

CITY OF PHILADELPHIA

AIR POLLUTION CONTROL BOARD

IN RE: Public Hearing - proposed Synthetic Minor
Operating Permit for Southeastern
Pennsylvania Transportation Authority
(SEPTA) - Roberts Complex

DATE: Thursday, July 27, 2023

LOCATION: Zoom Teleconference

REPORTED BY: John Kelly, Court Reporter

HELD BEFORE: DR. PALAK RAVAL-NELSON, Deputy Health
Commissioner for Philadelphia DPH
DR. EDWARD WIENER, Chief of Source
Registration for AMS
DR. CHERYL BETTIGOLE, Health Commissioner
for Philadelphia DPH
DR. KASSAHUN SELLASSIE, Director of AMS
JIAZHENG LI, Board Staff

ALSO PRESENT:

TAMMY MURPHY, M.A., LL.M., Physicians for Social
Responsibility - Pennsylvania
LYNN ROBINSON, Neighbors Against the Gas Plants
MARTA GUTTENBERG, Resident, City of Philadelphia
FLORA CARDONI, PennEnvironment
KARENA JACKSON LUNDY, Resident, City of Philadelphia
WALTER TSOU, MD, MPH
STATE REPRESENTATIVE DARISHA K PARKER
PETER WINSLOW, A SMART Collaboration LLC (ASC)
CHRISTINA DIGIULIO, Resident, City of Philadelphia
SHEILA TRIPATHY, Resident, City of Philadelphia
MITCH CHANIN, Resident, City of Philadelphia
HOPE FELDMAN, Resident, City of Philadelphia
PETER FURCHT, Resident, City of Philadelphia
TAYLOR BAKER, Resident, City of Philadelphia
HOPE PRIMAS, Resident, City of Philadelphia
MIKE EWALL, Energy Justice Network
RUSSELL ZERBO, Clean Air Council
MUSA WILSON, Student, Imhotep Charter School
JEREMIAH WHITE, Student, Imhotep Charter School
LISA HASTINGS, Resident, City of Philadelphia

Pages 1 through 69

LIST OF SPEAKERS

	PAGE
Tammy Murphy, M.A., LL.M.	5
Lynn Robinson	10
Marta Guttenberg	15
Flora Cardoni	17
Karena Jackson Lundy	20
Walter Tsou, MD, MPHNB	21
State Representative Darisha K Parker	25
Peter Winslow	26
Christina DiGiulio	31
Sheila Tripathy	35
Mitch Chanin	37
Hope Feldman	41
Peter Furcht	44
Taylor Baker	47
Hope Primas	49
Mike Ewall	51
Russell Zerbo	54
Musa Wilson	56
Jeremiah White	60
Lisa Hastings	62

1 PROCEEDINGS

2 MR. WIENER: My name is Edward Wiener, Chief of Source
3 Registration for Air Management Services of the Philadelphia
4 Department of Public Health. Please note that this public
5 hearing is being recorded.

6 We are here to accept testimony on a proposed
7 Synthetic Minor Operating Permit for Southeastern
8 Pennsylvania Transportation Authority (SEPTA) - Roberts
9 Complex, located at 4301 Wissahickon Avenue, Philadelphia,
10 PA 19129.

11 This hearing was published in the notices section of
12 the Pennsylvania Bulletin on Saturday, June 10, 2023. This
13 hearing was also published in the Philadelphia Inquirer and
14 the Philadelphia Tribune on May 31, 2023, June 1, 2023, and
15 June 2, 2023.

16 The proposed Synthetic Minor Operating Permit, Number
17 OP17-000024, is a renewal of the existing Synthetic Minor
18 Operating Permit for the facility. All the sources in the
19 proposed renewal Synthetic Minor Operating Permit are also
20 in the existing Synthetic Minor Operating Permit except for
21 the two (2) natural-gas fired 4.6 megawatt combined heat and
22 power units.

23 AMS approved installation of the combined heat and
24 power units by issuing a construction permit, AMS Plan

1 Approval No. IP17-000009, on November 29, 2017. The
2 combined heat and power units are included in the proposed
3 renewal Synthetic Minor Operating Permit.

4 The facility is not a major stationary source as
5 defined in Title I, Part D of the Clean Air Act Amendments.
6 The facility is subject to the operating permit requirements
7 adopted in 25 Pa Code Section 127, Subchapter F but is not
8 subject to the Title V operating permit requirements adopted
9 in 25 Pa Code Section 127, Subchapter G.

10 The Department is holding this hearing to allow all
11 interested parties to testify with comments on this
12 Synthetic Minor Operating Permit application.

13 This hearing is being recorded and transcribed.
14 Please state and spell your name and any organization you
15 represent for the record before you begin. Each person's
16 testimony is limited to five minutes so everyone who wishes
17 to testify can testify. We will notify you when you have
18 one minute remaining. Each organization should designate
19 one witness to present testimony. Following your testimony,
20 we may need to ask for additional information.

21 This hearing will not be a question-and-answer
22 session. However, I can assure you that we will address all
23 comments and questions concerning this Synthetic Minor
24 Operating Permit before any determination is made to issue

1 it. All oral or written comments received will become part
2 of the public record. We will prepare a response document
3 prior to final action on this operating permit. It will be
4 sent to attendees and commenters who we have an address for.

5 If anyone has written comments to submit, please
6 e-mail them to the AMS Service Requests e-mail address,
7 which you can find in the chat. That's the
8 DPHAMS_Service_Requests@Phila.Gov address. Please put SEPTA
9 Roberts Complex SMOP in the subject line.

10 We will start the oral comments now.

11 DR. RAVAL-NELSON: Excellent. Thank you very much,
12 Ed. All right. Good evening. Our first commenter will be
13 Tammy Murphy. Please un-mute Ms. Murphy's mic, and Ms.
14 Murphy, please share yourself on the screen if you would
15 like, and when you start speaking, I will start the timer.
16 Thank you in advance for testifying.

17 MS. MURPHY: Okay. I can't, I don't have access to
18 showing myself on the screen.

19 DR. RAVAL-NELSON: That's fine.

20 MS. MURPHY: I do have a slide deck, if you would let
21 me share it.

22 DR. RAVAL-NELSON: We're going to keep it to verbal
23 testimony.

24 MS. MURPHY: Okay. All right.

1 DR. RAVAL-NELSON: But Ms. Murphy, if I could, I
2 apologize for interrupting you, we will keep it to verbal
3 testimony but if you want to email the slide deck, we will
4 make sure it becomes a matter of public record and will
5 review and provide any feedback associated.

6 MS. MURPHY: Okay. That would be great. Thank you so
7 much.

8 DR. RAVAL-NELSON: Thank you. Please begin and I will
9 start the timer.

10 MS. MURPHY: Sure. Okay. So my name is Tammy Murphy,
11 and do I have to spell that? It's up on the screen. T-A-M-
12 M-Y, M-U-R-P-H-Y. I am a resident of East Falls. I live in
13 walking distance of the facility and I am also a parent
14 living here with a child who has asthma.

15 Learning that my child has asthma, I have two kids,
16 and the first one was not born here and didn't live here the
17 first couple years of his life, but the second child who was
18 raised here just recently last year started having issues
19 with asthma.

20 So this area that we live in in Philadelphia is pretty
21 complicated, and I want to talk a little bit about that
22 before I talk about those things that I'd like to see happen
23 here.

24 I think that the situation of putting this gas plant

1 in here despite the other gas plants that do exist in the
2 city, I think that the placement of this here was done to
3 appease policy makers that wanted the natural gas industry
4 to use power plants as they have in other places to allow
5 themselves to take eminent domain for their for-profit
6 industry, which is mostly exports, but they have to have a
7 couple locations where the residents are technically using
8 them, whether we want them here or not.

9 They have to have that in order for them to get
10 eminent domain to pipe their product through the state and
11 out to, you know, to the ports for export, which is the
12 majority of the fossil fuel business.

13 They went through this iteration in the past with
14 trying to get the bus lines, and when SEPTA didn't it to
15 them, they were punished and the bus lines were reduced in
16 Philadelphia because our financial support was reduced by
17 policy makers that wanted to appease the industry.

18 I want to point out that one out of three children in
19 this area already have asthma. That's an extremely high
20 rate for the city, and actually an extremely high rate of
21 asthma anywhere in the world, so it's standing out.

22 This particular area stands out on a global scale.
23 It's a massive number, to have one out of three children in
24 the area already having asthma.

1 Now, combine it with the next couple of facts that I'm
2 going to talk out. You're going to see why it's
3 environmental racism and I will share the slides with you as
4 I have done with City Council and others.

5 The majority of the people in this community are
6 black. If you look just adjacent, when you see the slides,
7 you're going to see that the majority in East Falls is
8 white. There's a stark difference in the border lines
9 between the neighborhood, but it's black in the area smack
10 dab where the actual power plant is, and then on the other
11 side of that, it's majority Latino. So we're talking about
12 people of color and having these kinds of facilities put
13 into their community.

14 The other major thing about Nicetown that stands out
15 strong is the fact that the wealth in the community is
16 decreasing. It's decreasing at a rate that is far faster
17 than any other community in the city, and the wealth has
18 gone down to, in most of the area, it's gone down to the
19 bottom level, which is public assistance and up to like
20 \$28,000 per household per year.

21 So a community like this is not the kind of community
22 where we should be adding extra burdens. Obviously they
23 have existing burdens.

24 A couple of things, four things I'd like to demand in

1 general, and I'll more specific stuff in written testimony.
2 We need and demand that the health consequences of emissions
3 violations need to be put on public record in real time from
4 the current time dating back to when the plant was started
5 operating.

6 We need and demand transparent, real time, accessible,
7 continuous air quality monitoring of the site and
8 surrounding community in at least a one-mile radius.

9 We need and demand remediation of air quality by
10 reducing the amount of fossil fuels burned on site to reduce
11 emissions.

12 DR. RAVAL-NELSON: You have one minute left.

13 MS. MURPHY: Okay. They should add solar and plant
14 thousands of trees in the area to protect the residents'
15 health, and we demand a just transition immediately away
16 from gas to protect the community, union workers'
17 livelihood, and environment.

18 I'm going to ask before I end if, for myself and for
19 others, if you can please share in the chat where we can
20 send written testimony and when the deadline is for that.

21 DR. RAVAL-NELSON: Absolutely. Thank you very much.
22 The written comments, that period has been extended to
23 August 31st, so folks will have to August 31st to provide
24 additional written comments including, if you want to submit

1 slides.

2 And the email address that they can be sent to was
3 shared in the chat, but I will ask the team to re-share it
4 so that it's written in the chat for everybody.

5 It is DPHAMS_Service_Requests@Phila.Gov. That's a
6 little bit complicated, but it's being re-shared, thank you,
7 Ed, with everybody.

8 MS. MURPHY: Do they need to have a specific headline
9 or something like that? Can you put all the information in
10 the chat, please?

11 DR. RAVAL-NELSON: Yes. Ed Wiener will go ahead and
12 enter that in the chat. Okay? So thank you very much, Ms.
13 Murphy.

14 Our next speaker for the evening will be Ms. Lynn
15 Robinson. Again, Ms. Robinson, when you're ready, I will
16 start the timer, and you may feel free to un-mute your
17 camera and Jason will un-mute you.

18 (Pause.)

19 DR. RAVAL-NELSON: Ms. Robinson?

20 MS. ROBINSON: Yes. Can you hear me?

21 DR. RAVAL-NELSON: Yes. Now we can. Thank you very
22 much. Might I ask if you could speak up just a little bit
23 louder?

24 MS. ROBINSON: Okay.

1 DR. RAVAL-NELSON: Thank you. That's perfect. And I
2 will start your timer now.

3 MS. ROBINSON: Great. Good evening. My name is Lynn
4 Robinson. I'm representing Neighbors Against the Gas
5 Plants. I live in southwest Germantown, 9/10ths of a mile
6 from SEPTA's power plant at Roberts Yard.

7 Thank you for holding a public hearing in response to
8 our request during the written comment period back in
9 January. These remarks are addressed to AMS and Health
10 Commissioner Bettigole and Deputy Commissioner Raval-Nelson
11 within the context that your stated mission is to protect
12 local public health within the City of Philadelphia.

13 I'm shocked that AMS and SEPTA are still repeating the
14 misguided refrain that the CHP reduces greenhouse gases
15 regionally by 41 percent.

16 The claim is based on an EPA CHP calculator with
17 SEPTA's inputs for grid energy from before two coal plants
18 were closed. The calculation is not certified by the EPA,
19 and we have never accepted the claim. Even Mayor Kenny
20 stopped saying it.

21 The other refrain is that toxic emissions would be
22 undetectable at the fenceline. We're here today with a
23 lived experience of being outside of SEPTA's fenceline for
24 over two and a half years during the operation of SEPTA's

1 gas plant and we collectively refute the nonsense about
2 being undetectable.

3 What you can't see can still hurt you, and your body
4 doesn't lie. I've noticed a decline in air quality in
5 Nicetown and southwest Germantown where I live since 2021.
6 Bad air days used to be a problem in hot weather, but now
7 air quality on my block is detectably polluted on some
8 winter days, and generally the air is simply not as fresh.

9 My neighbors with allergies and asthma have reported
10 worse symptoms, and I get headaches. My job here today is
11 to make realistic, practical recommendations.

12 Here's the big kicker. Total potential NOx emissions
13 for the facility is 24.7 tons per year, just 0.29 tons below
14 the 25 ton limit for Synthetic Minor permit.

15 An equipment malfunction or a worker making a mistake,
16 both of which have happened, could again put the facility in
17 violation. It could take AMS up to three years to detect
18 the violation because a performance stack test only runs
19 every three years.

20 We are sitting ducks, knowing we are unprotected for
21 almost three years at a time. Even if no violations ever
22 occur again, our health is affected by the stress of the
23 threat.

24 Here is what we want: install continuous emission

1 monitors in the two CHP stacks. SEPTA's mentions CEM
2 monitors for NOx as an option during ozone season. We say
3 use them year-round and add VOCs and carbon dioxide and HAPS
4 monitoring.

5 Stack tests should occur quarterly. Portable analyzer
6 tests should be conducted at least monthly and include
7 additional pollutants.

8 AMS should install at least one EPA quality ambient
9 air monitoring station in the residential community that
10 measures ozone, ozone precursors and other toxics. North
11 Philadelphia is an air monitoring desert.

12 SEPTA should report emissions data to the public as it
13 is collected on the Health Department web site. To protect
14 health, AMS should require SEPTA to turn the CHP down to
15 minimal operation during Code Orange and worse air quality
16 days.

17 Disallow the new de minimis emissions increases in
18 SEPTA's 2023 permit. These forgive extra emissions within a
19 five-year period, altogether 21 tons. Unpredictable high
20 spikes of pollution could kill more of the neighbors
21 prematurely.

22 If the reality is that it's not about short-term
23 dumping but that daily operations would allow more gas
24 burning, this permit could be a plan to encourage violations

1 and move towards a major permit. The EPA calls that type of
2 plan a sham permit, and it's not allowed.

3 Address Philadelphia's lack of compliance with the
4 national ambient air quality standard for ozone and the fact
5 that the facility releases an excess of waste heat in a heat
6 island neighborhood. Very little of the waste heat is
7 actually used by the bus depot, and in the summer absolutely
8 none of it.

9 We ask that during ozone season, SEPTA measures NOx
10 hourly as stated in the permit as an option, instead of
11 looking at one-year averages. Decrease levels of NOx,
12 carbon monoxide and VOCs by reducing gas burning --

13 DR. RAVAL-NELSON: You have one minute, Ms. Robinson.

14 MS. ROBINSON: Great -- and cancel the need for the
15 facility to ever purchase allowances from other facilities
16 to compensate for emission overages.

17 Be prohibited from buying allowances. The allowance
18 system perpetuates dangerous levels of ozone production in
19 our region.

20 Reduce the risk of emissions violations by reducing
21 annual gas usage by the CHP. Electric power from gas can be
22 replaced by the grid or installing solar panels without
23 negatively impacting train service at Wayne Junction. SEPTA
24 knows this.

1 The Health Department should strongly encourage SEPTA
2 to apply for federal infrastructure act and other grants for
3 the installation of solar on rooftops including the Midvale
4 Bus Barn, Wayne Junction, Wayne Junction Maintenance
5 Facility.

6 DR. RAVAL-NELSON: Ms. Robinson, your time is up. May
7 I ask that you submit the rest of your testimony, I don't
8 mean to be rude, if you could submit the rest of it in
9 writing.

10 MS. ROBINSON: Great. Thank you.

11 DR. RAVAL-NELSON: Thank you very much, Ms. Robinson.

12 Our next speaker will be Marta Guttenberg, and if I
13 mispronounce anybody's name, I apologize in advance. Ms.
14 Guttenberg, when you are ready, Jason will un-mute you. You
15 can feel free to be on camera. When you get started, I will
16 start the timer.

17 (Pause.)

18 DR. RAVAL-NELSON: Please feel free to start.

19 MS. GUTTENBERG: Am I audible?

20 DR. RAVAL-NELSON: We can hear you.

21 MS. GUTTENBERG: Thank you.

22 We're in a very special moment right now, as everyone
23 is aware, the hottest day of the hottest month of the
24 hottest year all over the world, and here in Philadelphia.

1 We've been asking SEPTA to please not build this plant
2 since they proposed it. We've urged them not to run it
3 since they built it, even before it was approved. And now
4 they're asking us to permit them to run it some more.

5 The plant has never been in compliance. The whole
6 area has never been in compliance. I can't believe that
7 with all the evidence available to all of us right now,
8 telling us that this plant and this plan is the wrong thing
9 to do, that people are persisting. And I'm going to persist
10 in demanding that it be stopped. Thank you.

11 DR. RAVAL-NELSON: Thank you very much.

12 Our next speaker will be Mike Ewall. Once you get on
13 the screen and you get started, I will start your timer.

14 (Pause.)

15 DR. RAVAL-NELSON: Mr. Ewall?

16 (No response.)

17 DR. RAVAL-NELSON: Okay. Last call for Mr. Ewall, Mr.
18 Mike Ewall from Energy Justice Network. Are you here?

19 (No response.)

20 DR. RAVAL-NELSON: Okay. I will mark the sheet that
21 you had registered to testify but were not available, so we
22 will come back to you.

23 Our next person will be Flora Cardoni from Penn
24 Environment. Flora, when you're ready, please come on the

1 screen. You will be un-muted.

2 MS. CARDONI: Hi. Can you hear me?

3 DR. RAVAL-NELSON: Yes, we can, and I will start your
4 timer, ma'am.

5 MS. CARDONI: Thank you. My name is Flora Cardoni, F-
6 L-O-R-A C-A-R-D-O-N-I, and I'm testifying on behalf of Penn
7 Environment, the statewide citizen-based environmental
8 advocacy non-profit.

9 Thank you for the opportunity to testify today on
10 behalf of thousands of our members across the state and here
11 in Philadelphia who are clamoring for real action to lower
12 harmful air pollution and tackle the climate crisis.

13 Of course, as Marta just expressed as well, the threat
14 posed by climate change has never been more apparent. All
15 you had to do is walk outside today as we experienced yet
16 another excessive heat watch here in Philly after a string
17 of record-breaking summer temperatures, or breathe the air a
18 few weeks ago as much of the East Coast was shrouded in
19 smoke from the Canadian wildfires, to feel firsthand that
20 climate change is here.

21 And unfortunately, the heat waves, fires, tragic
22 floods and other impacts will only get worse without real
23 action, and the time to act is now.

24 The science is clear that to stop the worst impacts of

1 climate change, we need to stop burning fossil fuels
2 including so-called natural gas as quickly as possible, not
3 extend their life any further.

4 Ending our reliance on dirty, dangerous fossil fuels
5 and moving towards a future powered with 100 percent clean
6 renewable energy will help us lower global warming
7 emissions, clean up our air and protect our health.

8 SEPTA has an opportunity to meet the moment of the
9 climate crisis and protect community health at the same
10 time. SEPTA should prioritize electrifying its facilities
11 and powering its operations with clean renewable energy like
12 solar power instead of digging deeper into these dirty,
13 dangerous fossil fuels.

14 At Penn Environment, we echo residents' calls to
15 invest in solar arrays at the Nicetown plant and throughout
16 the SEPTA service area, taking advantage of new federal
17 funded opportunities, and this of course should be part of a
18 larger transition away from all fossil fuels again like
19 fracked gas towards an operation powered by 100 percent
20 clean renewable energy.

21 In the meantime, if and as the facility continues to
22 burn fossil fuels, we join the calls for increased air
23 monitoring and testing requirements at the facility to
24 ensure that air pollution emitted from the facility is in

1 compliance with its pollution permit limits at all times.

2 There are mountains of data that show that air
3 pollution has a litany of negative effects on our health
4 like respiratory and cardiovascular diseases, increased risk
5 of dementia and even premature death, and certain residents
6 of the neighborhood have experienced those things firsthand.

7 While we can't choose whether or not to breathe the
8 air, we can choose to work to make the air cleaner, and AMS
9 can help by lowering levels of allowable pollution at the
10 plant, mandating more frequent air monitoring and testing
11 and strictly enforcing air permits to make sure that
12 facilities never exceed the legal limit, which is too high
13 as it is.

14 No one should have to breathe polluted air just
15 because of where they live, and none of us deserve to
16 experience the devastation that the climate crisis is
17 already causing.

18 So we call on AMS and SEPTA to do everything in their
19 power to move away from fossil fuels towards a cleaner
20 energy future, clean up our air and protect our health and
21 our planet for generations to come. Thank you.

22 DR. RAVAL-NELSON: Thank you very much.

23 Our next presenter will be Karena Jackson Lundy. When
24 you are ready and on the screen, I will start your timer.

1 (Pause.)

2 DR. RAVAL-NELSON: Ms. Lundy?

3 (No response.)

4 DR. RAVAL-NELSON: Are you still available to speak,
5 Ms. Lundy?

6 MS. JACKSON: Can you hear me?

7 DR. RAVAL-NELSON: Yes, now we can. Thank you very
8 much. I will start your timer.

9 MS. JACKSON: One second before you start my timer.

10 DR. RAVAL-NELSON: Sure.

11 MS. JACKSON: Just one question. Is there a way to
12 split time with another person on the call, or are we --

13 DR. RAVAL-NELSON: No. Thank you.

14 MS. JACKSON: Okay.

15 DR. RAVAL-NELSON: Get started.

16 MS. JACKSON: Okay. My name is Karena Jackson. I
17 live up on the hill on Fern Hill, basically, the top of the
18 hill. I just have a few statements. I'm not going to take
19 very long. Sorry, I'm not a public speaker, but I'm going
20 to try.

21 SEPTA has talked about numbers on the low level of
22 pollution that they, you know, release in the air over the
23 years. They stated many ways how it's low and how much is
24 being released, but they never really stated anything about,

1 you know, how they're cleaning the air at the same time.
2 It's more of, you know, the minimum that's being released.

3 I recommend that trees be planted in the surrounding
4 areas because they're natural air cleaners. SEPTA owns a
5 lot of property around the City, so it shouldn't be an issue
6 to plant these trees.

7 I recommend 15 to 20 trees in the surrounding area
8 since pollution is going to be released and we're probably
9 not going to be able to prevent it. That's my end.

10 DR. RAVAL-NELSON: Thank you very much for your
11 testimony.

12 Our next speaker will be Walter Tsou. Dr. Tsou?

13 DR. TSOU: Hi.

14 DR. RAVAL-NELSON: Hi.

15 DR. TSOU: Can you hear me?

16 DR. RAVAL-NELSON: Yes, we can. I will start the
17 timer.

18 DR. TSOU: It's so great to see you, Palak, and also
19 Dr. Bettigole and my old friends from the Health Department.
20 Anyway, I'm Dr. Walter Tsou. I want to speak today as an
21 individual about the permit for the SEPTA gas plant.

22 As Marta stated earlier, that today is a bitter
23 reminder of the price that we pay as a nation as we continue
24 to burn fossil fuels, of which SEPTA gas plant is an

1 example, just one of many power plants that we have in our
2 city.

3 We have a climate crisis and there's no question about
4 that, and the more rapidly we can move toward renewable
5 energy, the better off we will be.

6 Unfortunately, the new AMS air pollution rules do not
7 envision a renewable future, which makes it a requirement
8 that no power plant permit would be allowed unless they can
9 demonstrate why a renewable energy source like wind, solar
10 and battery storage, was not the first option and/or somehow
11 integrated into the energy plan.

12 SEPTA states that they need the CHP because they are
13 unable to develop enough power with solar panels at the
14 Midvale site, but SEPTA actually reaches over 450 miles of
15 track, hundreds of buildings, and they could all be, with
16 time, covered with solar panels and battery storage, and
17 once installed, it would have a permanent, low-maintenance
18 energy source for all its trains and transportation needs.

19 Now, it is true that that's the future, but right now,
20 until tonight, I could not find any data about the emissions
21 that came from the SEPTA gas plant.

22 And my criticism to you, maybe I'm just not perceptive
23 enough, is that you cannot ask people to give public
24 testimony about the emissions for a gas plant unless you

1 publish the current data on how many emissions actually came
2 out of the gas plant, because it's hard for us to comment
3 otherwise.

4 It's also interesting that you now have a mobile van
5 that can do air monitoring. That is something that we
6 requested at the time of the original SEPTA gas plant
7 permit. You were relying on the Lycoming site four miles
8 away from the SEPTA gas plant rather than actually having a
9 mobile site actually at the Nicetown plant so that we could
10 have actually known what the true baseline was, because the
11 baseline was an essential part of granting the original
12 SEPTA permit.

13 And finally, you know, I personally think that you
14 have to have, as Lynn Robinson said earlier, some type of
15 monitoring system that's available, that's published on a
16 web site, that the public can use to view what exactly is
17 going on with the various gas plants, not just SEPTA's gas
18 plant but all the power plants that we have in our city, so
19 that we have an idea of how much NOx and VOCs are actually
20 being emitted.

21 So in sort, I think that the lack of data and
22 transparency is a serious problem that AMS needs to correct
23 in future permits that they grant.

24 It's hard for me to know whether this is truly a

1 Synthetic Minor. The permit said they only operate 8,060
2 hours a year, but there are actually -- that means that's 29
3 days short of a full year of operation.

4 It's hard for me to believe that the SEPTA gas plant
5 is actually closed for almost a month out of the year. And
6 if it were actually operated 365 hours (sic), I think the
7 number of emissions actually would go up and it would
8 actually --

9 DR. RAVAL-NELSON: You have one minute, sir. Sorry.
10 You have one minute left.

11 DR. TSOU: -- not be allowed as a Synthetic Minor
12 facility. So in conclusion, let me say that we need better
13 transparency of the data. We need better rules for AMS that
14 favor renewable energy.

15 We should realize that the baseline should not be coal
16 burning as a 41 percent reduction of greenhouse gases, but
17 rather how much more you're emitting because we're not using
18 renewable energy. Thank you.

19 DR. RAVAL-NELSON: Thank you very much.

20 Our next speaker will be State Representative Darisha
21 K. Parker. I apologize if I did not pronounce the name
22 correctly. Representative Parker?

23 (No response.)

24 DR. RAVAL-NELSON: Representative Parker?

1 (No response.)

2 REPRESENTATIVE PARKER: Hey, good afternoon. You hear
3 me? Can you hear me?

4 DR. BETTIGOLE: Yes. I apologize. Deputy Raval-
5 Nelson's computer just crashed. I can serve as your timer,
6 though. Let me just get a timer up for you. I'm sorry.

7 REPRESENTATIVE PARKER: Thank you.

8 DR. BETTIGOLE: No problem. I'm so sorry.

9 REPRESENTATIVE PARKER: That's okay.

10 DR. BETTIGOLE: Whenever you're ready, you can begin.

11 REPRESENTATIVE PARKER: Okay. Thank you so kindly.
12 Again, as you heard, for the record, my name is State
13 Representative Darisha Parker of 198th District, and I do
14 represent Nicetown. Actually, where I'm sitting, I am 0.9
15 miles away from the power plant.

16 As one of the over 500,000 Pennsylvanians who suffer
17 from asthma, I believe we need to do everything we can to
18 reduce the air pollution that poisons us daily.

19 I know that sometimes when I walk around my
20 neighborhood, I feel that itch in my throat and shortness of
21 breath that indicates an oncoming asthma attack. If we have
22 an opportunity to reduce air pollution by any means, we
23 should absolutely take advantage of that.

24 Philadelphia is already surrounded by six incinerators

1 which have led our city to be graded an F by the American
2 Lung Association for our ozone quality.

3 Nicetown specifically has a higher air pollution level
4 than 78 percent of the neighborhoods across the nation.
5 There are 22,000 cases of pediatric asthma in Philadelphia.
6 Thirty-three percent of children living in the 19140 ZIP
7 Code have asthma. That is 22,000 children whose lives are
8 impacted daily by their environment.

9 It's clear that we need continuous air quality
10 monitoring on the SEPTA plant and the surrounding
11 communities. There are options to help this ongoing climate
12 crisis, little things we can all do to protect our planet,
13 but SEPTA has a chance to do something big and prevent the
14 thousands of Philadelphians from more health problems, and
15 they need to act now. Thank you so kindly.

16 DR. BETTIGOLE: Thank you very much, Rep. Parker.

17 DR. RAVAL-NELSON: And I apologize. Thank you very
18 much. My computer crashed here, but I am joining from
19 another device. Our next speaker will be Mr. Peter Winslow,
20 and Mr. Winslow, when you're on, I will go ahead and start
21 your timer.

22 (Pause.)

23 DR. RAVAL-NELSON: Mr. Winslow?

24 MR. WINSLOW: Yes. Thank you, Deputy Commissioner.

1 My name is Peter Winslow. I'm a Philadelphia resident
2 and a SEPTA rider. I'm speaking today as president of A
3 SMART Collaboration LLC and as a member and supporter of
4 many of the environmental justice organizations providing
5 testimony today.

6 We are disappointed that the application for renewal
7 of SEPTA's Roberts Complex operating permit does not include
8 provisions that improve the permit's protection of our
9 friends and neighbors.

10 In fact, the proposed permit would increase the amount
11 of toxic emissions that SEPTA would be allowed. Inasmuch as
12 SEPTA has violated the current permit, this permit is moving
13 in the wrong direction.

14 Although the operating permit applies to the entire
15 Roberts Complex, our primary concern is with the electricity
16 generation facility located behind the Midvale bus depot
17 that was originally permitted in 2017.

18 We object to this power plant because it burns fracked
19 gas to run two Jenbacher engines, thereby increasing
20 emissions of nitrogen oxide, carbon monoxide, volatile
21 organic compounds and particulate matter at the site and in
22 the adjacent neighborhoods.

23 Those neighborhoods, specifically Nicetown, are in
24 census tracts designated environmental justice communities

1 by the Pennsylvania Department of Environmental Protection
2 and the Environmental Protection Agency.

3 Permitting affected environmental justice communities
4 should be subject to enhanced scrutiny. Because enhanced
5 scrutiny was not applied to the satisfaction of the
6 community, POWER -- Pennsylvanians Organized to Witness,
7 Empower, and Rebuild -- requested an investigation by the
8 Environmental Protection Agency's External Civil Rights
9 Compliance Office for the violation of the Civil Rights Act
10 of 1964, Title VI. The ECRCO opened a case in 2021 and the
11 case is ongoing.

12 The current permit renewal provides a do-over
13 opportunity for SEPTA and the City to correct the violation
14 and avoid a similar investigation by the United States
15 Department of Transportation.

16 The Civil Rights Act prohibits any action by a
17 recipient of federal funds that results in an adverse and
18 disparate impact on an environmental justice community.

19 The City violates the Civil Rights Act by providing
20 the permit. SEPTA violates the Civil Rights Act by
21 operating the power plant.

22 The power plant is particularly offensive because it
23 is unnecessary. The primary function of the power plant is
24 to provide electricity to the SEPTA substation at Wayne

1 Junction that delivers power for the regional rail system.

2 However, the Wayne Junction substation is already
3 supplied by two transmission lines provided by PECO, either
4 of which is capable of powering the system.

5 This third transmission line provides redundancy that
6 would be useful only in the event that the entire electrical
7 power grid fails, but SEPTA has never in its history
8 experienced service interruptions due to lack of power at
9 the Wayne Junction substation.

10 The vulnerability of the rail system is in the
11 overhead catenary wires that deliver electricity to trains
12 after transmission from Wayne Junction, not in supplying
13 power to the substation.

14 SEPTA never demonstrated a need for the power plant
15 because there isn't any need. Why then did SEPTA want to
16 in-source its electricity production? Political pressure
17 from legislators in Harrisburg acting in the interests of
18 the fossil fuel industry insisted that SEPTA be a customer
19 for fracked gas.

20 When SEPTA concluded that establishing a fleet of
21 compressed natural gas buses was impractical, Republican
22 legislators threatened to withhold funding for SEPTA. So to
23 consume more gas somewhere, SEPTA --

24 DR. RAVAL-NELSON: Mr. Winslow, you have one minute.

1 MR. WINSLOW: -- the power plant instead. Now SEPTA
2 is pressed to operate the power plant in order to pay for
3 the investment that was made to build it, an arrangement of
4 dubious economic justification that by shifting costs from
5 the capital budget to the operating budget had the effect of
6 making Philadelphians pay more for the services used
7 primarily by residents of other counties.

8 As a result, poor black residents of Nicetown are
9 breathing in more toxic air for the benefit of rich white
10 commuters from the suburbs and the profit of the fossil fuel
11 industry. Can anybody think this is fair?

12 We're experiencing increasingly frequent air quality
13 action days, heat records being broken. The sky is darkened
14 by smoke from forest fires in Canada. Shouldn't SEPTA
15 curtail power plant operations when people are suffering
16 from conditions contributed to by the power plant?

17 For example, Pennsylvania Department of Environmental
18 Protection has declared tomorrow an air quality action day
19 for the Philadelphia --

20 DR. RAVAL-NELSON: Sir, your time is up. Please
21 submit the rest of your comments, Mr. Winslow, as well as
22 the suggested slides to the email address in the chat.
23 Thank you, Mr. Winslow.

24 Our next speaker will be Christina DiGiulio.

1 MS. DiGIULIO: Can you hear me?

2 DR. RAVAL-NELSON: Yes, we can. I will start your
3 timer as soon as you start speaking.

4 MS. DiGIULIO: Very well. Thank you. My name is
5 Christina DiGiulio, C-H-R-I-S-T-I-N-A, D-I-G-I-U-L-I-O, and
6 I am here representing Physicians for Social Responsibility
7 of Pennsylvania.

8 I am actually a certified thermographer in optical gas
9 imaging, and there was a link shared in chat if people want
10 to look at, which I did go to the facility we are speaking
11 about and image it using my optical gas imaging camera,
12 which is a GFX320 from Teledyne FLIR.

13 And so I'm also an analytical chemist, and I want to
14 talk about something that I saw in your presentation that
15 was actually neglecting to say anything about methane, which
16 this is a power plant using fracked gas or methane.

17 And I did see you mentioned VOCs. So volatile organic
18 compounds are organic molecules, specifically hydrocarbons,
19 that are classified as a pollutant as they produce
20 undesirable effects in the atmosphere, and they are defined
21 as volatile because they evaporate quickly and easily into
22 the air.

23 However, when we are having these really bad air
24 quality days, it can be held into the air and the cumulative

1 aspect for people in that community is a problem. And this
2 is what we're talking about. There is no need for this.

3 The primary criteria for a natural gas fired engines,
4 which you guys have here, are oxides and nitrogen, carbon
5 monoxide and volatile organic compounds.

6 The formation of nitric oxides is exponentially
7 related to the combustion temperature in the engine
8 cylinder, and the other pollutants, CO and VOCS are
9 primarily the result of incomplete combustion.

10 Now, I know you guys had a violation that we talked
11 about, and it should be emphasized that the actual emissions
12 may vary considerably from the published emission factors
13 due to variations in the engine operating conditions, the
14 variations due to engines operating at different conditions
15 including air to fuel ratio, ignition timing, torque speed,
16 ambient temperature, humidity and other factors.

17 It is not unusual to test emissions in two identical
18 engines in the same plant operated by the same personnel
19 using the same fuel and have test results show significant
20 differences. So there's a lot of variability in these
21 tests.

22 Carbon dioxide, methane and nitrous oxide are referred
23 to as greenhouse gases, and this is all according to an EPA
24 document that I'm stating. Such gases are largely

1 transparent incoming solar radiation. However, they absorb
2 infrared radiation emitted by the earth.

3 So there is a chart in this document and I provided
4 the link in your chat and I will provide it to you also via
5 email, that we're talking about -- the video that I'm
6 showing is actually showing, this camera only can see, can
7 see hydrocarbons which are emitting at a 3.2 micron to 3.4
8 microns. It's looking for hydrocarbons.

9 And so what we're seeing in my video is actually the
10 emittance of hydrocarbons. I cannot specifically say what
11 those hydrocarbons are, and necessarily doesn't matter
12 because it's terrible.

13 With climate change and, you know, the climate crisis
14 that we're having right now, it's almost irresponsible to be
15 supporting such a project when we have so many other options
16 as several other speakers have said.

17 So in regards to our health, we're looking at, you
18 know, climate change being, you know, exacerbated by such
19 facilities. And what my video is showing is that exact
20 thing going out into the atmosphere.

21 Sure it goes up, but it can also be held down and
22 accumulate in a community along with all the other toxins
23 being released. So there's no need for an organization
24 supposedly so behind in supporting the City of Philadelphia

1 to be actually placing these people at harm.

2 And my request is that you also have air monitoring,
3 more than, you know, whatever, a mobile van. I know mobile
4 labs, and I'm going to tell you that you need to have what's
5 called continuous air monitoring --

6 DR. RAVAL-NELSON: You have one minute left.

7 MS. DiGIULIO: Thank you -- and as well passive air
8 monitoring, PAMs and CAMs. And they should be spread out
9 throughout the community as I believe Tammy Murphy said, at
10 least a mile away so that we're seeing the cumulative aspect
11 and where the plumes and where it's actually going, you
12 know. It's not that simple just to do fence line monitoring
13 and it's not sufficient in this community.

14 So I thank you for your time, and that's pretty much
15 all I have.

16 DR. RAVAL-NELSON: Thank you very much for your
17 testimony. Please refer to the Q&A. There is additional
18 information provided regarding how to submit additional
19 questions and comments.

20 MS. DiGIULIO: Not a problem.

21 DR. RAVAL-NELSON: The next speaker will be Sue Graf.
22 Sue?

23 (No response.)

24 DR. RAVAL-NELSON: Sue Graf, going twice?

1 (No response.)

2 DR. RAVAL-NELSON: Sue Graf?

3 (No response.)

4 DR. RAVAL-NELSON: Okay. We will, if Sue is
5 available, we will get her at the end. In the meantime,
6 after Sue, our next speaker is Sheila Tripathy.

7 DR. TRIPATHY: Hi. Can you hear me?

8 DR. RAVAL-NELSON: Yes, we can. Wonderful. I will
9 start your timer as soon as you start.

10 DR. TRIPATHY: Thank you. I am Dr. Sheila Tripathy
11 and I'm a member of POWER and an environmental exposure
12 scientist, and I'm calling on Air Management Services not to
13 renew the Synthetic Minor operating permit for the SEPTA
14 Roberts Complex.

15 I'm concerned about nearby residents' cumulative
16 exposure to both pollution from the SEPTA complex and
17 outside pollutant sources. The total burden of exposures
18 needs to be considered.

19 There are currently no permitted EPA air quality
20 system monitors located near the SEPTA complex. We need air
21 monitoring to be conducted both on site and in the
22 surrounding residential areas where community members live
23 and work.

24 Continuous emissions monitors should be placed on site

1 and EPA AQS monitors should be placed in the adjacent
2 community to continuously monitor pollutants including NOx,
3 VOCs, ozone, fine and ultra-fine particulate matter.

4 Once adequate monitoring is conducted, results need to
5 be compared to models to ensure that they accurately reflect
6 current conditions. In this way, modeling will be backed by
7 monitoring.

8 There also needs to be a process where less gas is
9 burned on unhealthy air quality days like we have seen
10 recently with the impacts from the Canadian wildfires on air
11 pollution in Philadelphia.

12 In addition to increasing air monitoring around the
13 gas plant, we need an on-line platform where air monitoring
14 data is accessible, as others previously mentioned.

15 This web site needs to include current, up-to-date
16 information on all monitors across the City where data and
17 past trends can be viewed and data can be downloaded. It
18 should be easy to determine the current conditions in
19 Nicetown and to be able to compare data to other locations
20 in the City at the same time.

21 There is a page on Air Management's web site dedicated
22 to Nicetown. However, this page needs to include more
23 information other than the results from the PAQS study which
24 was more relevant for looking at seasonal and annual data

1 compared to real-time pollutant concentrations, and doing
2 more passive data as others have mentioned. Thank you for
3 your time.

4 DR. RAVAL-NELSON: Thank you very much, doctor, and I
5 apologize for mispronouncing your last name.

6 Our next speaker will be Mitch Chanin. Mitch? Once
7 you are on the screen and we can hear you, I'll start your
8 timer.

9 MR. CHANIN: All right. Can you hear me now?

10 DR. RAVAL-NELSON: Yes. And I will start your timer.

11 MR. CHANIN: Great. Thank you so much for the
12 opportunity to testify today and thanks so much to everyone
13 who has already testified. It's great to be here with all
14 of you.

15 My name is Mitch Chanin. I'm not representing any
16 group today, although I am part of a number of organizations
17 around the City and I was involved in organizing back from
18 2015 for the next few years in opposition to the power
19 plant. I do not live in the Nicetown community. I live in
20 the northeast, but I'm a regular regional rail rider using
21 routes that pass through Wayne Junction.

22 I echo most of the comments that were already made,
23 but I do want to share a couple of other points. Before I
24 talk about the air quality, this is more a comment for

1 SEPTA, but a key justification for this project was to
2 ensure reliability for the railroad.

3 And as Mr. Winslow stated, there's really no evidence
4 that it's needed for that purpose. The thing that has made
5 regional rail really unreliable, especially over the past
6 couple years, is just the crew shortage.

7 Trains are just routinely canceled without, you know,
8 without any warning because there's no one to run them, and
9 it's been really horrible as a regional rail rider.

10 So I agree that we need much more air monitoring and
11 that AMS should require a reduction in the amount of gas
12 that's burned at the site, at this facility for all the
13 reasons that people have stated.

14 I wanted to call attention in particular to an issue
15 that hasn't gotten as much attention today, which is ultra-
16 fine particular matter.

17 This is a pollutant that appears to be emitted in very
18 significant quantities from the combustion of natural gas.
19 However, there are not yet any standards, no regulation for
20 ultra-fine particular matter from the federal or state
21 government.

22 Nevertheless, I think AMS has a responsibility to
23 respond to concern from the public about this pollutant in
24 Philadelphia and in particular from this plant.

1 Ultra-fine particles are the smallest kind of
2 particulate matter. Whereas fine particulate matter which
3 was referenced earlier in the monitoring reports is smaller
4 than 2.5 microns, ultra-fine particular matter is smaller
5 than 1/10th of one micron.

6 And there's growing concern about the health impacts
7 of ultra-fine particular matter and growing evidence that
8 natural gas combustion is a very significant source of
9 ultra-fine particular matter.

10 I'm very aware that there are sort of lots of
11 misinformation that circulates about, you know, health
12 scares that aren't really, you know, in particular over the
13 past couple years, a lot of misinformation about vaccines,
14 saying that they're dangerous.

15 And so I understand the reluctance of policymakers to
16 listen when people are calling attention to pollutants that
17 aren't yet regulated. But this is not a case where the
18 preponderance of evidence is that ultra-fine particular
19 matter is safe. There's growing evidence that it is
20 extremely dangerous and likely more dangerous than the
21 larger particles.

22 I'm not sure how much time I have left. I do have
23 some sources that I can --

24 DR. RAVAL-NELSON: Just to let you know, you have one

1 minute and 31 seconds.

2 MR. CHANIN: Okay. I can share some sources in
3 writing, but what I want to say is that ultra-fine
4 particular matter needs to be measured by the number of
5 particles and/or the surface area, and that measuring fine
6 particulate matter, PM 2.5, according to the mass of the
7 particles, does not tell you what number of ultra-fine
8 particles are present or being emitted or what the health
9 impact is. Each pollutant needs to be addressed separately.

10 DR. RAVAL-NELSON: You have one minute left, sir.

11 MR. CHANIN: Great. I'm aware, as I said, that
12 there's not a regulation for this, but I really would like
13 to see AMS measure ultra-fine particular matter and respond
14 in a serious way to this concern.

15 I was very disappointed in the appeal hearings in
16 2018, I believe, when we were challenging the permit, when
17 Mr. Wiener was asked if they had looked at ultra-fine
18 particular matter and his response is that he had looked at
19 a couple of articles.

20 That's not a sufficient response to legitimate
21 concerns about a pollutant that is likely emitted in
22 significant quantities from this facility, and I hope that
23 AMS will take it much more seriously going forward. Thank
24 you.

1 DR. RAVAL-NELSON: Thank you very much. Our next
2 speaker -- and for those folks such as Mr. Ewall, if you're
3 still on, we will get to you when we get to the end.

4 Our next speaker will be Beverly Gunn. Once Ms. Gunn
5 is on camera or on the cube, I will go ahead and start the
6 timer.

7 (Pause.)

8 DR. RAVAL-NELSON: Ms. Beverly --

9 (Pause.)

10 DR. RAVAL-NELSON: Okay, last call for Beverly Gunn.

11 (No response.)

12 DR. RAVAL-NELSON: All right. We will move to Charles
13 Best. Charles Best?

14 (No response.)

15 DR. RAVAL-NELSON: Okay. Charles Best?

16 (No response.)

17 DR. RAVAL-NELSON: All right. We will move to the
18 next person, Hope Feldman. Hope?

19 MS. FELDMAN: Can you hear me?

20 DR. RAVAL-NELSON: Yes, we can.

21 MS. FELDMAN: Wonderful.

22 DR. RAVAL-NELSON: Hi. Once you get started, I'll
23 start your timer. Thank you.

24 MS. FELDMAN: Thank you. Thank you for having me. My

1 name is Hope Feldman. I both live in the neighborhood at
2 4700 block of Pulaski and I work close to the gas plant at
3 4700 Wissahickon.

4 And I work as a family nurse practitioner, and my job
5 is very supportive about, sort of, and has been engaged in
6 this for several years about trying to reduce the burden on
7 our community from a health standpoint, but I am not
8 speaking in an official capacity from them. I'm speaking on
9 my own behalf.

10 I am asking AMS not to renew the SMO permit for the
11 SEPTA Roberts Complex. And what I'm seeing is, in the past
12 few years, it's a higher burden on our community.

13 As some of you may know, I work in a federally
14 qualified health center which are located in places of high
15 health burden and low resources.

16 So pre-COVID, I had a patient with asthma that came in
17 and she felt like she fine inside her house, she was fine at
18 work, that it was only a problem when she went outside.

19 And what she told me in the office is that it feels
20 like the air is trying to kill me. She took a trip to
21 Tennessee. Everything was better. She was great. She
22 didn't need her rescue inhaler. She felt like a lot more
23 energy, and then returned back to our community and felt
24 like the symptoms returned.

1 And I say that because locality matters. What we do
2 in our environment matters. So I am asking for local
3 neighborhood monitoring. If we don't monitor in the area
4 where the emissions are being produced, we're not really
5 getting a sense of what risk we putting for our communities
6 and in our neighborhoods.

7 We know that since we've had some qualitative poor air
8 quality days, we have felt the burden in our environment in
9 the ways our kids can engage outside, in the number of
10 asthma attacks.

11 I have seen an increase not only in asthma but also
12 headaches, dizziness, upper respiratory infections, sinus
13 congestion, skin dermatitis on areas that have been exposed
14 to, you know, to the air, like to the arms or to the legs,
15 the face.

16 I do not have asthma, and I noticed that at times when
17 the air quality is poor, wearing a mask outside to walk to
18 and from my house to work does make a difference.

19 The amount of burden that we hold in our air and in
20 our bodies are affected, you know, affect our total health.
21 And so I'm also asking that we reduce burden, that the plant
22 reduces their burden of emissions when there's high ozone
23 and unhealthy air quality days.

24 This is not something that we can wait for the effects

1 of what's happening. We know that this is affecting our
2 health. We know it's affecting the health of our kids, of
3 our pregnant women

4 Most of our mamas are already at high risk for
5 pregnancy complications, low birth weight and health
6 outcomes, and they are coming in for care just a block away
7 from the SEPTA plant. We are asking you not to renew the
8 permit, that it is putting us, putting our community in
9 risk.

10 DR. RAVAL-NELSON: Thank you.

11 Our next speaker will be Peter Furcht, F-U-R-C-H-T.
12 Sorry for the mispronunciation.

13 MR. FURCHT: Not a problem. So good evening. My name
14 is Peter Furcht, P-E-T-E-R, F-U-R-C-H-T. I am a resident of
15 and a homeowner in Philadelphia and I am testifying as a
16 private citizen, and I thank you for this opportunity.

17 While I do not live in the immediate area of the SEPTA
18 Roberts Complex power plant, there shouldn't be any question
19 in anybody's mind just how far pollutants in the air can
20 travel.

21 How much smoke have we seen this summer in
22 Philadelphia from fires burning a thousand miles away? I
23 only live a handful of miles from the SEPTA power plant and
24 the wind blows from every directions, so I know some of the

1 NOx's and VOCs and resulting ground level smog from these
2 power plants make its way not just to me but to every
3 resident of Philadelphia. We all have say in what AMS
4 should do regarding renewing SEPTA's operating permit.

5 So my little car that I rarely drive as a City
6 resident maybe will admit a few pounds of NOx's and VOCs
7 over its entire life, yet I'm required to conduct an annual
8 inspection to keep it on the road regardless of how many
9 hours I actually may drive it.

10 The SEPTA Roberts Complex power plant that can put out
11 25 tons annually is required to have an emissions inspection
12 once every one to three years. What's wrong with this
13 picture?

14 If malfunctioning, the power plant could emit in
15 minutes the amount of NOx and VOCs that my little car emits
16 in a lifetime, and that could go unchecked for up to three
17 years with the current permit.

18 Why is the power plant not required to be monitored
19 continuously for NOx emissions just like my car? If my car
20 emits too much NOx, the check in engine light comes on so I
21 know it needs to be repaired.

22 The technology for continuous monitoring is available.
23 Honestly, I don't care how expensive it might be. It's time
24 for the residents of Philadelphia to stop paying for the

1 cost of emitting pollutants, especially those above a
2 permitted amount, with their health and well-being.

3 It must be the responsibility of the polluter-emitter
4 to bear the cost of monitoring, maintaining and controlling
5 the pollutants they are permitted to exhaust.

6 The time of three-year free passes is over. Please
7 impose strict monitoring requirements like continuous
8 monitoring on the Roberts Complex power plant so real-time
9 actions can be taken to minimize emissions.

10 And since I have five minutes, allow me to follow up
11 on some comments made by an AMS and SEPTA presenter earlier.
12 First, by pointing out that Nicetown doesn't have the worst
13 air quality in the City, do you really think that makes it
14 okay to continue the bad practice of keeping the air not
15 quite the worst?

16 Second, SEPTA, you using today the same reasons you
17 used in 2017 to tout your environmental credibility and
18 justify burning natural gas today is, well, way out of
19 touch. You need to update your understanding of what
20 climate friendly power looks like today, and what you should
21 be aiming for in powering your facilities. Dr. Tsou in his
22 earlier testimony provided some good ideas. Thank you.

23 DR. RAVAL-NELSON: Thank you, sir.

24 Our next speaker is Taylor Baker.

1 MR. BAKER: Hi. Can you hear me all right?

2 DR. RAVAL-NELSON: Yes. I will start your timer.

3 MR. BAKER: Hi. My name is Taylor Baker, T-A-Y-L-O-R,
4 B-A-K-E-R. The SEPTA gas plant which started operating in
5 2019 burns fracked natural gas. The plant's emissions,
6 particularly of volatile organic compounds, VOCs and other
7 pollutants poses significant health risks to the surrounding
8 communities.

9 This risk is exacerbated by insufficient emissions
10 testing and monitoring, resulting in potential unchecked
11 violations of emissions standards for up to three years.

12 Right now, solar power is cheaper per kilowatt-hour
13 than all other forms of energy, and the green transition is
14 happening all over the world. And it's an inevitability,
15 and it's necessary for our survival. The question is, will
16 it happen now while it can still save lives, or decades from
17 now when it's far too late?

18 The plant is not required to test its emissions more
19 than once every three years, and such infrequency does not
20 adequately safeguard our community from potential harm.

21 This lack of transparency and oversight is
22 unacceptable. We demand continuous air quality monitoring
23 at the site and the surrounding community.

24 The lack of data collection is a common tactic for

1 polluters who can then claim ignorance of the health
2 consequences and avoid legal and fiscal responsibility,
3 which is what happened at the Three Mile Island disaster
4 where a lack of radiation testing in the nearby community
5 allowed the nuclear plant to skirt true responsibility. The
6 fact that the City allows this to go on makes it clear we're
7 being sold out for profit's sake.

8 We are calling for remediation of air quality by
9 reducing the amount of fossil fuels burned on site. This
10 can be achieved by implementing sustainable energy solutions
11 like solar power and undertaking greening initiatives such
12 as planting thousands of trees in order to protect
13 residents' health.

14 In light of alarming data showing that Nicetown has a
15 higher fine particulate level than 78 percent of
16 neighborhoods across the nature and a higher exposure to
17 diesel exhaust than 90 to 95 percent of neighborhoods, we
18 must take immediate action.

19 The health consequences are severe. We're
20 experiencing a surge in respiratory conditions like asthma
21 and allergies, particularly in children.

22 According to a 2012 report, 31 percent of children in
23 the 19140 ZIP Code were diagnosed with asthma, significantly
24 higher than the local and national averages.

1 A community also deserves full transparency about
2 HAPs, hazardous air pollutants, emitted from this facility.
3 The Health Department regulations must be enforced to
4 protect residents from exposure to harmful substances like
5 lead, formaldehyde, and benzene. The potential for these
6 toxins to cause cancer and central nervous system diseases
7 such as Parkinson's and Alzheimer's is a serious concern.

8 The consequences of our reliance on fossil fuels are
9 far-reaching. The plant's emissions contribute to global
10 warming with methane from gas having 86 times the global
11 warming potential of carbon dioxide over the first 20 years
12 of its release.

13 The urgency to transition away from fossil fuels is
14 not just about climate change but also about public health,
15 particularly for communities situated near gas
16 infrastructure. Thank you, and I hope it does not get
17 approved.

18 DR. RAVAL-NELSON: Thank you very much.

19 Our next speaker is Hope Primas. Hope Primas.

20 (Pause.)

21 DR. RAVAL-NELSON: Hope?

22 MS. PRIMAS: Can you hear me?

23 DR. RAVAL-NELSON: Yes.

24 DR. BETTIGOLE: Can you please speak a little louder?

1 DR. RAVAL-NELSON: All right, great. I will set the
2 timer.

3 MS. PRIMAS: (Inaudible.)

4 DR. RAVAL-NELSON: You're not coming through clearly.

5 MS. PRIMAS: Can you hear me now?

6 DR. RAVAL-NELSON: Yes.

7 MS. PRIMAS: Okay. I will do the best that I can. My
8 name is Hope Primas. I am a near neighbor -- (inaudible) --

9 DR. RAVAL-NELSON: We lost your volume completely. We
10 cannot hear you.

11 DR. BETTIGOLE: May I suggest, Ms. Primas, sometimes
12 when this happens, if you log out and log back in, you can
13 solve the sound problem.

14 MS. PRIMAS: Okay. I will log out and log back in and
15 let you know when I do. Thank you.

16 DR. RAVAL-NELSON: Perfect, and we'll add you to the
17 end of the list, okay?

18 MS. PRIMAS: Okay. Thank you.

19 DR. RAVAL-NELSON: Thank you. Okay. So our next
20 person will be Tiffany DiGiacomo. Tiffany?

21 (No response.)

22 DR. RAVAL-NELSON: Tiffany?

23 (No response.)

24 DR. RAVAL-NELSON: Okay. Last call for Tiffany

1 DiGiacomo.

2 (No response.)

3 DR. RAVAL-NELSON: All right. Our next person then is
4 Marc Davies. Marc Davies?

5 (No response.)

6 DR. RAVAL-NELSON: Marc Davies?

7 (No response.)

8 DR. RAVAL-NELSON: Okay. Marc was our last --

9 DR. BETTIGOLE: I think there are a few more in the
10 chance. I think Russell Zerbo is next.

11 DR. RAVAL-NELSON: Yes. I have a couple more people
12 that we're adding, but Marc was our last pre-registered
13 person. And before we move to Russell Zerbo, I'd like to
14 see if Mike Ewall, who had pre-registered, is available to
15 speak now. Mike?

16 MR. EWALL: Yes. Can you hear me now?

17 DR. RAVAL-NELSON: Yes, we can. I will start your
18 timer. Please feel free to start.

19 MR. EWALL: Thank you. So my name is Mike Ewall with
20 Energy Justice Network. I'm a Philadelphia resident, and I
21 would like to back the calls for not renewing this permit,
22 but with the likelihood that it will be renewed, I want to
23 urge, as others are calling for, for continuous emissions
24 monitors in stack at the facility to be used for all

1 pollutants that are being regulated.

2 It's inadequate to be using modeling to guess what the
3 emissions are, and it's inadequate to be testing once a year
4 or once every three years for certain pollutants as many
5 other facilities do, although this is being regulated even
6 less than those that tend to test for a handful of things
7 about once a year.

8 The pollutants like carbon monoxide, carbon dioxide,
9 hydrogen oxides, volatile organic compounds, particulate
10 matter, even acid gases like hydrochloric acid, should be
11 tested on a continuous basis, and the technology has existed
12 to do this since at least when EPA tested and verified that
13 in 2006, and yet it's rare that they're being required to be
14 continuously monitored.

15 One example, though, that is encouraging that came
16 from comments I gave at a hearing years ago with the oil
17 refinery in Philadelphia where AMS required it to be the
18 first oil refinery in the country to have to use continuous
19 emissions monitors for particulate matter, at least with
20 that one part of the plant that was being considered in that
21 permit at the time.

22 And I would encourage the same thing here. The
23 technology exists, and obviously AMS knows about it and has
24 approved it, having looked at other examples that I provided

1 at the time of it being put into different permits around
2 the state, around the country.

3 The need for this is exemplified by the fact that
4 continuous monitors pick up a lot more information than you
5 get when you test once a year or even less, or God forbid,
6 not even test at all and just modeling it out.

7 When I looked at the data on the Covanta trash
8 incinerator in Chester, Pennsylvania, for instance, they use
9 continuous monitors for hydrochloric acid as well as doing
10 annual stack tests.

11 And as it turns out, the continuous monitors found
12 that the actual emissions are 80 percent higher than what
13 you would normally think it would be if you just rely on an
14 annual stack test as most facilities like that around the
15 country do.

16 Similarly, studies from Europe of dioxins, the most
17 toxic chemicals known to science, when they use continuous
18 sampling in that case, they found in one study, the actual
19 emissions 30 to 50 times higher than what we think they are
20 in the U.S. when they test once a year, and in another
21 study, about 460 or almost 1,300 times higher than we think
22 they are when we test once a year under best behavior tests.

23 So I encourage that this be used in stack for all
24 regulated pollutants, and that the data be put on a public

1 web site in real time for the world to see, because people
2 have a right to know this information. That's all. Thank
3 you very much.

4 DR. RAVAL-NELSON: Thank you very much for your
5 testimony. The next speaker that has not pre-registered
6 will be Russell Zerbo. Russell?

7 MR. ZERBO: Can you hear me?

8 (No response.)

9 MR. ZERBO: Yes. Thank you, Chris. People can hear
10 me.

11 DR. RAVAL-NELSON: Okay.

12 MR. ZERBO: My name is Russell Zerbo, R-U-S-S-E-L-L,
13 Z-E-R-B-O. I am an advocate at the non-profit Clean Air
14 Council. Please increase the frequency of stack testing
15 requirements for combined heat and power, CHP units G-1 and
16 G-2 at the Southeastern Pennsylvania Transportation
17 Authority's Roberts Complex in the Nicetown neighborhood of
18 Philadelphia.

19 Over 35,000 Philadelphians live within a mile of the
20 Roberts Complex, 51 percent of which live under the federal
21 poverty line and 83 percent of which are people of color.
22 This is an environmental justice community that has a right
23 to increased environmental protection.

24 In January 2022, during a required test of emissions

1 from the facility's largest pollution source, CHP Unit G-1,
2 it was determined that one of the heat and power generation
3 units was emitting pollution above the levels allowed under
4 the facility's permit.

5 The malfunction was repaired and the facility paid a
6 fine. It is unknown how long this equipment was
7 malfunctioning for, and how much unpermitted air pollution
8 was released over time.

9 This malfunction could have easily caused the facility
10 to surpass the 25 tons per year pollution limits for
11 nitrogen oxides and volatile organic compound emissions.

12 And I just want to note that both AMS and SEPTA have
13 presented about the actual emissions from this facility in
14 2022, and those numbers are inaccurate because this
15 pollution incident that was discovered in January 2022 was
16 not monitored, so you truly don't know how much air
17 pollution was released from this facility in 2022, because
18 of the lax stack testing requirements.

19 The City of Philadelphia currently does not meet
20 federal ground level ozone standards, and in its 2021 air
21 quality report, the City's Air Management Services concluded
22 that smog is increasing in the City -- smog and ground level
23 ozone are the same thing -- raising the risk of respiratory
24 damage and other health effects.

1 SEPTA is now seeking to renew this air pollution
2 permit and the current stack testing requirements are not
3 adequate to ensure that the facility's nitrogen oxides and
4 volatile organic compound emissions are kept below permitted
5 limits.

6 The current air permit and proposed renewal only
7 requires that the two combined heat and power generation
8 units at the site be tested every 8,760 hours of operation,
9 or every three years, whichever comes first.

10 This is not an adequate frequency to ensure that the
11 facility complies with its emissions limitations at all
12 times. Please increase air pollution monitoring and testing
13 at SEPTA's Nicetown plant to at least quarterly. Thank you.

14 DR. RAVAL-NELSON: Thank you very much. Our next
15 speaker will be Musa Wilson. Musa?

16 MR. WILSON: Hello?

17 DR. RAVAL-NELSON: Yes. We can hear you, and I'll
18 start your timer when you start speaking.

19 MR. WILSON: Before I start, is there any way I can
20 turn my camera on, or -- I don't see the option.

21 DR. RAVAL-NELSON: I believe you're looking for --
22 (inaudible) --

23 MR. WILSON: Okay. Well, I'll just start then.

24 DR. RAVAL-NELSON: One of the other -- go ahead.

1 MR. WILSON: My name is Musa Wilson. I'm a student at
2 Imhotep Institute Charter High School, and I'm one of the
3 STEM ambassadors for our new STEM program.

4 And I'm here to speak on behalf of the student body
5 that we have, largely across Philadelphia, Pennsylvania, and
6 especially why these plants, these factories, or SEPTA
7 itself needs to be held accountable for some of the things
8 that they are doing.

9 I want to start off by saying, I do have a close
10 friend of mine who was recently hospitalized because he had
11 an asthma attack while going to work on a SEPTA bus, and
12 this should go to show that like we need to take initiative.

13 Air quality itself is inextricably linked to a whole
14 bunch of different other illnesses such as vitamin
15 deficiency because parents don't even want their kids going
16 outside to see the light of day, so they're not even getting
17 vitamins, like they are scared that if their children go
18 outside, that it will cause irreversible damages to their
19 lungs and stuff, especially the residents of Nicetown.

20 But that would be going to the factual things. I just
21 wanted to point out a couple of things that bothered me
22 during the presentation or some, I guess you could say
23 solutions or suggestions that I recommend.

24 CHP factories, I know that a lot of other

1 organizations utilize them, but that does not mean that
2 everybody else should do it. Because somebody's doing one
3 thing bad, that does not give you a free pass and it doesn't
4 make it okay. You shouldn't do something that's bad to me
5 because everybody else is doing it.

6 And the facility itself is already in a bad
7 neighborhood that's struggling over air quality, and it
8 should have an even lower amount of a lot of emissions than
9 it does currently because even though they claim that they
10 emit natural gas which is healthy, it's actually not, nor is
11 it sustainable.

12 So even if they are, even if the numbers are lower
13 than what they have been, that doesn't mean it's still a
14 healthy practice that we should keep practicing or
15 upholding.

16 I think data needs to be easily and publicly
17 accessible to ensure that those who wish to stay informed
18 about SEPTA's policies and/or rebuttal upcoming policies or
19 advancements, they should have access to that data because
20 they're the main ones who are at cause when it comes to
21 these policies, like the decision that SEPTA makes is
22 affecting them directly.

23 A lot of people in Philadelphia use SEPTA. They rely
24 on their transit lines to go to and from work, to and from

1 school, and it's just overall not okay for them to feel as
2 though they don't have a say in the choices that SEPTA is
3 making.

4 I also should say that SEPTA itself should take charge
5 in finding healthier, sustainable, renewable energy sources
6 to apply to their franchise, especially because, like I said
7 previously, a large portion of citizens in Philadelphia use
8 their transportation systems.

9 But I just really want to highlight that. It's very
10 important because kid, young kids, they go outside for a
11 majority of their lifetime to either play or go to and from
12 school, to and from work, and they are the ones who are
13 directly in harm's way when it comes to this air pollution
14 and air quality.

15 They're young. They're not as developed as adults.
16 Their immune systems are not as strong as they could be, so
17 they can potentially be very sick. They could get very weak
18 from this air pollution, air quality.

19 I know that SEPTA definitely does or would be able to
20 have the technology to monitor air quality around the City
21 daily, because we do it at our school. We're a charter
22 school. We make sure that our air quality is good in our
23 schools, especially through the hallways --

24 DR. RAVAL-NELSON: Mr. Wilson, you have one minute.

1 MR. WILSON: Okay. Thank you. But I know that if we
2 can do it, then SEPTA can do it too. And I just really feel
3 like we need to protect the youth, especially with these
4 policies that they're making. SEPTA should have more
5 consideration when making these bills and things of that
6 nature. Thank you for your time.

7 DR. RAVAL-NELSON: Thank you very much. Our next
8 speaker is Mr. Jeremiah White. Jeremiah?

9 MR. WHITE: Yes. Can you hear me?

10 DR. RAVAL-NELSON: Yes, we can. I will start your
11 timer.

12 MR. WHITE: How are you doing? My name is Jeremiah
13 White. I am also a STEM ambassador at Imhotep Institute
14 Charter High School. I am going into twelfth grade, and I
15 am also a student athlete.

16 Me and my STEM ambassador team, we have been working
17 on air quality issues for a while now, so we have a lot of
18 background information, and we've been working with U. Penn
19 in reference to the matter of our major causes of pollution
20 such as airports, trucks, cars, and factories.

21 And adding this factory to the mix is just going to
22 cause the same hurt and pain to the earth that has been
23 going on for generations and generations.

24 And as an athlete, I can say that athletes inhale much

1 more air and use much more energy than a regular person as
2 we are being active, and we're outside more, and we work
3 out. It's deteriorating our health. And I'm sorry, yeah.

4 (Pause.)

5 DR. RAVAL-NELSON: Thank you very much --

6 MR. WHITE: Hello?

7 DR. RAVAL-NELSON: -- for your testimony.

8 MR. WHITE: Can you hear me? Can you hear me? I'm
9 sorry.

10 DR. RAVAL-NELSON: Yes --

11 MR. WHITE: My phone cut off for a second.

12 DR. RAVAL-NELSON: -- we can. No worries. You have
13 three minutes and 25 seconds.

14 MR. WHITE: Okay. So yes, I am here advocating for
15 the black community and for the youth of the black community
16 as well, because us as a community, we get the low, like the
17 bottom of the barrel.

18 So we go through a lot of health crises that not a lot
19 of people, or not a lot of other races go through. And I
20 really just want to see that change. It starts here. Like,
21 this one meeting can start a whole movement and change much
22 more than we can know.

23 Also, to add another fact to the matter, I found out
24 that around airports where residents live, there is more

1 likely to -- you're more likely to have a heart attack or to
2 experience lung cancer or any type of cancer, like Taylor
3 Baker was saying earlier in the meeting, and I really just
4 want to see a change. That's all. Thanks for having me.

5 THE REPORTER: Excuse me. This is the court reporter.
6 Mr. White, could you please state the school that you
7 attend? I did not catch it. Thank you.

8 MR. WHITE: I attend Imhotep Institute Charter High
9 School. We are an African culture based high school in the
10 City of Philadelphia.

11 THE REPORTER: Thank you very much.

12 MR. WHITE: Thank you.

13 DR. RAVAL-NELSON: Thank you. Excellent.

14 Our next speaker will be Lisa Hastings, and then we
15 will be on the lookout for Hope Prima. So Lisa Hastings?

16 MS. HASTINGS: Yes. Hi. My name is Lisa Hastings and
17 I'm speaking as a concerned resident of Philadelphia. If
18 this permit goes through, it needs to at least be seriously
19 revised to reflect that ozone is increasing in Philadelphia,
20 not decreasing --

21 DR. RAVAL-NELSON: Okay. Ms. Hastings is not
22 available. We've hit everybody we had --

23 MR. WIENER: She's --

24 DR. BETTIGOLE: She's speaking.

1 MS. HASTINGS: I was speaking.

2 DR. RAVAL-NELSON: Oh.

3 MS. HASTINGS: Can I start over?

4 (No response.)

5 MS. HASTINGS: Hello?

6 DR. BETTIGOLE: I think there's something wrong with
7 Dr. Raval-Nelson's connection. I can restart the timer for
8 you if you want to go ahead and speak. I apologize.

9 MS. HASTINGS: Okay. I'll start over.

10 DR. RAVAL-NELSON: Sorry about that.

11 MS. HASTINGS: Okay. This permits needs to be
12 seriously revised to reflect that ozone is increasing in
13 Philadelphia, not decreasing as it was acclaimed in 2019, to
14 reduce unnecessary pollutants including waste heat that this
15 facility emits directly into a federally recognized
16 environmental justice area, and to radically increase and
17 improve monitoring and public transparency.

18 The fact that there are other CHPs polluting
19 Philadelphia does not lessen the harm done. The only way to
20 reduce the harm to public health and the environment in
21 Nicetown is to reduce the amount of fossil fuel burned at
22 this facility.

23 If natural gas is burned, continuous emission
24 monitoring on the CHPs must be required. Also, AMS must

1 install comprehensive permanent air quality monitoring near
2 the site. Mobile temporary monitoring is helpful but not
3 sufficient.

4 It is good in this version of the permit that SEPTA
5 included other stationary sources of air pollution from this
6 facility, but the permit still has serious limitations.

7 Given the air quality problems in Philadelphia and
8 SEPTA's violation of the previous permit, AMS should have
9 reduced the amount of natural gas that can be burned on site
10 to compensate for acknowledging other emissions and to
11 reduce potential problems in the future.

12 Instead, AMS increased the amount of pollution SEPTA
13 is allowed to emit, increasing the amount of NOx by almost
14 15 percent and the amount of VOCs allowed by over 50 percent
15 from the first permit, leaving SEPTA with no wiggle room
16 before crossing over to major source levels. This is unfair
17 and should be reversed.

18 The total amount of natural gas allowed to be burned
19 should be reduced, and these reductions should be taken
20 during the ozone season or at least during the high heat
21 ozone summer months.

22 They could alter the amount of natural gas and
23 electricity burned and change this radically to radically
24 reduce or eliminate what is burned during ozone season.

1 This will reduce the greenhouse gases and the ozone
2 precursors emitted during the ozone season, which should be
3 routinely expected in an ozone nonattainment area.

4 It will also decrease the amount of waste heat these
5 CHPs flood into already overheated environmental justice
6 neighborhoods. These are both serious problems that AMS and
7 SEPTA need to address.

8 Burning less fossil fuel on site does not require a
9 reduction in SEPTA service, but rather an adjustment in how
10 much electricity and how much natural gas are used during
11 this month.

12 Ideally, state and federal funds will be pursued to
13 help install solar at this facility and on other SEPTA
14 properties and used to offset burning natural gas. This is
15 an economic as well as an environmental necessity.

16 Increasing the energy resilience of SEPTA's regional
17 rail was a reason that SEPTA used the first time this
18 facility was approved --

19 DR. BETTIGOLE: Excuse me, Ms. Hastings. You have one
20 minute.

21 DR. RAVAL-NELSON: You have one minute left.

22 MS. HASTINGS: Okay, yes. Energy resiliency
23 supposedly of the CHPs was used as an argument to build this
24 plant. However, it is really a reason to install solar to

1 augment grid electricity and replace some natural gas.

2 PJM Interconnect found that individual natural gas
3 generators were less reliable during polar vortexes in
4 Pennsylvania than grid electricity was. Additionally, since
5 then, the U.S. Department of Energy now maintains that solar
6 energy with battery storage increases the resiliency of
7 power sources, partially because a breakdown in fuel
8 delivery will not impact it. So for energy resiliency, for
9 environmental quality, climate change, public health --

10 DR. RAVAL-NELSON: Ms. Hastings, your time is up.

11 MS. HASTINGS: Thank you.

12 DR. RAVAL-NELSON: Thank you very much. I am not sure
13 if Hope Primas has joined us back.

14 (Pause.)

15 DR. RAVAL-NELSON: Great. Hope is back, and Hope, do
16 you want to go ahead and come on and provide your testimony?

17 (No response.)

18 DR. RAVAL-NELSON: Hope?

19 (No response.)

20 DR. RAVAL-NELSON: Hope, are you on?

21 (No response.)

22 DR. RAVAL-NELSON: It seems as though Hope is not on,
23 so at this point we've gone through all of the testimony.

24 We will reach out to Hope and ask her to provide her

1 testimony in a written form so that she can be included as a
2 part of the public record.

3 Again, the written testimony comment has been extended
4 to August 31st of this year, and the information of where to
5 submit the written testimony as well as the subject
6 information was provided in both the chat and the Q&A.

7 At this point, I am going to turn it over to our
8 health commissioner for a few closing words.

9 DR. BETTIGOLE: I just wanted to take a moment to
10 thank everyone who has joined this call, who has given
11 comments, who has listened, for a really thoughtful and
12 solutions-focused process.

13 I know there's a lot of strong feelings about this
14 permit and this facility. Really, in a time in which
15 there's so much screaming at people, I just have truly
16 appreciated this approach of thoughtful, science-based,
17 important comments.

18 So we are listening. It's going to take us a while to
19 work through what I imagine will be copious public comments,
20 so we will do that, and we do take that process very
21 seriously.

22 I also just want to say how impressed I was, I think
23 everybody on this call was, with our two young people who
24 called in, and grateful that they are engaged in this kind

1 of thoughtful debate, and thinking deeply about how we can
2 make our environment safer and better for all of us to
3 breathe.

4 So thank you all for being here. It will probably
5 take us several months to work through all of this, but we
6 will issue a written document.

7 I'm going to turn things back over to Dr. Raval-Nelson
8 to wrap up. Thank you.

9 DR. RAVAL-NELSON: Thank you -- (inaudible) --

10 DR. BETTIGOLE: Palak, I think there's something wrong
11 with your sound, I'm afraid.

12 (Pause.)

13 DR. BETTIGOLE: All right. I just want to make sure
14 everybody sees the email Ed put in the chat in terms of
15 where to send public comments, again, open till August 31st,
16 to DPHAMS_Service_Requests@Phila.Gov. And please put "SEPTA
17 Roberts Complex SMOP" in the subject line. And all that is
18 in the chat.

19 So with that, unless there's anything else that I'm
20 missing processwise, folks, I think we're going to give you
21 your evening back, and thank you so much for being part of
22 this process.

23 (Whereupon, the public hearing was concluded.)

7/27/2023

1

C E R T I F I C A T I O N

2

I hereby certify that the foregoing proceedings, the

3

Public Hearing - proposed Synthetic Minor Operating Permit

4

for Southeastern Pennsylvania Transportation Authority

5

(SEPTA) - Roberts Complex, were reported by me on July 27,

6

2023, and that I, John A. Kelly, read this transcript and

7

attest that this transcript is a true and accurate record of

8

the proceedings.

9

By:

10

John A. Kelly

11

Court Reporter

7/27/2023

<u>WORD</u> <u>INDEX</u>					
< \$ >	3.4 33:7	absorb 33:1	admit 45:6	61:24	53:10, 14
\$28,000 8:20	30 53:19	accept 3:6	adopted 4:7, 8	alarming 48:14	annually 45:11
< 0 >	31 2:1 3:14	accepted 11:19	adults 59:15	allergies 12:9	anybody 30:11
0.29 12:13	40:1 48:22	access 5:17	advance 5:16	48:21	anybody's
0.9 25:14	31st 9:23	58:19	15:13	allow 4:10	15:13 44:19
< 1 >	67:4 68:15	accessible 9:6	advancements	7:4 13:23	Anyway 21:20
1 1:1 3:14	35 2:1	36:14 58:17	58:19	46:10	apologize 6:2
1,300 53:21	35,000 54:19	acclaimed	advantage	allowable 19:9	15:13 24:21
1/10th 39:5	365 24:6	63:13	18:16 25:23	allowance	25:4 26:17
10 2:1 3:12	37 2:1	accountable	adverse 28:17	14:17	37:5 63:8
100 18:5, 19	< 4 >	57:7	advocacy 17:8	allowances	apparent 17:14
127 4:7, 9	4.6 3:21	accumulate	advocate 54:13	14:15, 17	appeal 40:15
15 2:1 21:7	41 2:1 11:15	33:22	advocating	allowed 14:2	appears 38:17
64:14	24:16	accurate 69:7	61:14	22:8 24:11	appease 7:3, 17
17 2:1	4301 3:9	accurately	affect 43:20	27:11 48:5	application
19129 3:10	44 2:1	36:5	afraid 68:11	55:3 64:13, 14,	4:12 27:6
19140 26:6	450 22:14	achieved 48:10	African 62:9	18	applied 28:5
48:23	460 53:21	acid 52:10	afternoon 25:2	allows 48:6	applies 27:14
1964 28:10	47 2:1	53:9	Agency 28:2	alter 64:22	apply 15:2
198th 25:13	4700 42:2, 3	acknowledging	Agency's 28:8	altogether	59:6
< 2 >	49 2:1	64:10	ago 17:18	13:19	appreciated
2 3:15, 21	< 5 >	Act 4:5 15:2	52:16	Alzheimer's	67:16
2.5 39:4 40:6	5 2:1	17:23 26:15	agree 38:10	49:7	approach
20 2:1 21:7	50 53:19	28:9, 16, 19, 20	ahead 10:11	ambassador	67:16
49:11	64:14	acting 29:17	26:20 41:5	60:13, 16	Approval 4:1
2006 52:13	500,000 25:16	action 5:3	56:24 63:8	ambassadors	approved 3:23
2012 48:22	51 2:1 54:20	17:11, 23	66:16	57:3	16:3 49:17
2015 37:18	54 2:1	28:16 30:13,	aiming 46:21	ambient 13:8	52:24 65:18
2017 4:1	56 2:1	18 48:18	AIR 1:1 3:3	14:4 32:16	AQS 36:1
27:17 46:17	< 6 >	actions 46:9	4:5 9:7, 9	Amendments	area 6:20
2018 40:16	60 2:1	active 61:2	12:4, 6, 7, 8	4:5	7:19, 22, 24
2019 47:5	62 2:1	actual 8:10	13:9, 11, 15	American 26:1	8:9, 18 9:14
63:13	69 1:1	32:11 53:12,	14:4 17:12, 17	amount 9:10	16:6 18:16
2021 12:5	< 7 >	18 55:13	18:7, 22, 24	27:10 38:11	21:7 40:5
28:10 55:20	78 26:4 48:15	add 9:13 13:3	19:2, 8, 10, 11,	43:19 45:15	43:3 44:17
2022 54:24	< 8 >	50:16 61:23	14, 20 20:22	46:2 48:9	63:16 65:3
55:14, 15, 17	8,060 24:1	adding 8:22	21:1, 4 22:6	58:8 63:21	areas 21:4
2023 1:1 3:12,	8,760 56:8	51:12 60:21	23:5 25:18, 22	64:9, 12, 13, 14,	35:22 43:13
14, 15 13:18	80 53:12	addition 36:12	26:3, 9 30:9,	18, 22 65:4	argument
69:6	83 54:21	additional	12, 18 31:22,	AMS 1:1	65:23
21 2:1 13:19	86 49:10	4:20 9:24	23, 24 32:15	3:23, 24 5:6	arms 43:14
22,000 26:5, 7	< 9 >	13:7 34:17, 18	34:2, 5, 7	11:9, 13 12:17	arrangement
24.7 12:13	9/10ths 11:5	Additionally	35:12, 19, 20	13:8, 14 19:8,	30:3
25 2:1 4:7, 9	90 48:17	66:4	36:9, 10, 12, 13,	18 22:6 23:22	arrays 18:15
12:14 45:11	95 48:17	address 4:22	21 37:24	24:13 38:11,	articles 40:19
55:10 61:13	< A >	5:4, 6, 8 10:2	38:10 42:20	22 40:13, 23	ASC 1:1
26 2:1	able 21:9	14:3 30:22	43:7, 14, 17, 19,	42:10 45:3	asked 40:17
27 1:1 69:5	36:19 59:19	65:7	23 44:19	46:11 52:17,	asking 16:1, 4
29 4:1 24:2	Absolutely	addressed	46:13, 14	23 55:12	42:10 43:2, 21
< 3 >	9:21 14:7	11:9 40:9	47:22 48:8	63:24 64:8, 12	44:7
3.2 33:7	25:23	adequate 36:4	49:2 54:13	65:6	aspect 32:1
		56:3, 10	55:7, 16, 20, 21	analytical	34:10
		adequately	56:1, 6, 12	31:13	assistance 8:19
		47:20	57:13 58:7	analyzer 13:5	associated 6:5
		adjacent 8:6	59:13, 14, 18,	and/or 22:10	Association
		27:22 36:1	20, 22 60:17	40:5 58:18	26:2
		adjustment	61:1 64:1, 5, 7	annual 14:21	assure 4:22
		65:9	airports 60:20	36:24 45:7	asthma 6:14,
					15, 19 7:19, 21,

7/27/2023

24 12:9 25:17, 21 26:5, 7 42:16 43:10, 11, 16 48:20, 23 57:11 athlete 60:15, 24 athletes 60:24 atmosphere 31:20 33:20 attack 25:21 57:11 62:1 attacks 43:10 attendees 62:7, 8 5:4 attention 38:14, 15 39:16 attest 69:7 audible 15:19 augment 66:1 August 9:23 67:4 68:15 Authority 1:1 3:8 69:4 Authority's 54:17 available 16:7, 21 20:4 23:15 35:5 45:22 51:14 62:22 Avenue 3:9 averages 14:11 48:24 avoid 28:14 48:2 aware 15:23 39:10 40:11 < B > back 9:4 11:8 16:22 37:17 42:23 50:12, 14 51:21 66:13, 15 68:7, 21 backed 36:6 background 60:18 Bad 12:6 31:23 46:14 58:3, 4, 6 BAKER 1:1 2:1 46:24 47:1, 3 62:3 B-A-K-E-R 47:4 Barn 15:4 barrel 61:17	based 11:16 62:9 baseline 23:10, 11 24:15 basically 20:17 basis 52:11 battery 22:10, 16 66:6 bear 46:4 behalf 17:6, 10 42:9 57:4 behavior 53:22 believe 16:6 24:4 25:17 34:9 40:16 56:21 benefit 30:9 benzine 49:5 Best 41:13, 15 50:7 53:22 better 22:5 24:12, 13 42:21 68:2 BETTIGOLE 1:1 11:10 21:19 25:4, 8, 10 26:16 49:24 50:11 51:9 62:24 63:6 65:19 67:9 68:10, 13 Beverly 41:4, 8, 10 big 12:12 26:13 bills 60:5 birth 44:5 bit 6:21 10:6, 22 bitter 21:22 black 8:6, 9 30:8 61:15 block 12:7 42:2 44:6 blows 44:24 BOARD 1:1 bodies 43:20 body 12:3 57:4 border 8:8 born 6:16 bothered 57:21 bottom 8:19 61:17 breakdown 66:7 breath 25:21 breathe 17:17	19:7, 14 68:3 breathing 30:9 broken 30:13 budget 30:5 build 16:1 30:3 65:23 buildings 22:15 built 16:3 Bulletin 3:12 bunch 57:14 burden 35:17 42:6, 12, 15 43:8, 19, 21, 22 burdens 8:22, 23 burn 18:22 21:24 burned 9:10 36:9 38:12 48:9 63:21, 23 64:9, 18, 23, 24 burning 13:24 14:12 18:1 24:16 44:22 46:18 65:8, 14 burns 27:18 47:5 bus 7:14, 15 14:7 15:4 27:16 57:11 buses 29:21 business 7:12 buying 14:17 < C > calculation 11:18 calculator 11:16 call 16:17 19:18 20:12 38:14 41:10 50:24 67:10, 23 called 34:5 67:24 calling 35:12 39:16 48:8 51:23 calls 14:1 18:14, 22 51:21 camera 10:17 15:15 31:11 33:6 41:5 56:20 CAMs 34:8 Canada 30:14	Canadian 17:19 36:10 cancel 14:14 canceled 38:7 cancer 49:6 62:2 capable 29:4 capacity 42:8 capital 30:5 car 45:5, 15, 19 carbon 13:3 14:12 27:20 32:4, 22 49:11 52:8 cardiovascular 19:4 CARDONI 1:1 2:1 16:23 17:2, 5 C-A-R-D-O-N- I 17:6 care 44:6 45:23 cars 60:20 case 28:10, 11 39:17 53:18 cases 26:5 catch 62:7 catenary 29:11 cause 49:6 57:18 58:20 60:22 caused 55:9 causes 60:19 causing 19:17 CEM 13:1 census 27:24 center 42:14 central 49:6 certain 19:5 52:4 certified 11:18 31:8 certify 69:2 challenging 40:16 chance 26:13 51:10 change 17:14, 20 18:1 33:13, 18 49:14 61:20, 21 62:4 64:23 66:9 CHANIN 1:1 2:1 37:6, 9, 11, 15 40:2, 11 charge 59:4 Charles 41:12,	13, 15 chart 33:3 Charter 1:1 57:2 59:21 60:14 62:8 chat 5:7 9:19 10:3, 4, 10, 12 30:22 31:9 33:4 67:6 68:14, 18 cheaper 47:12 check 45:20 chemicals 53:17 chemist 31:13 CHERYL 1:1 Chester 53:8 Chief 1:1 3:2 child 6:14, 15, 17 children 7:18, 23 26:6, 7 48:21, 22 57:17 choices 59:2 choose 19:7, 8 CHP 11:14, 16 13:1, 14 14:21 22:12 54:15 55:1 57:24 CHPs 63:18, 24 65:5, 23 Chris 54:9 CHRISTINA 1:1 2:1 30:24 31:5 C-H-R-I-S-T-I- N-A 31:5 circulates 39:11 citizen 44:16 citizen-based 17:7 citizens 59:7 CITY 1:1 7:2, 20 8:4, 17 11:12 21:5 22:2 23:18 26:1 28:13, 19 33:24 36:16, 20 37:17 45:5 46:13 48:6 55:19, 22 59:20 62:10 City's 55:21 Civil 28:8, 9, 16, 19, 20 claim 11:16, 19 48:1 58:9	clamoring 17:11 classified 31:19 Clean 1:1 4:5 18:5, 7, 11, 20 19:20 54:13 cleaner 19:8, 19 cleaners 21:4 cleaning 21:1 clear 17:24 26:9 48:6 clearly 50:4 climate 17:12, 14, 20 18:1, 9 19:16 22:3 26:11 33:13, 18 46:20 49:14 66:9 close 42:2 57:9 closed 11:18 24:5 closing 67:8 coal 11:17 24:15 Coast 17:18 Code 4:7, 9 13:15 26:7 48:23 Collaboration 1:1 27:3 collected 13:13 collection 47:24 collectively 12:1 color 8:12 54:21 combine 8:1 combined 3:21, 23 4:2 54:15 56:7 combustion 32:7, 9 38:18 39:8 come 16:22, 24 19:21 66:16 comes 45:20 56:9 58:20 59:13 coming 44:6 50:4 comment 11:8 23:2 37:24 67:3 commenter 5:12
---	--	--	---	--	--

7/27/2023

commenters 5:4	comprehensive 64:1	continuously 36:2 45:19	58:9	defined 4:5 31:20	differences 32:20
comments 4:11, 23 5:1, 5, 10 9:22, 24 30:21 34:19 37:22 46:11 52:16 67:11, 17, 19 68:15	compressed 29:21	52:14	curtail 30:15	definitely 59:19	different 32:14 53:1 57:14
Commissioner 1:1 11:10 26:24 67:8	computer 25:5 26:18	contribute 49:9	customer 29:18	deliver 29:11	digging 18:12
common 47:24	concentrations 37:1	contributed 30:16	cut 61:11	delivers 29:1	DiGiacomo 50:20 51:1
communities 26:11 27:24 28:3 43:5 47:8 49:15	concern 27:15 38:23 39:6 40:14 49:7	CONTROL 1:1	cylinder 32:8	delivery 66:8	DIGIULIO 1:1 2:1 30:24
community 8:5, 13, 15, 17, 21 9:8, 16 13:9 18:9 28:6, 18 32:1 33:22 34:9, 13 35:22 36:2 37:19 42:7, 12, 23 44:8 47:20, 23 48:4 49:1 54:22 61:15, 16	concerned 35:15 62:17	controlling 46:4	< D > dab 8:10	demand 8:24 9:2, 6, 9, 15 47:22	D-I-G-I-U-L-I-O 31:5
commuters 30:10	concerning 4:23	correct 23:22 28:13	daily 13:23 25:18 26:8 59:21	demanding 16:10	dioxide 13:3 32:22 49:11 52:8
compare 36:19	concerns 40:21	correctly 24:22	damage 55:24	dementia 19:5	dioxins 53:16
compared 36:5 37:1	concluded 29:20 55:21 68:23	cost 46:1, 4 costs 30:4	damages 57:18	demonstrate 22:9	direction 27:13
compensate 14:16 64:10	conclusion 24:12	Council 1:1 8:4 54:14	dangerous 14:18 18:4, 13 39:14, 20	demonstrated 29:14	directions 44:24
completely 50:9	conditions 30:16 32:13, 14 36:6, 18 48:20	country 52:18 53:2, 15	DARISHA 1:1 2:1 24:20 25:13	Department 3:4 4:10 13:13 15:1 21:19 28:1, 15 30:17 49:3 66:5	directly 58:22 59:13 63:15
Complex 1:1 3:9 5:9 27:7, 15 35:14, 16, 20 42:11 44:18 45:10 46:8 54:17, 20 68:17 69:5	conduct 45:7 13:6 35:21 36:4	couple 6:17 7:7 8:1, 24 37:23 38:6 39:13 40:19 51:11 57:21	darkened 30:13	depot 14:7 27:16	Director 1:1
compliance 14:3 16:5, 6 19:1 28:9	conducted 13:6 35:21 36:4	course 17:13 18:17	data 13:12 19:2 22:20 23:1, 21 24:13 36:14, 16, 17, 19, 24 37:2 47:24 48:14 53:7, 24 58:16, 19	Deputy 1:1 11:10 25:4 26:24	dirty 18:4, 12
complicated 6:21 10:6	congestion 43:13	Court 1:1 62:5 69:11	DATE 1:1	dermatitis 43:13	Disallow 13:17
complications 44:5	connection 63:7	Covanta 53:7	dating 9:4	desert 13:11	disappointed 27:6 40:15
complies 56:11	consequences 9:2 48:2, 19 49:8	covered 22:16 26:18	Davies 51:4, 6	deserve 19:15	disaster 48:3
compound 55:11 56:4	consideration 60:5	crashed 25:5 26:18	day 15:23 30:18 57:16	deserves 49:1	discovered 55:15
compounds 27:21 31:18 32:5 47:6 52:9	considered 35:18 52:20	credibility 46:17	days 12:6, 8 13:16 24:3 30:13 31:24 36:9 43:8, 23	designate 4:18	diseases 19:4 49:6
	construction 3:24	crew 38:6	de 13:17	designated 27:24	disparate 28:18
	consume 29:23	crises 61:18	death 19:5	despite 7:1	distance 6:13
	context 11:11	crisis 17:12 18:9 19:16 22:3 26:12 33:13	debate 68:1	detect 12:17	District 25:13
	continue 21:23 46:14	criticism 22:22	decades 47:16	detectably 12:7	dizziness 43:12
	continues 18:21	crossing 64:16	decision 58:21	deteriorating 61:3	doctor 37:4
	continuous 9:7 12:24 26:9 34:5 35:24 45:22 46:7 47:22 51:23 52:11, 18 53:4, 9, 11, 17 63:23	cube 41:5	deck 5:20 6:3	determination 4:24	document 5:2 32:24 33:3 68:6
		culture 62:9	declared 30:18	determine 36:18	doing 37:1 53:9 57:8 58:2, 5 60:12
		cumulative 31:24 34:10 35:15	decline 12:4	determined 55:2	domain 7:5, 10
		current 9:4 23:1 27:12 28:12 36:6, 15, 18 45:17 56:2, 6	Decrease 14:11 65:4	devastation 19:16	do-over 28:12
		currently 35:19 55:19	decreasing 8:16 62:20 63:13	develop 22:13	downloaded 36:17
			dedicated 36:21	developed 59:15	DPH 1:1
			deeper 18:12	device 26:19	DPHAMS_Service_Requests@Phila.Gov 5:8 10:5 68:16
			deeply 68:1	diagnosed 48:23	DR 1:1 5:11, 19, 22 6:1, 8 9:12, 21 10:11, 19, 21 11:1 14:13 15:6, 11,
			deficiency 57:15	diesel 48:17	
				difference 8:8 43:18	

7/27/2023

18, 20 16:11, 15, 17, 20 17:3 19:22 20:2, 4, 7, 10, 13, 15 21:10, 12, 13, 14, 15, 16, 18, 19, 20 24:9, 11, 19, 24 25:4, 8, 10 26:16, 17, 23 29:24 30:20 31:2 34:6, 16, 21, 24 35:2, 4, 7, 8, 10 37:4, 10 39:24 40:10 41:1, 8, 10, 12, 15, 17, 20, 22 44:10 46:21, 23 47:2 49:18, 21, 23, 24 50:1, 4, 6, 9, 11, 16, 19, 22, 24 51:3, 6, 8, 9, 11, 17 54:4, 11 56:14, 17, 21, 24 59:24 60:7, 10 61:5, 7, 10, 12 62:13, 21, 24 63:2, 6, 7, 10 65:19, 21 66:10, 12, 15, 18, 20, 22 67:9 68:7, 9, 10, 13 drive 45:5, 9 dubious 30:4 ducks 12:20 due 29:8 32:13, 14 dumping 13:23 < E > earlier 21:22 23:14 39:3 46:11, 22 62:3 earth 33:2 60:22 easily 31:21 55:9 58:16 East 6:12 8:7 17:18 easy 36:18 echo 18:14 37:22 economic 30:4 65:15 ECRCO 28:10 Ed 5:12 10:7, 11 68:14 EDWARD 1:1	3:2 effect 30:5 effects 19:3 31:20 43:24 55:24 either 29:3 59:11 Electric 14:21 electrical 29:6 electricity 27:15 28:24 29:11, 16 64:23 65:10 66:1, 4 electrifying 18:10 eliminate 64:24 email 6:3 10:2 30:22 33:5 68:14 e-mail 5:6 eminent 7:5, 10 emission 12:24 14:16 32:12 63:23 emissions 9:2, 11 11:21 12:12 13:12, 17, 18 14:20 18:7 22:20, 24 23:1 24:7 27:11, 20 32:11, 17 35:24 43:4, 22 45:11, 19 46:9 47:5, 9, 11, 18 49:9 51:23 52:3, 19 53:12, 19 54:24 55:11, 13 56:4, 11 58:8 64:10 emit 45:14 58:10 64:13 emits 45:15, 20 63:15 emittance 33:10 emitted 18:24 23:20 33:2 38:17 40:8, 21 49:2 65:2 emitting 24:17 33:7 46:1 55:3 emphasized 32:11 Empower 28:7	encourage 13:24 15:1 52:22 53:23 encouraging 52:15 Energy 1:1 11:17 16:18 18:6, 11, 20 19:20 22:5, 9, 11, 18 24:14, 18 42:23 47:13 48:10 51:20 59:5 61:1 65:16, 22 66:5, 6, 8 enforced 49:3 enforcing 19:11 engage 43:9 engaged 42:5 67:24 engine 32:7, 13 45:20 engines 27:19 32:3, 14, 18 enhanced 28:4 ensure 18:24 36:5 38:2 56:3, 10 58:17 enter 10:12 entire 27:14 29:6 45:7 environment 9:17 16:24 17:7 18:14 26:8 43:2, 8 63:20 68:2 environmental 8:3 17:7 27:4, 24 28:1, 2, 3, 8, 18 30:17 35:11 46:17 54:22, 23 63:16 65:5, 15 66:9 envision 22:7 EPA 11:16, 18 13:8 14:1 32:23 35:19 36:1 52:12 equipment 12:15 55:6 especially 38:5 46:1 57:6, 19 59:6, 23 60:3 essential 23:11 establishing 29:20 Europe 53:16	evaporate 31:21 evening 5:12 10:14 11:3 44:13 68:21 event 29:6 everybody 10:4, 7 58:2, 5 62:22 67:23 68:14 evidence 16:7 38:3 39:7, 18, 19 EWALL 1:1 2:1 16:12, 15, 17, 18 41:2 51:14, 16, 19 exacerbated 33:18 47:9 exact 33:19 exactly 23:16 example 22:1 30:17 52:15 examples 52:24 exceed 19:12 Excellent 5:11 62:13 excess 14:5 excessive 17:16 Excuse 62:5 65:19 exemplified 53:3 exhaust 46:5 48:17 exist 7:1 existed 52:11 existing 3:17, 20 8:23 exists 52:23 expected 65:3 expensive 45:23 experience 11:23 19:16 62:2 experienced 17:15 19:6 29:8 experiencing 30:12 48:20 exponentially 32:6 export 7:11 exports 7:6 exposed 43:13	exposure 35:11, 16 48:16 49:4 exposures 35:17 expressed 17:13 extend 18:3 extended 9:22 67:3 External 28:8 extra 8:22 13:18 extremely 7:19, 20 39:20 < F > face 43:15 facilities 8:12 14:15 18:10 19:12 33:19 46:21 52:5 53:14 facility 3:18 4:4, 6 6:13 12:13, 16 14:5, 15 15:5 18:21, 23, 24 24:12 27:16 31:10 38:12 40:22 49:2 51:24 55:5, 9, 13, 17 56:11 58:6 63:15, 22 64:6 65:13, 18 67:14 facility's 55:1, 4 56:3 fact 8:15 14:4 27:10 48:6 53:3 61:23 63:18 factories 57:6, 24 60:20 factors 32:12, 16 factory 60:21 facts 8:1 factual 57:20 fails 29:7 fair 30:11 Falls 6:12 8:7 family 42:4 far 8:16 44:19 47:17 far-reaching 49:9 faster 8:16 favor 24:14	federal 15:2 18:16 28:17 38:20 54:20 55:20 65:12 federally 42:13 63:15 feedback 6:5 feel 10:16 15:15, 18 17:19 25:20 51:18 59:1 60:2 feelings 67:13 feels 42:19 FELDMAN 1:1 2:1 41:18, 19, 21, 24 42:1 felt 42:17, 22, 23 43:8 fenceline 11:22, 23 34:12 Fern 20:17 final 5:3 finally 23:13 financial 7:16 find 5:7 22:20 finding 59:5 fine 5:19 36:3 38:16 39:2 40:5 42:17 48:15 55:6 fired 3:21 32:3 fires 17:21 30:14 44:22 first 5:12 6:16, 17 22:10 46:12 49:11 52:18 56:9 64:15 65:17 firsthand 17:19 19:6 fiscal 48:2 five 4:16 46:10 five-year 13:19 fleet 29:20 FLIR 31:12 flood 65:5 floods 17:22 FLORA 1:1 2:1 16:23, 24 17:5 folks 9:23 41:2 68:20 follow 46:10 Following 4:19
---	--	--	---	--	--

7/27/2023

forbid 53:5	future 18:5 19:20 22:7, 19 23:23 64:11	goes 33:21 62:18	handful 44:23 52:6	56:17 60:9 61:8	hospitalized 57:10
foregoing 69:2		going 5:22 8:2, 7 9:18 16:9 20:18, 19 21:8, 9 23:17 33:20 34:4, 11, 24 40:23 57:11, 15, 20 60:14, 21, 23 67:7, 18 68:7, 20	happen 6:22 47:16	heard 25:12	hot 12:6
forest 30:14	< G >		happened 12:16 48:3	Hearing 1:1 3:5, 11, 13 4:10, 13, 21 11:7 52:16 68:23 69:3	hottest 15:23, 24
forgive 13:18	G-1 54:15 55:1		happening 44:1 47:14	hearings 40:15	hourly 14:10
form 67:1	G-2 54:16		happens 50:12	heart 62:1	hours 24:2, 6 45:9 56:8
formaldehyde 49:5	Gas 1:1 6:24 7:1, 3 9:16 11:4 12:1 13:23 14:12, 21 18:2, 19 21:21, 24 22:21, 24 23:2, 6, 8, 17 24:4 27:19 29:19, 21, 23 31:8, 11, 16 32:3 36:8, 13 38:11, 18 39:8 42:2 46:18 47:4, 5 49:10, 15 58:10 63:23 64:9, 18, 22 65:10, 14 66:1, 2	Good 5:12 11:3 25:2 44:13 46:22 59:22 64:4	HAPS 13:3 49:2	heat 3:21, 23 4:2 14:5, 6 17:16, 21 30:13 54:15 55:2 56:7 63:14 64:20 65:4	house 42:17 43:18
formation 32:6		gotten 38:15	hard 23:2, 24 24:4	heard 62:1	household 8:20
forms 47:13		government 38:21	harm 34:1 47:20 63:19, 20	heat 3:21, 23 4:2 14:5, 6 17:16, 21 30:13 54:15 55:2 56:7 63:14 64:20 65:4	humidity 32:16 hundreds 22:15
for-profit 7:5		grade 60:14	harmful 17:12 49:4	HELLED 1:1 31:24 33:21 57:7	hurt 12:3 60:22
forward 40:23		graded 26:1	harm's 59:13	Harrisburg 29:17	hydrocarbons 31:18 33:7, 8, 10, 11
fossil 7:12		Graf 34:21, 24 35:2	HASTINGS 1:1 2:1 62:14, 15, 16, 21 63:1, 3, 5, 9, 11 65:19, 22 66:10, 11	HELLO 56:16 61:6 63:5	hydrochloric 52:10 53:9
9:10 18:1, 4, 13, 18, 22		grant 23:23	15, 16, 21 63:1, 3, 5, 9, 11 65:19, 22 66:10, 11	help 18:6 19:9 26:11 65:13	hydrogen 52:9
19:19 21:24 29:18 30:10 48:9 49:8, 13 63:21 65:8		granting 23:11	hazardous 49:2	helpful 64:2	< I >
found 53:11, 18 61:23 66:2	gases 11:14 24:16 32:23, 24 52:10 65:1	grants 15:2	headaches 12:10 43:12	Hey 25:2	idea 23:19
four 8:24 23:7	general 9:1	grateful 67:24	headline 10:8	Hi 17:2 21:13, 14 35:7 41:22 47:1, 3 62:16	Ideally 65:12
fracked 18:19 27:18 29:19 31:16 47:5	generally 12:8	great 6:6 11:3 14:14 15:10 21:18 37:11, 13 40:11 42:21 50:1 66:15	Health 1:1 3:4 9:2, 15 11:9, 12 12:22 13:13, 14 15:1 18:7, 9 19:3, 20 21:19 26:14 33:17 39:6, 11 40:8 42:7, 14, 15 43:20 44:2, 5 46:2 47:7 48:1, 13, 19 49:3, 14 55:24 61:3, 18 63:20 66:9 67:8	Hi 17:2 21:13, 14 35:7 41:22 47:1, 3 62:16	ideas 46:22
franchise 59:6	generation 27:16 55:2 56:7	green 47:13	headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	identical 32:17
free 10:16 15:15, 18 46:6 51:18 58:3	generations 19:21 60:23	greenhouse 11:14 24:16 32:23 65:1	headlines 12:10 43:12	higher 26:3 42:12 48:15, 16, 24 53:12, 19, 21	ignition 32:15
frequency 54:14 56:10	generators 66:3	greening 48:11	headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	ignorance 48:1
frequent 19:10 30:12	Germantown 11:5 12:5	grid 11:17 14:22 29:7 66:1, 4	headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	illnesses 57:14
fresh 12:8	getting 43:5 57:16	ground 45:1 55:20, 22	headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	image 31:11
friend 57:10	GFX320 31:12	group 37:16	headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	imagine 67:19
friendly 46:20	give 22:23 58:3 68:20	growing 39:6, 7, 19	headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	imaging 31:9, 11
friends 21:19 27:9	Given 64:7 67:10	guess 52:2 57:22	headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	Imhotep 1:1 57:2 60:13 62:8
fuel 7:12 29:18 30:10 32:15, 19 63:21 65:8 66:7	global 7:22 18:6 49:9, 10	Gunn 41:4, 10	headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	immediate 44:17 48:18
fuels 9:10 18:1, 4, 13, 18, 22 19:19 21:24 48:9 49:8, 13	go 10:11 24:7 26:20 31:10 41:5 45:16 48:6 56:24 57:12, 17 58:24 59:10, 11 61:18, 19 63:8 66:16	GUTTENBERG G 1:1 2:1 15:12, 14, 19, 21	headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	immediately 9:15
full 24:3 49:1	God 53:5	guys 32:4, 10	headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	immune 59:16
function 28:23		< H >	headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	impact 28:18 40:9 66:8
funded 18:17		half 11:24	headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	impacted 26:8
funding 29:22		hallways 59:23	headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	impacting 14:23
funds 28:17 65:12			headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	impacts 17:22, 24 36:10 39:6
FURCHT 1:1 2:1 44:11, 13, 14			headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	implementing 48:10
F-U-R-C-H-T 44:11, 14			headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	important 59:10 67:17
further 18:3			headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	impose 46:7
			headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	impractical 29:21
			headlines 12:10 43:12	high 7:19, 20 13:19 19:12 42:14 43:22 44:4 57:2 60:14 62:8, 9 64:20	impressed 67:22

7/27/2023

improve 27:8 63:17	informed 58:17	issue 4:24 21:5 38:14 68:6	KASSAHUN 1:1	lead 49:5	live 6:12, 16, 20 11:5 12:5 19:15 20:17 35:22 37:19 42:1 44:17, 23 54:19, 20 61:24
inaccurate 55:14	infrared 33:2	issues 6:18 60:17	keep 5:22 6:2 45:8 58:14	Learning 6:15	19:15 20:17 35:22 37:19 42:1 44:17, 23 54:19, 20 61:24
inadequate 52:2, 3	infrastructure 15:2 49:16	issuing 3:24	keeping 46:14	led 26:1	42:1 44:17, 23 54:19, 20 61:24
Inasmuch 27:11	infrequency 47:19	itch 25:20	Kelly 1:1 69:6, 10	left 9:12 24:10 34:6 39:22 40:10 65:21	lived 11:23
Inaudible 50:3, 8 56:22 68:9	inhale 60:24	iteration 7:13	Kenny 11:19	legal 19:12 48:2	livelihood 9:17
incident 55:15	inhaler 42:22	its 18:10, 11 19:1 22:18 29:7, 16 45:2, 7 47:18 49:12 55:20 56:11	kept 56:4	legislators 29:17, 22	lives 26:7 47:16
incinerator 53:8	initiative 57:12	< J >	key 38:1	legitimate 40:20	living 6:14 26:6
incinerators 25:24	initiatives 48:11	JACKSON 1:1 2:1 19:23 20:6, 9, 11, 14, 16	kicker 12:12	legs 43:14	LLM 1:1 2:1
include 13:6 27:7 36:15, 22	inputs 11:17	January 11:9 54:24 55:15	kid 59:10	lessen 63:19	LLC 1:1 27:3
included 4:2 64:5 67:1	Inquirer 3:13	Jason 10:17 15:14	kids 6:15 43:9 44:2 57:15 59:10	level 8:19 20:21 26:3 45:1 48:15 55:20, 22	local 11:12 43:2 48:24
including 9:24 15:3 18:2 32:15 36:2 63:14	inside 42:17	Jenbacher 27:19	kill 13:20 42:20	levels 14:11, 18 19:9 55:3 64:16	locality 43:1
incoming 33:1	insisted 29:18	Jeremiah 1:1 2:1 60:8, 12	kind 8:21 39:1 67:24	lie 12:4	located 3:9 27:16 35:20 42:14
incomplete 32:9	in-source 29:16	JEREMIAH 1:1 2:1 60:8, 12	kindly 25:11 26:15	life 6:17 18:3 45:7	LOCATION 1:1
increase 27:10 43:11 54:14 56:12 63:16	inspection 45:8, 11	JIAZHENG 1:1	kinds 8:12	lifetime 45:16 59:11	locations 7:7 36:19
increased 18:22 19:4 54:23 64:12	install 12:24 13:8 64:1 65:13, 24	job 12:10 42:4	know 7:11 20:22 21:1, 2 23:13, 24 25:19 32:10 33:13, 18 34:3, 12 38:7 39:11, 12, 24 42:13 43:7, 14, 20 44:1, 2, 24 45:21 50:15 54:2 55:16 57:24 59:19 60:1 61:22 67:13	lie 12:4	log 50:12, 14
increases 13:17 66:6	installation 3:23 15:3	John 1:1 69:6, 10	known 23:10 53:17	life 6:17 18:3 45:7	long 20:19 55:6
increasing 27:19 36:12 55:22 62:19 63:12 64:13 65:16	installed 22:17	JOHN 1:1 69:6, 10	knowing 12:20	lifetime 45:16 59:11	look 8:6 31:10
increasingly 30:12	installing 14:22	joined 66:13 67:10	known 23:10 53:17	light 45:20 48:14 57:16	looked 40:17, 18 52:24 53:7
indicates 25:21	instance 53:8	joining 26:18	knows 14:24 52:23	likelihood 51:22	looking 14:11 33:8, 17 36:24 56:21
individual 21:21 66:2	Institute 57:2 60:13 62:8	July 1:1 69:5	knowing 12:20	limit 12:14 19:12	lookout 62:15
industry 7:3, 6, 17 29:18 30:11	insufficient 47:9	Junction 14:23 15:4 29:1, 2, 9, 12 37:21	known 23:10 53:17	limitations 56:11 64:6	looks 46:20
inevitability 47:14	integrated 22:11	Justice 1:1 16:18 27:4, 24 28:3, 18 51:20 54:22 63:16 65:5	known 23:10 53:17	limited 4:16	L-O-R-A 17:6
inextricably 57:13	Interconnect 66:2	July 1:1 69:5	knows 14:24 52:23	limits 19:1 55:10 56:5	lost 50:9
infections 43:12	interested 4:11	Justification 30:4 38:1	knowing 12:20	line 5:9 29:5 54:21 68:17	lot 21:5 32:20 39:13 42:22 53:4 57:24 58:8, 23 60:17 61:18, 19 67:13
information 4:20 10:9 34:18 36:16, 23 53:4 54:2 60:18 67:4, 6	interesting 23:4	justify 46:18	knowing 12:20	lines 7:14, 15 8:8 29:3 58:24	lots 39:10
	interests 29:17	Justice 1:1 16:18 27:4, 24 28:3, 18 51:20 54:22 63:16 65:5	knowing 12:20	link 31:9 33:4	louder 10:23 49:24
	interrupting 6:2	Justification 30:4 38:1	known 23:10 53:17	linked 57:13	low 20:21, 23 42:15 44:5 61:16
	interruptions 29:8	justify 46:18	known 23:10 53:17	LISA 1:1 2:1 62:14, 15, 16	lower 17:11 18:6 58:8, 12
	invest 18:15	< K >	known 23:10 53:17	LIST 2:1 50:17	lowering 19:9
	investigation 28:7, 14	KARENA 1:1 2:1 19:23 20:16	known 23:10 53:17	listen 39:16	low-
	investment 30:3		known 23:10 53:17	listened 67:11	maintenance 22:17
	involved 37:17		known 23:10 53:17	listening 67:18	LUNDY 1:1 2:1 19:23 20:2, 5
	IP17-000009 4:1		known 23:10 53:17	litany 19:3	
	irresponsible 33:14		known 23:10 53:17	little 6:21 10:6, 22 14:6 26:12 45:5, 15 49:24	
	irreversible 57:18		known 23:10 53:17		
	island 14:6 48:3		known 23:10 53:17		

7/27/2023

Lung 26:2 62:2	mean 15:8 58:1, 13	minutes 4:16 45:15 46:10	mountains 19:2	necessarily 33:11	30:8 36:19, 22
lungs 57:19	means 24:2 25:22	61:13	move 14:1 19:19 22:4	necessary 47:15	37:19 46:12
Lycoming 23:7	measure 40:13	misguided 11:14	41:12, 17	need 4:20 9:2, 3, 6, 9 10:8	48:14 54:17
LYNN 1:1 2:1 10:14 11:3 23:14	measured 40:4 measures 13:10 14:9	misinformation 39:11, 13	movement 61:21	necessity 65:15	56:13 57:19
< M >	measuring 40:5	mispronounce 15:13	moving 18:5 27:12	need 4:20 9:2, 3, 6, 9 10:8	63:21
M.A 1:1 2:1	meet 18:8 55:19	mispronouncin g 37:5	MPH 1:1	14:14 18:1 22:12 24:12, 13 25:17 26:9, 15 29:14, 15	nitric 32:6
ma'am 17:4	meeting 61:21 62:3	mispronunciati on 44:12	MPHNB 2:1	32:2 33:23 34:4 35:20 36:4, 13 38:10	nitrogen 27:20 32:4 55:11 56:3
main 58:20	megawatt 3:21	missing 68:20	MURPHY 1:1 2:1 5:13, 14, 17, 20, 24 6:1, 6, 10 9:13	42:22 46:19 53:3 57:12 60:3 65:7	nitrous 32:22
maintaining 46:4	member 27:3 35:11	mission 11:11	10:8, 13 34:9	needed 38:4	nonattainment 65:3
maintains 66:5	members 17:10 35:22	mistake 12:15	M-U-R-P-H-Y 6:12	needs 22:18 23:22 35:18 36:8, 15, 22 40:4, 9 45:21	non-profit 17:8 54:13
Maintenance 15:4	mentioned 31:17 36:14 37:2	MITCH 1:1 2:1 37:6, 15	MURPHY's 5:13	57:7 58:16 62:18 63:11	nonsense 12:1
major 4:4 8:14 14:1 60:19 64:16	mentions 13:1	mix 60:21	MUSA 1:1 2:1 56:15 57:1	62:18 63:11	normally 53:13
majority 7:12 8:5, 7, 11 59:11	methane 31:15, 16 32:22 49:10	mobile 23:4, 9 34:3 64:2	M-Y 6:12	negatively 14:23	North 13:10
makers 7:3, 17	mic 5:13	modeling 36:6 52:2 53:6	< N >	neglecting 31:15	northeast 37:20
making 12:15 30:6 59:3 60:4, 5	micron 33:7 39:5	models 36:5	name 3:2 4:14 6:10 11:3 15:13 17:5 20:16 24:21 25:12 27:1 31:4 37:5, 15 42:1 44:13 47:3 50:8 51:19 54:12 57:1 60:12 62:16	neighbor 50:8	noticed 12:4 43:16
malfunction 12:15 55:5, 9	microns 33:8 39:4	molecules 31:18	nation 21:23 26:4	neighborhood 8:9 14:6 19:6 25:20 42:1 43:3 54:17 58:7	notices 3:11
malfunctioning 45:14 55:7	Midvale 15:3 22:14 27:16	moment 15:22 18:8 67:9	national 14:4 48:24	neighborhoods 26:4 27:22, 23 43:6 48:16, 17 65:6	notify 4:17
mamas 44:4	MIKE 1:1 2:1 16:12, 18 51:14, 15, 19	monitor 36:2 43:3 59:20	natural 7:3 18:2 21:4 29:21 32:3 38:18 39:8 46:18 47:5 58:10 63:23 64:9, 18, 22 65:10, 14 66:1, 2	neighborhoods 26:4 27:22, 23 43:6 48:16, 17 65:6	November 4:1
Management 3:3 35:12 55:21	mile 11:5 34:10 48:3 54:19	monitored 45:18 52:14 55:16	natural-gas 3:21	negatively 14:23	NOx 12:12 13:2 14:9, 11 23:19 36:2 45:15, 19, 20 64:13
Management's 36:21	miles 22:14 23:7 25:15 44:22, 23	monitoring 9:7 13:4, 9, 11 18:23 19:10 23:5, 15 26:10 34:2, 5, 8, 12 35:21 36:4, 7, 12, 13 38:10 39:3 43:3 45:22 46:4, 7, 8 47:10, 22 56:12 63:17, 24 64:1, 2	nature 48:16 60:6	neglecting 31:15	NOx's 45:1, 6
mandating 19:10	mind 44:19	36:1, 16 51:24 52:19 53:4, 9, 11	near 35:20 49:15 50:8 64:1	neighbor 50:8	nuclear 48:5
Marc 51:4, 6, 8, 12	mine 57:10	monitors 13:1, 2 35:20, 24	nearby 35:15 48:4	neighborhood 8:9 14:6 19:6 25:20 42:1 43:3 54:17 58:7	Number 3:16 7:23 24:7 37:16 40:4, 7 43:9
mark 16:20	minimal 13:15	36:1, 16 51:24 52:19 53:4, 9, 11		neighborhoods 26:4 27:22, 23 43:6 48:16, 17 65:6	numbers 20:21 55:14 58:12
MARTA 1:1 2:1 15:12 17:13 21:22	minimis 13:17	monoxide 14:12 27:20 32:5 52:8		Neighbors 1:1 11:4 12:9 13:20 27:9	nurse 42:4
mask 43:17	minimize 46:9	month 15:23 24:5 65:11		Nelson's 25:5	< O >
mass 40:6	minimum 21:2	monthly 13:6		nervous 49:6	object 27:18
massive 7:23	Minor 1:1 3:7, 16, 17, 19, 20 4:3, 12, 23 12:14 24:1, 11 35:13 69:3	months 64:21 68:5		Network 1:1 16:18 51:20	Obviously 8:22 52:23
matter 6:4 27:21 33:11 36:3 38:16, 20 39:2, 4, 7, 9, 19 40:4, 6, 13, 18 52:10, 19 60:19 61:23	minute 4:18 9:12 14:13 24:9, 10 29:24 34:6 40:1, 10 59:24 65:20, 21			never 11:19 16:5, 6 17:14 19:12 20:24 29:7, 14	occur 12:22 13:5
matters 43:1, 2				Nevertheless 38:22	offensive 28:22
Mayor 11:19				new 13:17 18:16 22:6 57:3	Office 28:9 42:19
MD 1:1 2:1				Nicotown 8:14 12:5 18:15 23:9 25:14 26:3 27:23	official 42:8 offset 65:14 Oh 63:2 oil 52:16, 18 Okay 5:17, 24 6:6, 10 9:13 10:12, 24 16:17, 20 20:14, 16 25:9,

7/27/2023

11 35:4 40:2 41:10, 15 46:14 50:7, 14, 17, 18, 19, 24 51:8 54:11 56:23 58:4 59:1 60:1 61:14 62:21 63:9, 11 65:22 old 21:19 Once 16:12 22:17 36:4 37:6 41:4, 22 45:12 47:19 52:3, 4, 7 53:5, 20, 22 oncoming 25:21 one-mile 9:8 ones 58:20 59:12 one-year 14:11 ongoing 26:11 28:11 on-line 36:13 OP17-000024 3:17 open 68:15 opened 28:10 operate 24:1 30:2 operated 24:6 32:18 Operating 1:1 3:7, 16, 18, 19, 20 4:3, 6, 8, 12, 24 5:3 9:5 27:7, 14 28:21 30:5 32:13, 14 35:13 45:4 47:4 69:3 operation 11:24 13:15 18:19 24:3 56:8 operations 13:23 18:11 30:15 opportunities 18:17 opportunity 17:9 18:8 25:22 28:13 37:12 44:16 opposition 37:18 optical 31:8, 11	option 13:2 14:10 22:10 56:20 options 26:11 33:15 oral 5:1, 10 Orange 13:15 order 7:9 30:2 48:12 organic 27:21 31:17, 18 32:5 47:6 52:9 55:11 56:4 organization 4:14, 18 33:23 organizations 27:4 37:16 58:1 Organized 28:6 organizing 37:17 original 23:6, 11 originally 27:17 outcomes 44:6 outside 11:23 17:15 35:17 42:18 43:9, 17 57:16, 18 59:10 61:2 overages 14:16 overall 59:1 overhead 29:11 overheated 65:5 oversight 47:21 owns 21:4 oxide 27:20 32:22 oxides 32:4, 6 52:9 55:11 56:3 ozone 13:2, 10 14:4, 9, 18 26:2 36:3 43:22 55:20, 23 62:19 63:12 64:20, 21, 24 65:1, 2, 3 < P > PA 3:10 4:7, 9 PAGE 2:1	36:21, 22 Pages 1:1 paid 55:5 pain 60:22 PALAK 1:1 21:18 68:10 PAMs 34:8 panels 14:22 22:13, 16 PAQS 36:23 parent 6:13 parents 57:15 PARKER 1:1 2:1 24:21, 22, 24 25:2, 7, 9, 11, 13 26:16 Parkinson's 49:7 Part 4:5 5:1 18:17 23:11 37:16 52:20 67:2 68:21 partially 66:7 particles 39:1, 21 40:5, 7, 8 particular 7:22 38:14, 16, 20, 24 39:4, 7, 9, 12, 18 40:4, 13, 18 particularly 28:22 47:6 48:21 49:15 particulate 27:21 36:3 39:2 40:6 48:15 52:9, 19 parties 4:11 pass 37:21 58:3 passes 46:6 passive 34:7 37:2 patient 42:16 Pause 10:18 15:17 16:14 20:1 26:22 41:7, 9 49:20 61:4 66:14 68:12 pay 21:23 30:2, 6 paying 45:24 PECO 29:3 pediatric 26:5 Penn 16:23 17:6 18:14 60:18	PennEnvironm ent 1:1 Pennsylvania 1:1 3:8, 12 28:1 30:17 31:7 53:8 54:16 57:5 66:4 69:4 Pennsylvanians 25:16 28:6 people 8:5, 12 16:9 22:23 30:15 31:9 32:1 34:1 38:13 39:16 51:11 54:1, 9, 21 58:23 61:19 67:15, 23 percent 11:15 18:5, 19 24:16 26:4, 6 48:15, 17, 22 53:12 54:20, 21 64:14 perceptive 22:22 perfect 11:1 50:16 performance 12:18 period 9:22 11:8 13:19 permanent 22:17 64:1 Permit 1:1 3:7, 16, 18, 19, 20, 24 4:3, 6, 8, 12, 24 5:3 12:14 13:18, 24 14:1, 2, 10 16:4 19:1 21:21 22:8 23:7, 12 24:1 27:7, 10, 12, 14 28:12, 20 35:13 40:16 42:10 44:8 45:4, 17 51:21 52:21 55:4 56:2, 6 62:18 64:4, 6, 8, 15 67:14 69:3 permits 19:11 23:23 53:1 63:11 permit's 27:8	permitted 27:17 35:19 46:2, 5 56:4 Permitting 28:3 perpetuates 14:18 persist 16:9 persisting 16:9 person 16:23 20:12 41:18 50:20 51:3, 13 61:1 personally 23:13 personnel 32:18 person's 4:15 PETER 1:1 2:1 26:19 27:1 44:11, 14 P-E-T-E-R 44:14 PHILADELPH IA 1:1 3:3, 9, 13, 14 6:20 7:16 11:12 13:11 15:24 17:11 25:24 26:5 27:1 30:19 33:24 36:11 38:24 44:15, 22 45:3, 24 51:20 52:17 54:18 55:19 57:5 58:23 59:7 62:10, 17, 19 63:13, 19 64:7 Philadelphians 26:14 30:6 54:19 Philadelphia's 14:3 Philly 17:16 phone 61:11 Physicians 1:1 31:6 pick 53:4 picture 45:13 pipe 7:10 PJM 66:2 placed 35:24 36:1 placement 7:2 places 7:4 42:14 placing 34:1	Plan 3:24 13:24 14:2 16:8 22:11 planet 19:21 26:12 plant 6:24 8:10 9:4, 13 11:6 12:1 16:1, 5, 8 18:15 19:10 21:6, 21, 24 22:8, 21, 24 23:2, 6, 8, 9, 18 24:4 25:15 26:10 27:18 28:21, 22, 23 29:14 30:1, 2, 15, 16 31:16 32:18 36:13 37:19 38:24 42:2 43:21 44:7, 18, 23 45:10, 14, 18 46:8 47:4, 18 48:5 52:20 56:13 65:24 planted 21:3 planting 48:12 Plants 1:1 7:1, 4 11:5, 17 22:1 23:17, 18 45:2 57:6 plant's 47:5 49:9 platform 36:13 play 59:11 Please 3:4 4:14 5:5, 8, 13, 14 6:8 9:19 10:10 15:18 16:1, 24 30:20 34:17 46:6 49:24 51:18 54:14 56:12 62:6 68:16 plumes 34:11 PM 40:6 point 7:18 57:21 66:23 67:7 pointing 46:12 points 37:23 poisons 25:18 polar 66:3 policies 58:18, 21 60:4 policy 7:3, 17 policymakers
---	--	--	--	--	---

7/27/2023

39:15	44:18, 23 45:2, 10, 14, 18 46:8, 20 47:12	PRIMAS 1:1 2:1 49:19, 22 50:3, 5, 7, 8, 11, 14, 18 66:13	provided 29:3 33:3 34:18 46:22 52:24 67:6	quarterly 13:5 56:13	56:14, 17, 21, 24 59:24 60:7, 10 61:5, 7, 10, 12 62:13, 21 63:2, 10 65:21 66:10, 12, 15, 18, 20, 22 68:7, 9
Political 29:16	48:11 54:15 55:2 56:7 66:7	prior 5:3	provides 28:12 29:5	question 20:11 22:3 44:18 47:15	Raval-Nelson's 63:7
pollutant	powered 18:5, 19	prioritize 18:10	providing 27:4 28:19	question-and- answer 4:21	reach 66:24
31:19 35:17	powering 18:11 29:4 46:21	private 44:16	provisions 27:8	questions 4:23 34:19	reaches 22:14
37:1 38:17, 23 40:9, 21	practical 12:11	probably 21:8 68:4	Public 1:1 3:4 5:2 6:4 8:19 9:3 11:7, 12 13:12 20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	quickly 18:2 31:21	read 69:6
pollutants	practice 46:14 58:14	problem 12:6 23:22 25:8 32:1 34:20 42:18 44:13 50:13	12 13:12 20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	quite 46:15	ready 10:15 15:14 16:24 19:24 25:10
13:7 32:8 36:2 39:16 44:19 46:1, 5 47:7 49:2 52:1, 4, 8 53:24 63:14	practicing 58:14	problems 26:14 64:7, 11 65:6	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	< R >	real 9:3, 6 17:11, 22 54:1
polluted 12:7 19:14	practitioner 42:4	proceedings 69:2, 8	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	races 61:19	realistic 12:11
polluter- emitter 46:3	pre-COVID 42:16	process 36:8 67:12, 20 68:22	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	racism 8:3	reality 13:22
polluters 48:1	precursors 13:10 65:2	processwise 68:20	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	radiation 33:1, 2 48:4	realize 24:15
polluting 63:18	pregnancy 44:5	produce 31:19	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	radically 63:16 64:23	really 20:24 31:23 38:3, 5, 9 39:12 40:12 43:4 46:13 59:9 60:2 61:20 62:3 65:24 67:11, 14
POLLUTION	pregnant 44:3	product 7:10	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	radius 9:8	real-time 37:1 46:8
1:1 13:20 17:12 18:24 19:1, 3, 9 20:22 21:8 22:6 25:18, 22 26:3 35:16 36:11 55:1, 3, 7, 10, 15, 17 56:1, 12 59:13, 18 60:19 64:5, 12	premature 19:5	production 14:18 29:16	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	rail 29:1, 10 37:20 38:5, 9 65:17	reason 65:17, 24
poor 30:8 43:7, 17	prematurely 13:21	profit 30:10	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	railroad 38:2	reasons 38:13 46:16
Portable 13:5	prepare 5:2	profit's 48:7	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	raised 6:18	Rebuild 28:7
portion 59:7	preponderance 39:18	program 57:3	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	raising 55:23	rebuttal 58:18
ports 7:11	pre-registered 51:12, 14 54:5	prohibited 14:17	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	rapidly 22:4	received 5:1
posed 17:14	PRESENT 1:1 4:19 40:8	prohibits 28:16	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	rare 52:13	recipient 28:17
poses 47:7	presentation 31:14 57:22	projects 33:15 38:1	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	rarely 45:5	recognized 63:15
possible 18:2	presented 55:13	pronounce 24:21	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	rate 7:20 8:16	recommend 21:3, 7 57:23
potential	presenter 19:23 46:11	properties 65:14	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	ratio 32:15	recommendatio ns 12:11
12:12 47:10, 20 49:5, 11 64:11	president 27:2	property 21:5	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	Raval 25:4	record 4:15 5:2 6:4 9:3 25:12 67:2 69:7
potentially 59:17	pressed 30:2	proposed 1:1 3:6, 16, 19 4:2 16:2 27:10 56:6 69:3	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	RAVAL- NELSON 1:1 5:11, 19, 22 6:1, 8 9:12, 21 10:11, 19, 21 11:1, 10 14:13 15:6, 11, 18, 20 16:11, 15, 17, 20 17:3 19:22 20:2, 4, 7, 10, 13, 15 21:10, 14, 16 24:9, 19, 24 26:17, 23 29:24 30:20 31:2 34:6, 16, 21, 24 35:2, 4, 8 37:4, 10 39:24 40:10 41:1, 8, 10, 12, 15, 17, 20, 22 44:10 46:23 47:2 49:18, 21, 23 50:1, 4, 6, 9, 16, 19, 22, 24 51:3, 6, 8, 11, 17 54:4, 11	really 20:24 31:23 38:3, 5, 9 39:12 40:12 43:4 46:13 59:9 60:2 61:20 62:3 65:24 67:11, 14
pounds 45:6	pressure 29:16 34:14	protect 9:14, 16 11:11 13:13 18:7, 9 19:20 26:12 48:12 49:4 60:3	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	rapidly 22:4	record- breaking 17:17
poverty 54:21	prevent 21:9 26:13	protection 27:8 28:1, 2, 8 30:18 54:23	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	rarely 45:5	recorded 3:5 4:13
power 3:22, 24 4:2 7:4 8:10 11:6 14:21 18:12 19:19 22:1, 8, 13 23:18 25:15 27:18 28:6, 21, 22, 23 29:1, 7, 8, 13, 14 30:1, 2, 15, 16 31:16 35:11 37:18	previously 36:14 59:7	provide 6:5 9:23 28:24 33:4 66:16, 24	20:19 22:23 23:16 38:23 49:14 53:24 63:17, 20 66:9 67:2, 19 68:15, 23 69:3	rate 7:20 8:16	records 30:13 reduce 9:10 14:20 25:18, 22 42:6 43:21 63:14, 20, 21 64:11, 24 65:1

7/27/2023

reduced 7:15, 16 64:9, 19	reliance 18:4 49:8	required 45:7, 11, 18 47:18	results 28:17 32:19 36:4, 23	safeguard 47:20	SELLASSIE 1:1
reduces 11:14 43:22	reluctance 39:15	52:13, 17	returned 42:23, 24	safer 68:2	send 9:20 68:15
reducing 9:10 14:12, 20 48:9	rely 53:13 58:23	54:24 63:24	reversed 64:17	sake 48:7	sense 43:5
reduction 24:16 38:11 65:9	relying 23:7	requirement 22:7	review 6:5	sampling 53:18	sent 5:4 10:2
reductions 64:19	remaining 4:18	requirements 4:6, 8 18:23	revised 62:19 63:12	satisfaction 28:5	separately 40:9
redundancy 29:5	remarks 11:9	46:7 54:15	rich 30:9	Saturday 3:12	SEPTA 1:1 3:8 5:8 7:14
refer 34:17	remediation 9:9 48:8	55:18 56:2	rider 27:2	save 47:16	11:13 13:12, 14 14:9, 23
reference 60:19	reminder 21:23	requires 56:7	right 5:12, 24 15:22 16:7	saw 31:14	15:1 16:1 18:8, 10, 16
referenced 39:3	renew 35:13 42:10 44:7 56:1	re-rescue 42:22	22:19 33:14	saying 11:20 39:14 57:9 62:3	19:18 20:21 21:4, 21, 24
referred 32:22	renewable 18:6, 11, 20 22:4, 7, 9	re-share 10:3	37:9 41:12, 17	scale 7:22	22:12, 14, 21 23:6, 8, 12
refinery 52:17, 18	24:14, 18 59:5	re-shared 10:6	47:1, 12 50:1	scared 57:17	24:4 26:10, 13
reflect 36:5 62:19 63:12	renewal 3:17, 19 4:3 27:6 28:12 56:6	Resident 1:1 6:12 27:1	51:3 54:2, 22 68:13	scares 39:12	27:2, 11, 12 28:13, 20, 24
refrain 11:14, 21	renewed 51:22	6:12 27:1	Rights 28:8, 9, 16, 19, 20	School 1:1 57:2 59:1, 12, 21, 22 60:14	29:7, 14, 15, 18, 20, 22, 23 30:1, 14 35:13, 16, 20 38:1 42:11
refute 12:1	renewing 45:4 51:21	44:14 45:3, 6 51:20 62:17	16, 19, 20	62:6, 9	44:7, 17, 23 45:10 46:11, 16 47:4 55:12
regarding 34:18 45:4	Rep 26:16	residential 13:9 35:22	risk 14:20 19:4 43:5	schools 59:23	56:1 57:6, 11 58:21, 23 59:2, 4, 19 60:2, 4
regardless 45:8	repaired 45:21 55:5	residents 7:7 9:14 18:14	44:4, 9 47:9 55:23	science 17:24 53:17	64:4, 12, 15 65:7, 9, 13, 17 68:16 69:5
regards 33:17	repeating 11:13	19:5 30:7, 8 35:15 45:24	risks 47:7	science-based 67:16	68:16 69:5
region 14:19	replace 66:1	48:13 49:4 57:19 61:24	road 45:8	scientist 35:12	SEPTA's 11:6, 17, 23, 24 13:1, 18 23:17 27:7 45:4 56:13 58:18 64:8 65:16
regional 29:1 37:20 38:5, 9 65:16	replaced 14:22	resilience 65:16	Roberts 1:1 3:8 5:9 11:6	screaming 67:15	64:4, 12, 15 65:7, 9, 13, 17 68:16 69:5
regionally 11:15	report 13:12 48:22 55:21	resiliency 65:22 66:6, 8	27:7, 15 35:14	screen 5:14, 18 6:11 16:13 17:1 19:24 37:7	68:16 69:5
registered 16:21	repeating 11:13	resources 42:15	42:11 44:18 45:10 46:8 54:17, 20 68:17 69:5	scrutiny 28:4, 5	season 13:2 14:9 64:20, 24 65:2
Registration 1:1 3:3	replace 66:1	respiratory 19:4 43:12	54:17, 20	seasonal 36:24	second 6:17 20:9 46:16 61:11
regular 37:20 61:1	replaced 14:22	48:20 55:23	ROBINSON 1:1 2:1 10:15, 19, 20, 24 11:3, 4 14:13, 14 15:6, 10, 11 23:14	second 6:17 20:9 46:16 61:11	serious 23:22 40:14 49:7 64:6 65:6
regulated 39:17 52:1, 5 53:24	report 13:12 48:22 55:21	response 5:2 11:7 16:16, 19 20:3 24:23 25:1 34:23 35:1, 3 40:18, 20 41:11, 14, 16 50:21, 23 51:2, 5, 7 54:8 63:4 66:17, 19, 21	15:6, 10, 11 23:14	seconds 40:1 61:13	seriously 40:23 62:18 63:12 67:21
regulation 38:19 40:12	REPORTED 1:1 12:9 69:5	Responsibility 1:1 31:6 38:22 46:3 48:2, 5	room 64:15	section 3:11 4:7, 9	serve 25:5
regulations 49:3	Reporter 1:1 62:5, 11 69:11	30:21	routes 37:21	see 6:22 8:2, 6, 7 12:3 21:18 31:17 33:6, 7 40:13 51:14 54:1 56:20 57:16 61:20 62:4	Service 5:6 14:23 18:16 29:8 65:9
related 32:7	reports 39:3	run 16:2, 4 27:19 38:8	routinely 38:7 65:3	seeing 33:9 34:10 42:11	Services 3:3 30:6 35:12 55:21
release 20:22 49:12	represent 4:15 25:14	runs 12:18	rude 15:8	seeking 56:1	session 4:22
released 20:24 21:2, 8 33:23 55:8, 17	REPRESENTA TIVE 1:1 2:1 24:20, 22, 24 25:2, 7, 9, 11, 13	RUSSELL 1:1 2:1 51:10, 13 54:6, 12	rules 22:6 24:13	seen 36:9 43:11 44:21	set 50:1
releases 14:5	request 11:8 34:2	R-U-S-S-E-L-L 54:12	run 16:2, 4 27:19 38:8	sees 68:14	severe 48:19
relevant 36:24	requested 23:6 28:7	result 30:8 32:9	rest 15:7, 8 30:21		sham 14:2
reliability 38:2	Requests 5:6	resulting 45:1 47:10	restart 63:7		share 5:14, 21 8:3 9:19 37:23 40:2
reliable 66:3	require 13:14 38:11 65:8		result 30:8 32:9		

7/27/2023

shared 10:3 31:9	SMART 1:1 27:3	41:2, 4 44:11 46:24 49:19	25:12 38:20 53:2 62:6	sufficient 34:13 40:20 64:3	48:18 57:12 59:4 67:9, 18, 20 68:5
sheet 16:20	SMO 42:10	54:5 56:15	65:12	suggest 50:11	taken 46:9
SHEILA 1:1 2:1 35:6, 10	smog 45:1 55:22	60:8 62:14	stated 11:11 14:10 20:23, 24 21:22	suggested 30:22	talk 6:21, 22
shifting 30:4	smoke 17:19 30:14 44:21	SPEAKERS 2:1 33:16	28:14 38:3, 13	suggestions 57:23	talked 20:21 32:10
shocked 11:13	SMOP 5:9 68:17	speaking 5:15 27:2 31:3, 10 42:8 56:18	statements 20:18	summer 14:7 17:17 44:21 64:21	talking 8:11 32:2 33:5
short 24:3	so-called 18:2	62:17, 24 63:1	states 22:12	supplying 29:12	T-A-M 6:11
shortage 38:6	Social 1:1 31:6	special 15:22	statewide 17:7	support 7:16	TAMMY 1:1 2:1 5:13 6:10 34:9
shortness 25:20	solar 9:13 14:22 15:3 18:12, 15 22:9, 13, 16 33:1 47:12 48:11 65:13, 24 66:5	specific 9:1 10:8	stating 32:24	supporter 27:3	TAYLOR 1:1 2:1 46:24 47:3 62:2
short-term 13:22	sold 48:7	specifically 26:3 27:23 31:18 33:10	station 13:9	supporting 33:15, 24	T-A-Y-L-O-R 47:3
show 19:2 32:19 57:12	solutions 48:10 57:23	spell 4:14 6:11	stationary 4:4 64:5	supportive 42:5	team 10:3 60:16
showing 5:18 33:6, 19 48:14	solutions- focused 67:12	spikes 13:20	stay 58:17	supposedly 33:24 65:23 19:11 20:10 33:21 39:22 59:22 66:12 68:13	technically 7:7
shrouded 17:18	solve 50:13	split 20:12	STEM 57:3 60:13, 16	sure 6:4, 10 19:11 20:10 33:21 39:22 59:22 66:12 68:13	technology 45:22 52:11, 23 59:20
sic 24:6	somebody's 58:2	spread 34:8	stop 17:24 18:1 45:24	storage 22:10, 16 66:6	Teleconference 1:1
sick 59:17	soon 31:3 35:9	stack 12:18 13:5 51:24 53:10, 14, 23 54:14 55:18 56:2	stopped 11:20 16:10	stress 12:22	Teledyne 31:12
side 8:11	Sorry 20:19 24:9 25:6, 8 44:12 61:3, 9 63:10	standard 14:4	stoppage 11:20 16:10	strict 46:7	tell 34:4 40:7
significant 32:19 38:18 39:8 40:22 47:7	solutions- focused 67:12	standards 38:19 47:11 55:20	storage 22:10, 16 66:6	strictly 19:11	telling 16:8
significantly 48:23	solve 50:13	standing 7:21	strong 8:15 59:16 67:13	string 17:16	temperature 32:7, 16
similar 28:14	somebody's 58:2	standpoint 42:7	strongly 15:1	string 17:16	temperatures 17:17
Similarly 53:16	soon 31:3 35:9	stands 7:22 8:14	struggling 58:7	strong 8:15 59:16 67:13	temporary 64:2
simple 34:12	Sorrry 20:19 24:9 25:6, 8 44:12 61:3, 9 63:10	standard 14:4	Student 1:1 57:1, 4 60:15	strongly 15:1	Tennessee 42:21
simply 12:8	sort 23:21 39:10 42:5	standards 38:19 47:11 55:20	studies 53:16	struggled 58:7	terms 68:14
sinus 43:12	sound 50:13 68:11	standing 7:21	study 36:23 53:18, 21	struggling 58:7	terrible 33:12
sir 24:9 30:20 40:10 46:23	Source 1:1 3:2 4:4 22:9, 18 39:8 55:1 64:16	standpoint 42:7	stuff 9:1 57:19	Student 1:1 57:1, 4 60:15	test 12:18 32:17, 19 47:18 52:6 53:5, 6, 14, 20, 22 54:24
site 9:7, 10 13:13 22:14 23:7, 9, 16 27:21 35:21, 24 36:15, 21 38:12 47:23 48:9 54:1 56:8 64:2, 9 65:8	sources 3:18 35:17 39:23 40:2 59:5 64:5 66:7	stands 7:22 8:14	Subchapter 4:7, 9	studies 53:16	testified 37:13 testify 4:11, 17 16:21 17:9 37:12
sitting 12:20 25:14	Southeastern 1:1 3:7 54:16 69:4	start 5:10, 15 6:9 10:16 11:2 15:16, 18 16:13 17:3 19:24 20:8, 9 21:16 26:20 31:2, 3 35:9 37:7, 10 41:5, 23 47:2 51:17, 18 56:18, 19, 23 57:9 60:10 61:21 63:3, 9	subject 4:6, 8 5:9 28:4 67:5 68:17	studies 53:16	testimony 3:6 4:16, 19 5:23 6:3 9:1, 20
situated 49:15	southwest 11:5 12:5	started 6:18 9:4 15:15 16:13 20:15 41:22 47:4	submit 5:5 9:24 15:7, 8 30:21 34:18 67:5	studies 53:16	
situation 6:24	speak 10:22 20:4 21:20 49:24 51:15 57:4 63:8	starts 61:20	substances 49:4	studies 53:16	
six 25:24	speaker 10:14 15:12 16:12 20:19 21:12 24:20 26:19 30:24 34:21 35:6 37:6	STATE 1:1 2:1 4:14 7:10 17:10 24:20	substation 28:24 29:2, 9, 13	studies 53:16	
skin 43:13			suburbs 30:10	studies 53:16	
skirt 48:5			Sue 34:21, 22, 24 35:2, 4, 6	studies 53:16	
sky 30:13			suffer 25:16	studies 53:16	
slide 5:20 6:3			suffering 30:15	studies 53:16	
slides 8:3, 6 10:1 30:22				studies 53:16	
smack 8:9				studies 53:16	
smaller 39:3, 4				studies 53:16	
smallest 39:1				studies 53:16	

7/27/2023

<p>15:7 21:11 22:24 27:5 34:17 46:22 54:5 61:7 66:16, 23 67:1, 3, 5 testing 18:23 19:10 47:10 48:4 52:3 54:14 55:18 56:2, 12 tests 13:5, 6 32:21 53:10, 22 Thank 5:11, 16 6:6, 8 9:21 10:6, 12, 21 11:1, 7 15:10, 11, 21 16:10, 11 17:5, 9 19:21, 22 20:7, 13 21:10 24:18, 19 25:7, 11 26:15, 16, 17, 24 30:23 31:4 34:7, 14, 16 35:10 37:2, 4, 11 40:23 41:1, 23, 24 44:10, 16 46:22, 23 49:16, 18 50:15, 18, 19 51:19 54:2, 4, 9 56:13, 14 60:1, 6, 7 61:5 62:7, 11, 12, 13 66:11, 12 67:10 68:4, 8, 9, 21 thanks 37:12 62:4 thermographer 31:8 thing 8:14 16:8 33:20 38:4 52:22 55:23 58:3 things 6:22 8:24 19:6 26:12 52:6 57:7, 20, 21 60:5 68:7 think 6:24 7:2 23:13, 21 24:6 30:11 38:22 46:13 51:9, 10 53:13, 19, 21 58:16</p>	<p>63:6 67:22 68:10, 20 thinking 68:1 third 29:5 Thirty-three 26:6 thoughtful 67:11, 16 68:1 thousand 44:22 thousands 9:14 17:10 26:14 48:12 threat 12:23 17:13 threatened 29:22 three 7:18, 23 12:17, 19, 21 45:12, 16 47:11, 19 48:3 52:4 56:9 61:13 three-year 46:6 throat 25:20 Thursday 1:1 Tiffany 50:20, 22, 24 till 68:15 time 9:3, 4, 6 12:21 15:6 17:23 18:10 20:12 21:1 22:16 23:6 30:20 34:14 36:20 37:3 39:22 45:23 46:6 52:21 53:1 54:1 55:8 60:6 65:17 66:10 67:14 timer 5:15 6:9 10:16 11:2 15:16 16:13 17:4 19:24 20:8, 9 21:17 25:5, 6 26:21 31:3 35:9 37:8, 10 41:6, 23 47:2 50:2 51:18 56:18 60:11 63:7 times 19:1 43:16 49:10 53:19, 21</p>	<p>56:12 timing 32:15 Title 4:5, 8 28:10 today 11:22 12:10 17:9, 15 21:20, 22 27:2, 5 37:12, 16 38:15 46:16, 18, 20 told 42:19 tomorrow 30:18 ton 12:14 tonight 22:20 tons 12:13 13:19 45:11 55:10 top 20:17 torque 32:15 Total 12:12 35:17 43:20 64:18 touch 46:19 tout 46:17 toxic 11:21 27:11 30:9 53:17 toxics 13:10 toxins 33:22 49:6 track 22:15 tracts 27:24 tragic 17:21 train 14:23 trains 22:18 29:11 38:7 transcribed 4:13 transcript 69:6, 7 transit 58:24 transition 9:15 18:18 47:13 49:13 transmission 29:3, 5, 12 transparency 23:22 24:13 47:21 49:1 63:17 transparent 9:6 33:1 Transportation 1:1 3:8 22:18 28:15 54:16 59:8 69:4 trash 53:7 travel 44:20</p>	<p>trees 9:14 21:3, 6, 7 48:12 trends 36:17 Tribune 3:14 trip 42:20 TRIPATHY 1:1 2:1 35:6, 7, 10 trucks 60:20 true 22:19 23:10 48:5 69:7 truly 23:24 55:16 67:15 try 20:20 trying 7:14 42:6, 20 TSOU 1:1 2:1 21:12, 13, 15, 18, 20 24:11 46:21 turn 13:14 56:20 67:7 68:7 turns 53:11 twelfth 60:14 twice 34:24 two 3:21 6:15 11:17, 24 13:1 27:19 29:3 32:17 56:7 67:23 type 14:1 23:14 62:2 < U > U.S 53:20 66:5 ultra 38:15 ultra-fine 36:3 38:20 39:1, 4, 7, 9, 18 40:3, 7, 13, 17 unable 22:13 unacceptable 47:22 unchecked 45:16 47:10 understand 39:15 understanding 46:19 undertaking 48:11 undesirable 31:20 undetectable</p>	<p>11:22 12:2 unfair 64:16 unfortunately 17:21 22:6 unhealthy 36:9 43:23 union 9:16 Unit 55:1 United 28:14 units 3:22, 24 4:2 54:15 55:3 56:8 unknown 55:6 un-mute 5:13 10:16, 17 15:14 un-muted 17:1 unnecessary 28:23 63:14 unpermitted 55:7 Unpredictable 13:19 unprotected 12:20 unreliable 38:5 unusual 32:17 upcoming 58:18 update 46:19 upholding 58:15 upper 43:12 up-to-date 36:15 urge 51:23 urged 16:2 urgency 49:13 usage 14:21 use 7:4 13:3 23:16 52:18 53:8, 17 58:23 59:7 61:1 useful 29:6 utilize 58:1 < V > vaccines 39:13 van 23:4 34:3 variability 32:20 variations 32:13, 14 various 23:17 vary 32:12 verbal 5:22 6:2 verified 52:12</p>	<p>version 64:4 VI 28:10 video 33:5, 9, 19 view 23:16 viewed 36:17 violated 27:12 violates 28:19, 20 violation 12:17, 18 28:9, 13 32:10 64:8 violations 9:3 12:21 13:24 14:20 47:11 vitamin 57:14 vitamins 57:17 VOCs 13:3 14:12 23:19 31:17 32:8 36:3 45:1, 6, 15 47:6 64:14 volatile 27:20 31:17, 21 32:5 47:6 52:9 55:11 56:4 volume 50:9 vortexes 66:3 vulnerability 29:10 < W > wait 43:24 walk 17:15 25:19 43:17 walking 6:13 WALTER 1:1 2:1 21:12, 20 want 6:3, 21 7:8, 18 9:24 12:24 21:20 29:15 31:9, 13 37:23 40:3 51:22 55:12 57:9, 15 59:9 61:20 62:4 63:8 66:16 67:22 68:13 wanted 7:3, 17 38:14 57:21 67:9 warming 18:6 49:10, 11 warning 38:8 waste 14:5, 6 63:14 65:4 watch 17:16 waves 17:21</p>
--	---	--	---	---	---

7/27/2023

way 20:11 36:6 40:14 45:2 46:18 56:19 59:13 63:19	WINSLOW 1:1 2:1 26:19, 20, 23, 24 27:1 29:24 30:1, 21, 23 38:3	years 6:17 11:24 12:17, 19, 21 20:23 37:18 38:6 39:13 42:6, 12 45:12, 17 47:11, 19 49:11 52:4, 16 56:9			
Wayne 14:23 15:4 28:24 29:2, 9, 12 37:21	winter 12:8	young 59:10, 15 67:23			
ways 20:23 43:9	wires 29:11	youth 60:3 61:15			
weak 59:17	wish 58:17				
wealth 8:15, 17	wishes 4:16				
wearing 43:17	Wissahickon 3:9 42:3				
weather 12:6	withhold 29:22				
web 13:13 23:16 36:15, 21 54:1	witness 4:19 28:6				
weeks 17:18	women 44:3	< Z >			
weight 44:5	Wonderful 35:8 41:21	ZERBO 1:1 2:1 51:10, 13 54:6, 7, 9, 12			
well 17:13 30:21 31:4 34:7 46:18 53:9 56:23 61:16 65:15 67:5	words 67:8	Z-E-R-B-O 54:13			
well-being 46:2	work 19:8 35:23 42:2, 4, 13, 18 43:18 57:11 58:24 59:12 61:2 67:19 68:5	ZIP 26:6 48:23			
went 7:13 42:18	worker 12:15	Zoom 1:1			
We're 5:22 8:11 11:22 15:22 21:8 24:17 30:12 32:2 33:5, 9, 14, 17 34:10 43:4 48:6, 19 51:12 59:21 61:2 68:20	workers 9:16				
We've 16:1, 2 43:7 60:18 62:22 66:23	working 60:16, 18				
whichever 56:9	world 7:21 15:24 47:14 54:1				
WHITE 1:1 2:1 8:8 30:9 60:8, 9, 12, 13 61:6, 8, 11, 14 62:6, 8, 12	worries 61:12				
WIENER 1:1 3:2 10:11 40:17 62:23	worse 12:10 13:15 17:22				
wiggle 64:15	worst 17:24 46:12, 15				
wildfires 17:19 36:10	wrap 68:8				
WILSON 1:1 2:1 56:15, 16, 19, 23 57:1 59:24 60:1	writing 15:9 40:3				
wind 22:9 44:24	written 5:1, 5 9:1, 20, 22, 24 10:4 11:8 67:1, 3, 5 68:6				
	wrong 16:8 27:13 45:12 63:6 68:10				
	< Y >				
	Yard 11:6				
	yeah 61:3				
	year 6:18 8:20 12:13 15:24 24:2, 3, 5 52:3, 7 53:5, 20, 22 55:10 67:4				
	year-round 13:3				