative compounds.

Carol Ann: Just to let everyone know, New Jersey presented this a year or 2 at MARAMA it was well received, and everyone thought it was a great approach.

Q: Why round half value numbers up rather than down?

Jason: Sometimes we didn't round up or down, other times we rounded up. Rounding the numbers can change the results dramatically.

5. NEW BUSINESS

Chairman Battle: To Kass and Rich - Before the next meeting, we need to have a dry run so that we don't have the same technical glitches we had at this meeting.

6. ADJOURN

The meeting adjourned at approximately 4:00pm.