



TOWNSHIP OF HOPEWELL

MERCER COUNTY

201 Washington Crossing Pennington Road
Titusville, New Jersey 08560-1410
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September 3, 2015

Honorable Norman C. Bay, Chair
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

**Re: Docket PF15-1-000
Proposed Gas Pipeline
PennEast Pipeline Company LLC
Hopewell Township, Mercer County**

Dear Mr. Bay:

On July 28, 2015 the Hopewell Township Board of Health held a special meeting to discuss the health effects of the proposed PennEast Pipeline. Attached find a Board of Health Resolution 2015-2 and a transcript of that meeting for the record. Thank you.

Sincerely,

Harvey Lester, Chairman
Hopewell Township Board of Health

C: Hopewell Township Committee
Steven P. Goodell, Esquire
Governor Chris Christie
U.S. Senator Robert Menendez
U.S. Senator Cory Booker
Congresswoman Bonnie Watson Coleman
Mercer County Board of Chosen Freeholders

**BOARD OF HEALTH
TOWNSHIP OF HOPEWELL
MERCER COUNTY, NEW JERSEY**

RESOLUTION NO. 2015-2

**Hopewell Township Board of Health Inquiry into the Health and Safety Impacts Presented
by Construction and Operation of the Penn East Natural Gas Pipeline**

RESOLUTION

THE HOPEWELL TOWNSHIP BOARD OF HEALTH (“Board”), having heard the testimony of experts and individuals regarding potential adverse health effects on the citizens of Hopewell Township as a result of construction and operation of the proposed Penn East natural gas pipeline;

THE BOARD HEREBY FINDS that the proposed Penn East natural gas pipeline will pose an unreasonable and significant risk to the health and safety of the citizens of Hopewell Township, as a result of, among other things, potential groundwater and surface water contamination, air quality degradation, blasting risk, increased risk of mental health illness, and increased risk of physical illness.

THE BOARD will forward this resolution and the record of the proceedings to the Hopewell Township Committee for use in any proceedings brought by the New Jersey Department of Environmental Protection, the Federal Energy Regulatory Commission, or other public body considering approval of the pipeline, or for other purposes which the Township Committee deems appropriate

Certification

The foregoing is a true copy of the Resolution adopted by the Board of Health of the Township of Hopewell on July 28, 2015.



**Kathy Prassas, Recording Secretary
Board of Health
Township of Hopewell, State of New Jersey**

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HOPEWELL TOWNSHIP
BOARD OF HEALTH

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RE :
SPECIAL MEETING :
-----x

AUDIO RECORDING

DATE: July 28, 2015

TRANSCRIPT ORDERED BY:
PAUL POGORZELSKI, Hopewell Township Administrator

GUY J. RENZI & ASSOCIATES, INC.
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1 PRESENT:

2

3 MAYOR HARVEY LESTER, Chairman

4 TODD BRANT

5 JOHN R. HART, JR.

6 KEVIN D. KUCHINSKI

7 VANESSA SANDOM

8

9 APPEARANCES:

10

11 STEVEN P. GOODELL, ESQ. (Herbert, Van Ness,

12 Cayci & Goodell, PC)

13 Attorney for Hopewell Township.

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15 KATHERINE V. DRESDNER, ESQ.

16 Attorney for Hopewell Citizens Against the

17 PennEast Pipeline.

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1 MR. CHAIRMAN: This is an audiorecording of the
2 July 28th, 2015 meeting of the Hopewell Township Board of
3 Health. I will call this meeting to order with a notice
4 that this -- of this meeting has been posted on the
5 municipal bulletin board and forwarded to the Hopewell
6 Valley News and The Trenton Times, The Trentonian on
7 January 6th, 2015, according to public laws of 1975, Chapter
8 231.

9 May we have a roll call by our secretary?

10 THE SECRETARY: Mr. Brant?

11 MR. BRANT: Here.

12 THE SECRETARY: Mr. Hart?

13 MR. HART: Here.

14 THE SECRETARY: Mr. Kuchinski?

15 MR. KUCHINSKI: Here.

16 THE SECRETARY: Ms. Sandom?

17 MS. SANDOM: Here.

18 THE SECRETARY: Mayor Lester?

19 MR. CHAIRMAN: Here.

20 Welcome, everyone, to this special meeting of
21 the Hopewell Township Board of Health. The focus of these
22 proceedings is the potential health impacts of the PennEast
23 Pipeline, which are unique to Hopewell Township as a result
24 of our topography, geology and waterways.

25 In that regard, we are conducting a board of

1 health inquiry. The authority for our inquiry is found
2 in the public practice standards of performance for local
3 boards of health in New Jersey, as set forth in New Jersey
4 law.

5 As part of the subsection entitled "Public
6 Health Practice," a local board of health is required to
7 provide ten essential public health services. Included
8 among these ten essential public health services are the
9 obligation to:

10 1) Monitor health status to identify community
11 health problems.

12 2) Diagnose and investigate health problems
13 in the community which includes identifying emerging
14 epidemiological health threats.

15 3) Inform, educate, and empower people
16 regarding health issues.

17 4) Mobilize community partnerships to identify
18 and solve health problems.

19 5) Develop policies and plans which support
20 individual and community health efforts and

21 6) Enforce the laws and regulations that
22 enforce health and ensure safety.

23 To achieve these goals, the Board of Health will
24 hear testimony given under oath. The proceedings will
25 be conducted by our township attorney, Steve Goodell.

1 While we are interested in public questions and concerns,
2 the chief focus of this inquiry is scientific evidence
3 presented through testimony and/or reports.

4 It is our intention to create a record and a
5 resolution which may be of interest to the Federal Energy
6 Regulatory Commission, commonly known as FERC and/or the
7 New Jersey Department of Environmental Protection, as well
8 as others. It is also our intention to provide a model
9 for other PennEast impacted local New Jersey boards of
10 health to follow.

11 Before I turn these proceedings over to Mr.
12 Goodell, does any member of the Board of Health have any
13 comments or any questions at this time?

14 Not seeing anybody, Mr. Goodell?

15 MR. GOODELL: Thank you, Mayor. Good evening,
16 everybody. Thank you for coming to this Board of Health
17 meeting. This is, as you may know, a fairly unique
18 proceeding, but it is one that is firmly based on
19 jurisdiction given to the Board by statute and regulation.

20 In order for the Board to meet its requirements
21 and to develop a resolution, it is going to hear evidence
22 and testimony. So we have scheduled to testify the
23 Township hydrogeologist. He will testify first, Mr. Matt
24 Mulhall. After that, I know that Katherine Dresdner, the
25 attorney for the Hopewell Citizens Against the Pipeline

1 has several witnesses that she would like to present.
2 We will hear testimony from those expert witnesses. When
3 those experts have finished testifying, I understand that
4 there are certain members of the public who have signed
5 up because they indicate that they have evidence that they
6 would like the Board to hear, and we will hear from those
7 individuals.

8 We would like to keep these proceedings moving
9 along and so we ask that experts try to restrict themselves
10 and their presentations to about ten minutes. And that
11 any citizens who testify try to restrict themselves to
12 about three minutes. Beyond that, if members of the Board
13 of Health have any followup questions that they would like
14 to ask any of the witnesses, we'll certainly allow that
15 to happen.

16 And at the end of the proceedings, the Board
17 can consider whether or not they've heard sufficient
18 evidence to adopt a resolution and, if so, they can discuss
19 that at that time.

20 The proceedings are being recorded. It's
21 anticipated that these recordings will be submitted to
22 a court reporter service and a transcript will be prepared.
23 That transcript can then be used in other proceedings,
24 as the Township finds necessary. And also, as the Mayor
25 indicated, all the testimony will be under oath. So I

1 will swear you in if you are going to testify.

2 So with that said, the first witness will be
3 Mr. Mulhall.

4 M A T T H E W J. M U L H A L L, WITNESS, SWORN.

5 MR. GOODELL: Can you state your name please?

6 MR. MULHALL: Matthew J. Mulhall,
7 M-u-l-h-a-l-l.

8 MR. GOODELL: And, Mr. Mulhall, you are a
9 geologist?

10 MR. MULHALL: Yes, I am.

11 MR. GOODELL: You're --

12 MR. MULHALL: I'm a professional geologist.

13 MR. GOODELL: And you are the Township's
14 hydrogeologist?

15 MR. MULHALL: Yes, and I -- yes, I am.

16 MR. GOODELL: How long have you been the
17 Township's hydrogeologist?

18 MR. MULHALL: Since at least 1999.

19 MR. GOODELL: All right. And can you briefly
20 give us your training and experience as a professional
21 geologist?

22 MR. MULHALL: Yes. I have a Bachelor's Degree
23 in geology from Lafayette College. I have a Master's
24 Degree in the geological sciences from Northwestern
25 University. I've been practicing as geologist in New

1 Jersey and Eastern Pennsylvania for more than 30 years.

2 MR. GOODELL: Okay. You're familiar with the
3 geology and the hydrogeology of Hopewell Township?

4 MR. MULHALL: Absolutely.

5 MR. GOODELL: And are you also familiar with
6 the proposed PennEast Pipeline route?

7 MR. MULHALL: Yes, I am.

8 MR. GOODELL: All right. And do you have an
9 opinion as to whether or not that route has the capacity
10 to affect the water quality and quantity in Hopewell
11 Township?

12 MR. MULHALL: Yes, I do.

13 MR. GOODELL: And what is that opinion?

14 MR. MULHALL: That opinion is that given the
15 pipeline route, and for a number of factors, both -- well,
16 geologic and hydrogeologic, that the pipeline route can
17 have an adverse influence on groundwater resources, both
18 from a quantity perspective and a quality perspective.

19 MR. GOODELL: Go ahead.

20 MR. MULHALL: Okay. First of all, I wanna
21 emphasize that the only available resource to residence
22 of Hopewell Township is groundwater. USEPA recognized
23 in 1988, as did the NJDEP, that Hopewell Township is
24 underlaid by what they term sole source aquifers. That
25 the only source of water for residents of the Township

1 is groundwater and that impacts to that groundwater can
2 make it difficult to utilize those water resources.

3 One -- we've known for a while now -- and
4 historically, Hopewell Township has long recognized that
5 there's been issues with its groundwater resources.
6 They've conducted studies going back more than 50 years
7 now. In addition, we do know that groundwater resources
8 are strained. If you walk around, especially in the
9 summertime, you'll see a lot of areas where streams should
10 be flowing. They're not flowing. That primary reason
11 for that is because water levels have -- have been -- have
12 declined in the aquifer system below the stream bank.

13 So we already know that there's strains to
14 groundwater resources in the Township. We also know that
15 Hopewell Township is in one of the most populated areas
16 of the state. As a result, those demands get further
17 impacted by any additional growth. And the Township has
18 put together a master plan to try to focus that growth
19 to where those resources are available and protect the
20 areas where those resources are not available.

21 One thing is both proposed pipeline pathways
22 that have been suggested so far will cut through the
23 northern portion of the Township where those resources
24 are perhaps most strained. Those areas of the Township
25 where you have igneous and metamorphic rocks, you have

1 the Lockatong Formation, even in its sedimentary form have
2 very limited availability for water to be replenished.

3 It's replenished at about a rate of less than two inches
4 a year. It's about 4.3 percent of annual precipitation.

5 It's not a lot of water getting into the ground up there.

6 In addition to that, you have very hilly nature
7 and topography to that area. So each of those areas --
8 each area of the Township is divided into small subwater
9 sheds. Each subwater shed is dependent upon precipitation
10 that falls in that same subwater shed. It's not something
11 where you're getting water from one area of the Township
12 and it's migrating miles over and hitting another area
13 of the Township.

14 Sorry about that. I keep hitting that light.

15 The pipeline pathway -- pipeline pathways, or
16 whatever pipeline they decide to install can itself --
17 in itself serve as a preferred conduit. If you already
18 have depleted water resources and that pipeline pathway
19 becomes a preferred conduit, in other words, water that
20 would infiltrate into fracture -- bedrock fractures, or
21 into soils and then into bedrock fractures now migrate
22 along the pathway of the pipeline, either on the surface
23 or within the backfill around the pipeline, now can migrate
24 from one subwater shed to another subwater shed and is
25 now lost.

1 Not only that, it can take contaminants from
2 one area to another area that aren't necessarily to the
3 advantage. So you're taking recharge to some areas of
4 the Township and you're moving it to other areas where
5 it may not necessarily be needed or, more importantly,
6 taking it away from areas where it is needed.

7 One thing is the proposed pipeline pathways will
8 cross the Hopewell fault. The Hopewell fault, while it's
9 not been seismically active in a very, very long time,
10 the issue with the Hopewell fault is it is perhaps the
11 most important water resource for Hopewell Borough. By
12 bringing the pipeline along that -- the Hopewell fault
13 now what you've created is an opportunity for, again,
14 carrying water away from a groundwater resource that's
15 available and/or creating a conduit or pathway for
16 contaminants from one area to migrate into another area.

17 An issue of concern is that contaminants that
18 are either introduced during the construction or the
19 maintenance operations could have irreparable harm to any
20 of the -- to the limited resources of the Township. This
21 Township primarily must rely on dilution from our -- of
22 contaminants to remove contaminants -- to remove -- step
23 back a second. Dilution to reduce contaminant
24 concentrations in groundwater, if present, both natural
25 contaminants and manmade contaminants.

1 The pathway -- the pipeline can, as a conduit
2 can (indiscernible) move contaminants around, but it also
3 -- they can limit dilution that's necessary to remove those
4 contaminants. As I said earlier too, in somewhat
5 conclusion here, the Township's had a long history of
6 protecting its groundwater resources. They've expended
7 considerable funds to preserve open space and to ensure
8 continued natural replenishment. Cutting through these
9 open lands to install a pipeline can severely reduce the
10 effectiveness of these efforts.

11 Preservation and protection of open lands from
12 unnecessary damage is the best available method for
13 ensuring aquifer reliability. The Township has long
14 considered that and since about 1999, the Township had
15 introduced measure after measure to ensure that. They've
16 bought lands. They've protected lands. They've
17 introduced a master plan that better protects those lands.

18 The groundwater resource of the Township have
19 been recognized by both federal and state regulatory
20 authorities. We ask that FERC, as another regulatory
21 authority, a federal regulatory authority, also consider
22 the fact that these groundwater resources are limited,
23 easily affected by both on a quantity and quality
24 perspective and can be irreparably damaged as a result
25 of cutting through the sub -- shallow subsurface to install

1 the pipeline. And ultimately, neither of the proposed
2 pipeline paths will benefit the Township's interest in
3 protecting its most vital and needed groundwater natural
4 resource.

5 Sorry. A little nervous tonight, so.

6 MR. GOODELL: All right. Thank you.

7 Members of the town -- of the Board of Health
8 have any questions for Mr. Mulhall?

9 If -- you do?

10 MR. KUCHINSKI: (Indiscernible).

11 MR. GOODELL: Okay. Wait a minute. You're
12 gonna have to -- and Mr. Kuchinski, why don't you identify
13 yourself since we need to have identification for the
14 recording?

15 MR. KUCHINSKI: Kevin Kuchinski, Hopewell
16 Township Board of Health and committee member. So you
17 mentioned potential contamination by the construction and
18 ongoing operation of the pipeline. What are the primary
19 sources of potential contamination that affect our
20 groundwater?

21 MR. MULHALL: Well, you have natural
22 contaminants that are present, but you also have manmade
23 contaminants. You have fuels. You have oils, hydraulic
24 fluids, things that are used in excavation activities.
25 Again, the fuels that are used in the equipment. You can

1 have any number of factors. Maybe not necessarily the
2 gas itself that's in the pipeline, but the materials that
3 are used in the pipeline and that operation can have an
4 adverse impact.

5 MR. KUCHINSKI: Thank you.

6 MR. GOODELL: Any other members of the Board
7 of Health?

8 Sure.

9 MR. CHAIRMAN: I have one. Harvey Lester,
10 Chair of the Board of Health. Given our dependence on
11 groundwater, if that groundwater becomes contaminated,
12 what are we to do?

13 MR. MULHALL: If it becomes contaminated, the
14 only real resource is -- well, there's two things. Number
15 one is a spill could result in NJDEP requiring either
16 PennEast, or whoever causes the spill, to follow the
17 pipeline pathway to clean that up, and/or ultimately
18 dilution from precipitation.

19 And as I said before, if it gets into the aquifer
20 system, there's not a lot of water getting into the ground
21 in Northern Hopewell Township, about two inches per year.
22 And that's in a normal year. So you're not talking about
23 a lot of water that gets into the -- into the area that
24 could dilute it. So you're limited in that ability. And
25 if you have a small subwater shed that's affected, it may

1 be irreparably harmed.

2 MR. GOODELL: And, Mr. Mulhall, you have a
3 report that you --

4 MR. MULHALL: Yes, I do. I have a report dated
5 February 23rd, 2015.

6 MR. GOODELL: All right. We'll make that part
7 of the record. Thank you very much.

8 MR. MULHALL: Thank you.

9 MR. GOODELL: Okay. All right. Ms. Dresdner,
10 as the attorney for the Hopewell Citizens Against the
11 Pipeline, I understand that you have some experts that
12 you would like to present at this time?

13 MS. DRESDNER: Yes, I do. Thank you. Is this
14 on? Okay. Okay. Thank you.

15 The first witness I would like to call -- can
16 you hear me? Is that better?

17 MR. GOODELL: Yeah, you're gonna have to --
18 you're gonna have to speak directly into the microphone
19 and identify yourself before you speak.

20 MS. DRESDNER: Okay. This Katherine Dresdner.
21 The first expert witness is Mike Pisauro, from the Stony
22 Brook-Millstone Watershed Association.

23 Mr. Pisauro?

24 MR. GOODELL: Mr. Pisauro, you can approach the
25 podium.

1 M I C H A E L P I S A U R O, WITNESS, SWORN.

2 MR. GOODELL: Thank you. The record will
3 reflect that the witness has been sworn.

4 MS. DRESDNER: Mr. Pisauero, can you just please
5 tell us what your position is at the watershed and your
6 academic background?

7 MR. PISAURO: Sure. I am the policy director
8 for the Stony Brook-Millstone Watershed Association. I
9 have -- I'm a licensed attorney in the States of New Jersey
10 and Pennsylvania. I have a law degree from the University
11 of Richmond and -- from 1995.

12 Prior to being a policy director at the
13 Watershed, I was in private practice where I focused my
14 practice on representing environmental organizations and
15 citizen groups at the State House, lobbying at DEP on
16 regulations, and other environmental issues.

17 MS. DRESDNER: So you have a lot of experience
18 with environmental regulatory matters?

19 MR. PISAURO: Yes.

20 MS. DRESDNER: Okay. Please go ahead.

21 MR. PISAURO: Sure. I would like to take this
22 opportunity to thank the Township and the Board of Health
23 for this opportunity. The Stony Brook-Millstone
24 Watershed Association is Central New Jersey's oldest
25 environmental organization, founded in 1965, to keep New

1 Jersey's waters clean. And that's very important because
2 that issue is about keeping our waters clean.

3 The potential impacts from the PennEast Pipeline
4 on water quality is, as you somewhat heard, is kind of
5 scary. Quality is an issue that is relevant tonight and
6 to this Board of Health because the Board of Health statute
7 in the Local Ordinance 16-7.2 gives the authority to issues
8 that may be injurious, detrimental, or otherwise harmful
9 to the public health or the environment.

10 And that environment includes pollution or the
11 existence of a condition which causes or threatens
12 pollution of any surface water of the Township. And you've
13 heard tonight from the Township's expert about some of
14 those impacts to groundwater and streams.

15 The PennEast Pipeline will cut through -- and
16 I do mean that quite literally. They will trench through
17 -- they will dig a trench through multiple Category 1
18 streams and other waterways.

19 MS. DRESDNER: Can you explain what a Category
20 1 stream --

21 MR. PISAURO: Sure.

22 MS. DRESDNER: -- is please?

23 MR. PISAURO: Category 1 streams is a
24 designation under New Jersey DEP regulations surface water
25 quality planning rules, flood hazard area rules, and other

1 rules, where those are the waters that the DEP has
2 determined have multiple reasons including surface
3 drinking water supplies, aesthetic environmental issues
4 the highest quality and deserves the best protection.
5 Those are waters that receive a 300 foot buffer. And I
6 think those are very important, those buffers.

7 But -- let's see if I can do this.

8 MR. GOODELL: And right now you're referring
9 to a PowerPoint?

10 MR. PISAURO: Yes.

11 MR. GOODELL: Will that PowerPoint be part of
12 the record?

13 MR. PISAURO: Yes.

14 MR. GOODELL: Okay.

15 MR. PISAURO: Yes. This is a map prepared by
16 the Watershed, looking at the route for the PennEast
17 Pipeline. Those lines in the dark blue are Category 1
18 waters. But you can also see, in the lighter blue, other
19 tributaries, other waters that drain into the D&R Canal
20 or the Delaware River. That's important because, at least
21 in brand new farms, the small section of Hopewell Township
22 and where I live, that is one part of the town that gets
23 its drinking water from Trenton Water Works. Trenton
24 Water Works gets the water from those supplies. So any
25 pollution that enters those waters may impact that water

1 supply which, again, gives the Board of Health in Hopewell
2 Township some issues.

3 MR. GOODELL: And you're referring to the lines
4 --

5 MR. PISAURO: Sure.

6 MR. GOODELL: -- on a diagram --

7 MR. PISAURO: Yeah.

8 MR. GOODELL: -- that's called impacted waters,
9 correct?

10 MR. PISAURO: Yes.

11 MR. GOODELL: Okay.

12 MR. PISAURO: The D&R Canal and the Delaware
13 River are the sort of purplish and orange lines and they're
14 mapped -- they're marked on the legend. As you can see
15 the PennEast Pipeline comes down and in here, here's
16 Hopewell Township. It's a darker green line. And, again,
17 you see all these tributaries, all these waters to supply,
18 at least to my drinking water.

19 Now buffers, as I said, are vital to protecting
20 water quality. Sorry. New Jersey DEP regulations
21 implementing statutes recognize this. The Township
22 ordinances recognize this, the importance of buffers.
23 For example, in this stream corridor ordinance, as well
24 as the forest management and tree removal ordinances.

25 And I'd just like to read a couple of sections.

1 Section 12.3.2, that's the stream corridor protection
2 ordinance, "The purpose of the stream corridor protection
3 provisions are to assure that adequate water supply is
4 available and maintain the long-term natural equilibrium
5 of ground and surface waters in Hopewell Township, and
6 neighboring communities, and improve and maintain the
7 quality of waters supply and sustain diverse populations
8 of aquatic flora and fauna."

9 One of the things I failed to mention, a lot
10 of those Category 1 streams were designated in part because
11 of habitat for threatened and endangered species.

12 The forest protection -- the forest management
13 and tree removal, it's intent, trees are declared to be
14 important, cultural, ecological, scenic, and economic
15 resource. Results -- and one of the things that help
16 result in additional storm water runoff, which would --
17 sorry.

18 And one of the things that you cannot do with
19 a forest is remove them because they will result in
20 additional storm water runoff, which will impact adjacent
21 properties.

22 And what I have up here, again, a PowerPoint
23 slide entitled, "Impacted Forests," are all of the forests
24 along the PennEast Pipeline route. Again, that's the
25 route, and in here, you have Bald Pate Mountain and

1 Washington Crossing Park, which are important forests.

2 Forests, especially forested riparian zones
3 provide some of the highest quality filtering, buffers
4 filter storm water. As Mr. Mulhall indicated, if those
5 pollutants reach into the aquifers, reach into our
6 waterways, there's not gonna be a whole lot in summer months
7 and low flow months for that water -- that pollution to
8 be diluted. And so by protecting our buffers, you are
9 protecting water quality. You are protecting our waters
10 supply.

11 MR. GOODELL: And you've been referring to a
12 slide entitled "Impacted Forests"?

13 MR. PISAURO: Correct.

14 MR. GOODELL: Okay.

15 MR. PISAURO: Correct.

16 Went to far. You know, this has been one of
17 those days with technology.

18 MS. DRESDNER: You wanna go back?

19 MR. PISAURO: This was a picture that was taken
20 by our staff on the Leidy Line which is in Princeton and
21 Skillman.

22 MR. GOODELL: It's entitled "Leidy Line
23 Impacts."

24 MR. PISAURO: Impacts. And I'm using this to
25 demonstrate. Where that bridge is is the Rock Brook.

1 That is the Transco-Leidy Line Pipeline. There -- as you
2 can see, there is no riparian buffer. There is no
3 structure between the pipeline and the waterway. There
4 is no trees. There is no vegetation to which storm water
5 which hits the ground can hit, be filtered, slowed down
6 and infiltrated into the ground. Any storm water that
7 hits that area will have nothing to stop it to hit our
8 waters. So all the pollutants that are there will continue
9 to run in. And I think that's important. The 2012
10 integrated -- I always call it the integrated report, but
11 it's the 2012 Integrated Water Quality and Monitoring
12 Assessment report, the report that DEP prepares every two
13 years as a requirement under the EPA's Clean Water Act.
14 And that lists and reviews all of the impaired waters,
15 waters that do not meet water quality standards. And in
16 New Jersey, in this region, 90 percent of our waters do
17 not meet water quality standards.

18 Why is that? Nationally and in this state, that
19 is because 60 percent of that pollution, that impairment
20 is a result of storm water runoff. The very pollution
21 that our buffers help us, protect us from. And the
22 PennEast Pipeline will trench through, cut and remove these
23 buffers. And there will be nothing to stop, slow down,
24 and filter that water, which is why we thank the Board
25 of Health for having this hearing. We urge you to find

1 that these impacts are unacceptable and we appreciate
2 it. Thank you.

3 MR. GOODELL: Okay. Thank you very much.

4 Any members of the Board of Health have any
5 questions for Mr. Pisauro?

6 If not, thank you very much.

7 And, Ms. Dresdner, you have another witness?

8 MS. DRESDNER: Yes. Thank you.

9 The next witness is Dr. Onstott.

10 DR. ONSTOTT: Thank you.

11 D R. T U L L I S O N S T O T T, WITNESS, SWORN.

12 MR. GOODELL: Could you state your name and
13 spell it please for the record?

14 DR. ONSTOTT: I'm Tullis C. Onstott.

15 MR. GOODELL: Can you spell it?

16 DR. ONSTOTT: T-u-l-l-i-s.

17 MR. GOODELL: Onstott?

18 DR. ONSTOTT: O-n-s-t-o-t-t.

19 MR. GOODELL: Okay. The record will reflect
20 that Dr. Onstott has been sworn in.

21 MS. DRESDNER: Okay. Professor Onstott, can
22 you give us the benefit of your background, educational
23 background?

24 DR. ONSTOTT: Certainly. I got a Bachelor's
25 at Caltech, Ph.D. at Princeton. I've been on the faculty

1 --

2 MS. DRESDNER: In what areas? What area?

3 DR. ONSTOTT: Initially, in geology. And I've
4 been on the faculty at Princeton University for 30 years
5 now.

6 MS. DRESDNER: What department?

7 DR. ONSTOTT: In geosciences. And I've spent
8 the last 20 years focusing my research on low temperature
9 geochemistry and microbiology.

10 MS. DRESDNER: Okay. Thank you.

11 DR. ONSTOTT: So today, I wanna provide you with
12 my professional opinion on the issue of arsenic and it's
13 relationship to the PennEast Pipeline. The main points
14 I wanna cover is where is the arsenic coming from, how
15 do gas pipelines affect arsenic, how does this relate
16 specifically to this Township and its problems, and to
17 talk a bit about what we need to do about this.

18 Now within the last ten years, the scientists
19 at the geological survey of New Jersey have identified
20 the source of arsenic in this region as coming from these
21 black bands that you see here in this photograph. These
22 are within the red beds of the Triassic lake sediments
23 that form the bedrock in this region here.

24 And at higher magnification, they located
25 arsenic minerals actually present in the matrix of the

1 rock. So the arsenic is leaking from these minerals into
2 the ground where it percolates through this rock, and
3 that's where the arsenic in groundwater originates.

4 It's a little bit more complicated than that.
5 This is a diagram that they published, which shows the
6 aquifers running diagonally through here. The surface
7 going from the ridges, down into the valleys and over to
8 the wetlands and streams, and what happens in the natural
9 course of events is that those pyrites that are in the
10 bedrock are exposed to air and oxidized. And oxidation
11 leads to the release of arsenic in the form of what we
12 call arsenate. And that arsenate then enters sluggishly
13 into the aquifer groundwater. But as it penetrates into
14 the surface, the oxygen levels of the groundwater diminish
15 because of microbial activity.

16 The microorganisms are using organic matter,
17 sources of electrons, hydrogen, and they dump electrons
18 onto the arsenate, and they convert that into arsenite.
19 And that arsenite is highly mobile, and it is the most
20 dangerous form of arsenic, with the exception of arsine
21 gas.

22 Now the arsenic that runs off the stream and
23 into the buffers that Mike was just talking about, the
24 wetlands and our streams, those act as the perfect sponges
25 for arsenic, and they retain it there, and microorganisms

1 will partially mobilize that arsenic into a vaporous form
2 of arsenic gas. So that, in short, is the arsenic cycle.

3 PennEast, as was already illustrated by Mike's
4 diagrams, are crossing these ridges and valleys and
5 trenching right through the streams. So the orientation
6 of the pipeline is designed to have the maximum possible
7 impact on the aquifer and the arsenic cycle.

8 How does that work? Well, we already got some
9 insight from this from Matt's presentation. They have
10 to install the gas pipeline in the bedrock, as you just
11 saw on the previous presentation. That will expose that
12 bedrock to air, fracture, pulverize it, converting the
13 arsenic and pyrite into arsenate.

14 Then the organics that are around that pipeline
15 during installation process, methane leaking from the
16 pipelines are consumed by bacteria. Those bacteria will
17 take the electrons from the methane gas and organics, dump
18 it on arsenate, convert to arsenite, and then become
19 mobile. They will attack the gas pipeline and corrode
20 it, getting electrons from the pipeline, dumping those
21 electrons on arsenic, converting it to arsenite, making
22 it mobile.

23 Now pipelines will install an active cathodic
24 shield to prevent the corrosion. They basically stick
25 (indiscernible) into the ground. They pump 50 amps into

1 the ground, converting it from -- converting the pipeline
2 into a cathode, preventing the corrosion. But the
3 electrons are gonna feed the bacteria. And, again, which
4 will then dump it onto the arsenate and spread the
5 mobilization of the arsenate around the pipeline.

6 Now just to show that I'm not a little crackpot
7 about this, this is an exciting area of research just within
8 the last five years. There are multiple papers that show
9 that electrons feed -- bacteria feed off electrons.

10 Now you can go on the internet and draw down
11 a recent study of arsenic in the Northern State of New
12 Jersey. It's a very thorough study of groundwater. They
13 covered 32,000 in Northern New Jersey over this course
14 of time up to 2011, again, done by the Geological Survey.
15 And what they found is the most significant contaminant
16 was arsenic. That's what's causing a failure of
17 groundwater quality in this area is arsenic.

18 Now when you plot it on a map of New Jersey,
19 where those arsenic regions are located, right on the
20 Triassic lake sediments in the areas where you're living.
21 And so when I first learned about the PennEast Pipeline,
22 I would discover that it went right through the middle
23 of the arsenic regions in New Jersey, rather than
24 circumventing it.

25 So now let's look a little bit closer at Hopewell

1 Township and get a feeling for granularity of the situation
2 here. These are showing you wells which exceed the 5 ppb
3 standard. So 5 ppbs is the maximum contamination level
4 that is allowed by state law here. And so you can see
5 the number of wells in bright orange and red that exceed
6 those levels and the ones that do not. And keep in mind
7 that this is not a static issue. These values will change
8 with time. And this does not show you the wetlands. We
9 don't have data on the wetlands. We have no idea at all
10 of the arsenic levels that are stored in the wetlands as
11 well.

12 So negotiating a three-foot pipeline through
13 that without causing an arsenic problem has gotta be like
14 raking leaves in a minefield. Okay?

15 Now I wanna finish up with some visualization
16 of what this means. And this is a photograph taken on
17 a farm where they're doing horizontal directional
18 drilling, which is, in fact, the best option available
19 for crossing wetlands, instead of trenching through them,
20 drilling underneath them. And here, you see they're just
21 getting started. They've got a -- sort of like about a
22 12-foot diameter drill rod going in there. This is gonna
23 be for a 42-inch diameter pipeline. So they're gonna have
24 to drill a four-foot diameter hole through the ground for
25 about a distance of a thousand feet or so in this case.

1 So the big boys, the really big bits are over
2 there on the other side. And what you see in the middle
3 there is the drill bite. Now there's probably about, I'd
4 say, several tens of thousands of liters of drill mud
5 sitting right there right now and they're just getting
6 started. By the time they're done, they'll have somewhere
7 on the order of about a half-a-million liters of drill
8 mud in that hole.

9 Now they're removing the tiny chips that are
10 coming out of there and circulating the water. Where's
11 the water coming from? Well, they drilled a well right
12 next to here, into the aquifer, to extract water from the
13 well they use to put into the drilling well, and to restore
14 the water that's leaking out into the groundwater system
15 underneath the water shelf.

16 Now they're putting bentonite (phonetic) in
17 there to try to slow that process down. Okay?
18 Interestingly enough, if you look at these rocks really
19 carefully, you'll notice that there are some of the rocks
20 in there that are these black, dark colored rocks. And
21 sure enough, those are the dark gray beds in the Passaic
22 Formation that have the highest concentrations of arsenic
23 in it.

24 All right. So they have 500,000 liters of this
25 drill mud and the question is, well, how much arsenic is

1 actually in the drill mud? If the arsenic is transferred
2 from that crushed up bits of rock that's in the drill mud
3 into the mud filtrate, going into the liquid phase, well,
4 it'll be on the order of about 30 ppm. Okay.

5 To give you a better picture of how this works,
6 if I have one kilogram of that rock with 10 ppm of arsenic
7 in it, I remove the arsenic from that one kilogram, so
8 about the size of my fist, and I put it in a one liter
9 bottle of Fiji water, okay, how much Fiji water would it
10 take for me to dilute that down to 5 ppb, to meet state
11 standards? It's all about dilution, as Michael said.
12 It would take about 5,000 bottles of Fiji water. Okay?

13 Now I've got 500,000 liters of drilling mud in
14 there that has seen 2.6 million kilograms of rock. How
15 much water will I have to add to that drilling mud to dilute
16 it down to meet state standards? 2.5 billion liters.
17 How much is 2.5 billion liters? It's about 12,000 Olympic
18 sized swimming pools. So the question is how many Olympic
19 sized swimming pools of water does this Township have?
20 And that's just for one section of that pipeline, one sort
21 section of the pipeline.

22 Okay. So I'm gonna finish here with that
23 because I don't wanna run over time, and I'll take any
24 questions. Thank you.

25 MR. GOODELL: Okay. Thank you, Dr. Onstott.

1 Any members of the Board of Health have any
2 questions for Dr. Onstott?

3 Mr. Kuchinski?

4 MR. KUCHINSKI: So from your testimony, Doctor,
5 it seems inconceivable that there is enough groundwater
6 in Hopewell Township to sufficiently mitigate the arsenic
7 contamination that would result from the construction
8 process. Is that correct?

9 DR. ONSTOTT: That's right. That's exactly
10 right. Now from the point of view of PennEast, they are
11 basically stating that they don't think it's going to be
12 a problem. And their reasoning, I assume, is that the
13 arsenic doesn't get transferred from the rock into the
14 groundwater at sufficiently high concentrations. In
15 order for that to work, less than .01 percent of the arsenic
16 has to get transferred to the groundwater. But if that
17 were the case, your county wouldn't have an arsenic problem
18 in its groundwater at all, and you do. So the arsenic
19 does move from the rock into that groundwater, in
20 sufficient quantities that it will be a problem.

21 MR. GOODELL: Any other members of the Board
22 of Health have any questions?

23 Okay. Thank you very much, Dr. Onstott.

24 DR. ONSTOTT: Sure.

25 MS. DRESDNER: And you'll be submitting the

1 PowerPoint?

2 DR. ONSTOTT: That's right.

3 MS. DRESDNER: Okay. Thank you.

4 DR. ONSTOTT: (Indiscernible).

5 MR. GOODELL: We'll make sure that that's part
6 of the record.

7 Ms. Dresdner, your next witness?

8 MS. DRESDNER: Yes.

9 Dr. Trachtenberg?

10 D R . M I C H A E L T R A C H T E N B E R G , W I T N E S S ,
11 SWORN.

12 MR. GOODELL: Could you state your name and
13 spell it please?

14 DR. TRACHTENBERG: Yes. My name is Michael
15 Trachtenberg, M-i-c-h-a-e-l, initial C, last name
16 T-r-a-c-h-t-e-n-b-e-r-g.

17 MS. DRESDNER: And, Doctor, can you please give
18 us the benefit of your professional background?

19 DR. TRACHTENBERG: Yes. I have a Bachelor's
20 Degree in -- from City University of New York, and a Ph.D.
21 from the University of California in Los Angeles, with
22 a major in anatomy and neurobiology. I give you here on
23 this first slide a quick thumbnail of my key employment.
24 I currently run a small company developing flow batteries.
25 I'm an adjunct professor at Rutgers and which I teach

1 a course on sustainability, which deals with a lot of the
2 problems we're talking about today. I previously had
3 worked in a company called Carbozyme. You can see the
4 other issues. In my prior lifetime, I was the director
5 of Neurological and Neurosurgical Research and, among
6 other things, this excellent talk preceding mine brought
7 to mind one of my first meetings was all about arsenic
8 in well water. So it's come full circle.

9 MS. DRESDNER: Thank you. And if -- please give
10 us your opinion about the impact of the PennEast Pipeline.

11 DR. TRACHTENBERG: The PennEast Pipeline
12 presents some very serious health hazards for the populous
13 at large, both in terms of toxicity, potentials for
14 explosion, and for the earth as overall. And I'll discuss
15 each of those in turn.

16 So let me sort of set the stage. We all want
17 clean energy, preferably cheap, although that's -- may
18 or may not be the case. We want it to be safe. That's
19 a real consideration this evening, and we want it without
20 adverse consequences. The case I'm going to make tonight
21 is that the PennEast Pipeline proposal does not provide
22 for any of those benefits. It would not be clean. It
23 would present very high risks. Those risks would be and
24 burdens would be transferred to Hopewell and the adjoining
25 villages.

1 Let me point out that I live in Lawrenceville,
2 and I'm speaking tonight as a private resident of
3 Lawrenceville, New Jersey.

4 So there are two classes of problems that one
5 would have to deal with: The local and the worldwide.
6 The local problems are essentially the emissions, as they
7 may be related to health effects, and fire and explosion
8 issues. Worldwide, we're gonna talk about increases in
9 carbon dioxide equivalents -- that's what the little e
10 stands for -- and how that will impact civilization. And
11 I don't mean that lightly.

12 First is a picture to show you where the pipeline
13 is ending currently. The two proposals are in green and
14 red. The circle in the top right is the compressor booster
15 station, which is on Cold Soil Road, very next -- very
16 close to Carter Road. Let me point out that I live right
17 off Cold Soil Road.

18 They have not yet proposed a connection between
19 the pipeline and the compressor station, but that will
20 never be necessary. This is a little higher view of the
21 compressor station. And for those who are familiar with
22 the area, it's right across from Terhune Orchards.

23 So what kinds of problems does one normally
24 encounter at compressor stations? Because that's where
25 your big leaks really occur. There are three. There are

1 blowdowns, which can be scheduled and some are accidental.
2 Many of you have received a letter with regard to blowdown
3 activity that's going to release methane in the local area.
4 So you're familiar with the fact that this will happen.

5 There are fugitive releases as they're called,
6 meaning that they're not really sure where they're coming
7 from. Typically, this is equipment leakage. And that
8 means that as the compressor is rotating around the axis,
9 there is a seal and that seal inevitably leaks and then
10 there are evaporative losses. And, finally, there are
11 accidents, such as occur everywhere.

12 Most of the releases, interestingly, are
13 unpredictable in time, in magnitude, and in impact. Why
14 is that the case? Well, the impact is that it depends,
15 to a large extent on the first two events. Time, meaning
16 when are people out and about and might be directly affected
17 by the materials. Magnitude is pretty obvious. And
18 impact, in part, depends upon the local wind conditions.
19 If the wind is blowing towards you, that may not be very
20 pretty. If it's blowing in the opposite direction, you're
21 lucky that time.

22 It's important to understand that PennEast
23 Pipeline will probably refer to EPA based protocols, but,
24 as was said in the previous presentation and is well-known
25 to chemist, dilution is the best way to minimize an impact.

1 The solution to pollution is dilution, as is well-known.

2 Well, the way the EPA makes its measurements
3 is that it averages over a long period of time, a minimum
4 of 24 hours, often longer periods of time and it just looks
5 at the distribution in space of whatever materials are
6 released. That's very nice because it reduces the
7 apparent impact, but it is not effective for people who
8 are in the immediate proximity wherein a release may occur
9 over a period of an hour or two, and then be diluted, if
10 you will, over the 24-hour counting period. So it's now
11 one-twelfth of the -- the apparent release is one-twelfth
12 of the actual release.

13 What kinds of things might be released? One
14 of the -- and these are compounds, in part, that come out
15 of the Marcellus Shale. So it contains radon. Every one
16 of you has a radon filter in your house, to pull the air
17 from the basement or below the basement. You're aware
18 of this. So this is a gas that as a 3.8 day half-life,
19 but that's not a meaningful number here because it's going
20 to be released continuously. So it's present all of the
21 time. It decays in the pipeline to give you lead and
22 polonium, both of which remain in the pipeline. That's
23 important because if you get a pipeline burst for any
24 reason, now those radioactive compounds will be exposed.
25 They are not gaseous.

1 Another thing that comes out are particulates.
2 Those are very fine carbonaceous particles. It used to
3 be that the standard was what was called pm 10, meaning
4 ten microns in diameter. That has been reduced to 2.5
5 microns. The problem with the 2.5 micron situation is
6 that those particles get very deep into the lung and are
7 not prevented from accessing your respiratory system by
8 means of the mucous membranes or the hairs in your nose.

9 So they EPA's (indiscernible) 2.5 has been very
10 contentious. Mind you that when those particles are in
11 the air, they are absorbing anything that is near them,
12 whether -- anything that can be absorbed onto carbon will
13 be picked up.

14 Here's a long list of VOCs that have been
15 identified from sites in Pennsylvania, at compressor
16 stations in Pennsylvania. I noted two of them in red,
17 MBTE and benzine. Those of you who have seen gasoline
18 storage tanks being dug up at filling stations may or may
19 not be aware that the reason for that is the presence of
20 MBTE leakage, which is a carcinogen. Benzine is also
21 marked so because it's another carcinogen.

22 The others that are commonly found include
23 formaldehyde and methylene chloride, also highly
24 problematic, not to mention all of the others that are
25 listed in this slide. So this is the kind of gas content

1 that is gonna be present in the gas pipeline that we're
2 discussing.

3 So what is the problem? You're gonna get all
4 of these physiological systems adversely affected.
5 Respiratory irritation, neurologic symptoms. There's a
6 long list on the right-hand side. You can see -- so you
7 get headaches, coughing, dizziness, visual disorders,
8 fatigue, loss of coordination, nausea, memory impairment,
9 in addition to inhalation of the radioactive gas and the
10 ultra fine particles, to the extent that they are released.

11 This is an important considerations. There are
12 methods of recapturing a lot of this. Most of them are
13 not in use. But -- so this is the risks that are being
14 transferred, the burden shift.

15 Let's look at a couple of these very quickly.
16 So here's your benzine. So I've marked it in acute,
17 chronic, reproductive and carcinogen related problems,
18 all of which you can read for yourself. None of those
19 are things I would particularly sign up for, and I am sure
20 you would not either. Benzine, as you see, is a known
21 human carcinogen, for all routes of exposure, as designated
22 by the EPA.

23 How about the next one? Methylene chloride.
24 Well, it also doesn't sound very nice. Visual and auditory
25 functions are adversely affected. Central nervous system

1 is a potential target. So if you think about VOCs, every
2 time you heard about some kid huffing, right, from
3 propellants in gas, that's essentially what you're doing
4 when you're taking in VOCs.

5 One other PM 2.5. So those of you who have
6 asthma will not be very happy about this. You can have
7 nonfatal heart attacks, increase in blood pressure, lung
8 cancer risks, pulmonary and cardiovascular diseases are
9 exacerbated. So -- and these particles are small enough
10 to actually move through the lung tissue and get into the
11 capillary system, into the blood and distribute to other
12 tissues.

13 Here's the conclusion on this, with respect to
14 personal health. Compressor stations commonly release
15 VOCs, particulates and radioactive materials. They can
16 be toxic. They will result in discomfort and disease,
17 and they include known carcinogens.

18 Next. Here's the pipeline that we've seen
19 several times now and here are some interesting explosion
20 maps of what would happen in the first 30 seconds, and
21 60 seconds, should one of these pipelines explode. You'll
22 notice that in the yellow is a 50 percent chance of
23 mortality at 30 seconds. In other words, if you happen
24 to be in that space, and the pipeline should explode there,
25 with all due humor, you're toast.

1 Orange line has a one percent chance of mortality
2 at 30 seconds and 50 percent at 60 seconds. So you'd better
3 get running and, in fact, most of the standards assume
4 that you will be running at about five miles an hour to
5 try to get out of the way of any kind of explosion.

6 And lastly, you have 40 seconds to blister burns
7 in the outermost orange area. Notice in this zone, how
8 many housing units and how many commercial units are
9 included in this disaster area. But wait, let me show
10 you a better one. Here we have two and this is centered
11 around the area -- excuse me -- the area where the Hopewell
12 Township city residence -- the Township City Hall is.
13 One of the things you will notice is in the upper right
14 between the yellow and orange line, there are four baseball
15 fields, and absolutely no place for protection. You
16 cannot run anywhere that will save you.

17 Now were we just told that there's gonna be a
18 42-inch diameter pipe?

19 MS. DRESDNER: It's -- I think it's 36 inches.

20 DR. TRACHTENBERG: Thirty-six. I'm sorry.
21 Thirty-six. Well, let's take a look at these data that
22 come from the Gas Research Institute, in their R-7 hazard
23 paper, looking at the relationship between the hazard
24 radius on the Y axis, the operating pressure, and the pipe
25 diameter. And you could see the second line down is the

1 36-inch pipe. That unless you get under 700 pounds, you're
2 looking at a very serious hazard radius. Okay.

3 So what do we conclude from this portion? Were
4 an explosion to occur, given the population density and
5 the lack of protective zones, fatalities are all but
6 guaranteed, so too are numerous burn victims. What does
7 that mean in terms of burden transfer. I'd like to talk
8 about that. It's an important issue. It means that your
9 hospital or other medical facilities are essentially being
10 tasked with dealing with potential consequences. So too
11 your volunteer fire departments, and all of those that
12 you recruit from the adjacent townships. That is known
13 in the trade as an externality, but I see it as a burden
14 shift.

15 Let's go one more. Methane is a particularly
16 potent greenhouse gas. It's -- over its initial 20-year
17 period 84 times more potent than is carbon dioxide,
18 according to the Environmental Defense Fund. You'll see
19 a variety of numbers in the literature, and it all depends
20 upon the time period that's calculated.

21 What do we know about methane releases? And
22 this is really critical. If methane is going to be a clean
23 alternative and less injurious to the atmosphere, to
24 greenhouse gas accumulations, than is burning coal, coal,
25 you have to keep your methane losses at less than one

1 percent. Currently, methane leaks are between one and
2 eight percent of production. Remember, that's 84 times
3 the CO2 release. If you only flared that methane, you
4 would reduce its potency 84 fold.

5 The Marcellus Shale estimates by the EPA were
6 .04 to 3 grams per second of methane release. What happens
7 with data, models are fine, but data counts. The measured
8 values are between 3 and 34 grams per second, ten fold
9 what has been predicted and projected.

10 I wanna drop back for a second. Those of you
11 who have seen the recent paper, or heard about it, by Jim
12 Hansen (phonetic) and 13 colleagues -- or 16 colleagues,
13 I think this is particular important. The -- Jim Hansen
14 is the guy who had been at NASA and was one of the first
15 to call attention to greenhouse gas problems due to the
16 burning of hydrocarbons. He's at Columbia University.

17 The latest data showed that the real reason that
18 ocean levels would be rising is that the ice in the Arctic
19 and the Antarctic is being melted from below. That is
20 the ocean is warming and the ice is caving and falling
21 in. If we don't reduce our carbon emissions, or even
22 worse, our carbon equivalent emissions, we will have 10
23 to 30 feet of water in New York before you turn around.
24 My advise, buy land in the Palisades.

25 But the conclusion here is fracking and the

1 attendant methane release are a clear and present danger
2 to the planet, and that means to current civilization as
3 we know it. Let me put a fine point on that as I close.
4 One of the important papers that recently came out
5 indicated that a major cause of the formation of ISIS --
6 yes, I realize I'm going to the Near East -- is climate.
7 Throughout history, if you are a paleo climatologist,
8 you will realize that virtually every war has been about
9 getting food, which is ultimately due to climate change.
10 So when you're thinking about millions and millions of
11 refugees, think about the methane emissions.

12 MR. GOODELL: Okay. Thank you, Doctor. And
13 just so that I've got it straight in my notes, your area
14 of expertise specifically is what?

15 DR. TRACHTENBERG: Two areas.

16 MR. GOODELL: Okay.

17 DR. TRACHTENBERG: I've been doing a great deal
18 of neurobiology and the clinical consequences, such as
19 why I spoke about health. And then I've been
20 -- the last 15 years, I've been working in carbon capture
21 technologies and the impact of carbon on greenhouse gas
22 systems.

23 MR. GOODELL: Okay. Thank you.

24 DR. TRACHTENBERG: You're welcome.

25 MR. GOODELL: Members of the Board of Health

1 have any questions? No? Okay.

2 Thank you very much, Doctor.

3 DR. TRACHTENBERG: Thank you.

4 MR. GOODELL: Ms. Dresdner, your next witness?

5 MS. DRESDNER: Yes. Dr. Michael Brogan.

6 M I C H A E L B R O G A N, WITNESS, SWORN.

7 MR. GOODELL: State your name and spell it

8 please?

9 DR. BROGAN: Michael J. Brogan, B-r-o-g-a-n.

10 MR. GOODELL: Thank you.

11 The record will reflect that Dr. Brogan has been
12 sworn.

13 MR. GOODELL: Ms. Dresdner?

14 MS. DRESDNER: Thank you.

15 Dr. Brogan, can you just give us your educational
16 background and your area of expertise?

17 DR. BROGAN: I have a Bachelor of Arts in
18 Political Science from the University of Delaware, a
19 Master's of Public Administration from Rutgers University.

20 I have a Ph.D. from the City University of New York
21 Graduate Center in Political Science, with a specialty
22 in Public Policy and my areas are environmental policy
23 and program evaluation.

24 MS. DRESDNER: Thank you.

25 DR. BROGAN: Tonight, my testimony will focus

1 on public safety risks and uncertainty associated with
2 the construction of the proposed PennEast Pipeline. My
3 comments focus specifically on the estimated impact of
4 the line on the residents of Hopewell Township. My work
5 is intended to provide some benchmarks for the Board to
6 evaluate and prepare for uncertainty surrounding the risk
7 associated with the construction of the proposed line.
8 I'm going to split my comment into three short sections.
9 One, a brief overview for of regulatory framework for
10 natural gas transportation in the U.S. A review of
11 existing risks associated with the delivery of natural
12 gas. Based upon the most recent PHMSA incident reports,
13 and an estimated impact on the number of residents who
14 are now placed within the blast zone due the proposed
15 construction of the line.

16 From the prior speakers, you get a sense that
17 natural gas is flammable. It consists primarily of
18 methane. It's categorized either conventional or
19 unconventional sources. It's a commodity that is
20 difficult to store. Typically, storage requires very
21 complex environmental areas such as salt caverns, or
22 through more capital and technologically intensive methods
23 such as LNG.

24 The transportation of the fuel comes primarily
25 through a pipeline network in order to connect producers

1 with consumers. The fuel source fits into a definition
2 of a natural monopoly where the most efficient structure
3 of an industry consists of a single seller.

4 Natural gas is heavily regulated by the Federal
5 Government, as well as the states, at the state level
6 because of it's -- these requirements associated with the
7 delivery of the resource. Primarily, it's done through,
8 of course, this national network.

9 Ultimately, the Feds got involved with the
10 regulation of natural gas with the Natural Gas Act.
11 Ultimately, as a way to ensure that demand and growth and
12 -- were in line and that prices and supply from suppliers
13 that -- that they be connected.

14 At the Federal level, there are some significant
15 changes from the Natural Gas Policy Act in the late 1970s,
16 led to a push for deregulation of this energy source in
17 an attempt to align production, transportation, and
18 consumption.

19 Regulating natural gas is developed under model
20 transmission networks. Because the energy source is
21 difficult to store, it usually takes the form similar to
22 the form of generating electricity. Essentially, it's
23 considered a public good. Thus, this warrants a type of
24 relationship that has the following features. One,
25 because it is a uniform commodity, the delivery of the

1 fuel is constant. It cannot be done on a discreet basis,
2 where coal or petroleum can be stored. It also tends to
3 be privately owned. The pipelines are privately owned.
4 The distribution system is based on an oligopoly, where
5 private firms are responsible for the production,
6 transportation, delivery to consumers of the good. As
7 I mentioned before, the fuel cannot be stored.

8 The network, of course, is authorized to use
9 eminent domain as the good considers part of a public need,
10 which creates a public interest in the expansion of
11 pipeline networks. Safety measures, annual reporting and
12 pipeline inspections are done primarily by natural gas
13 firms.

14 Let's go back here one second. Here's -- this
15 chart here, this PowerPoint will be for the record,
16 indicates from the Energy Information Administration the
17 overall national network of pipeline capacity as of 2013.
18 And this is by states, from kind of interconnections.
19 You can see New Jersey is a hub state, particularly into
20 the northeast. This is primarily one of the important
21 areas for PennEast Pipeline as a way to ship natural gas
22 north, as well as to get it into the southern area of the
23 country where there has been a -- a significant shift in
24 terms of using natural gas, in terms of power burn for
25 electricity. Shifting it from coal in -- I'm sorry.

1 Using natural gas, shifting it from coal.

2 Typically, safety measures, annual reporting
3 and pipeline inspections are done primarily by natural
4 gas firms and transportation companies. Oversight is
5 conducted by state utilities and by the U.S. Department
6 of Transportation through PHMSA.

7 Currently PHMSA advertises it has about 139
8 federal inspectors and about 300 inspectors at the state
9 level covering roughly 2.6 million miles of pipeline across
10 the U.S. When factoring both federal and state
11 inspectors, this is about one inspector covering roughly
12 six miles of pipeline. If we were to take federal
13 inspectors alone, this equates to a ratio of one inspector
14 per 19,000 miles of pipeline.

15 In the eastern region along, where we reside,
16 there are about 21 inspectors at the federal level covering
17 approximately 800,000 miles of pipeline, or roughly 38,000
18 miles of pipeline per inspector. Overall the regulatory
19 network developed to monitor interstate lines has resulted
20 in a relatively closed hierarchical system of oligopoly,
21 which is coupled with segmented pseudo-markets. The
22 problem that arises from the structure is that it's
23 periodically failed to protect consumers in terms of
24 pricing, supply, and residents in terms of safety.

25 Now there's a lot of content here, but I -- in

1 putting this together and looking at the PHMSA data, I'm
2 a fan of Harper's monthly and every month, the first thing
3 I do when I turn it -- turn it open, they have their index
4 statistics that come out on a variety of topics and so,
5 as an academic, we don't -- we never create anything new.
6 We just kind of re-conceptualize and take what's been
7 done and kind of put it in a new form.

8 So I've taken from the most recent PHMSA report,
9 from 2010 to 2014, I've highlighted out items that have
10 been reported by the industry and I wanna just kind of
11 take a censure to give you the national picture of natural
12 gas pipelines in terms of safety, risk and health issues.

13 Roughly reported one out of five incidences have
14 resulted in some type of reported injuries. This is --
15 this -- I'm sorry. This coincides with about 272
16 individuals who are injured in these incidents. People
17 are -- the number of incidences where you saw evacuations,
18 almost 47 percent. This resulted in about ten -- a little
19 less than 11,000 people being evacuated from their homes,
20 place of business, and other residences during an incident.
21 This points back to Dr. Trachtenberg's work before.

22 In this data, you have roughly seven percent
23 have resulted in fatalities. Again, this resulted in
24 about 57 individuals. The percent of pipeline incidences
25 reported on private property, which the majority of the

1 PennEast line is proposed, is about 51 percent.
2 Incidences reported on owner -- operator or owner
3 properties is about two percent. So it's asymmetric here
4 when you look at the burden that's been placed on residents
5 and property owners.

6 Percent of incidences, of course, that gas
7 ignited, about 62 percent. The percent from explosions
8 rate one out of four. From unintentional release of gas,
9 which we just saw a presentation on, roughly 83 percent
10 of incidences have been reported. Total cost in nominal
11 dollars, unadjusted, about 164 million. Total amount paid
12 for these costs, from operators that are responsible for
13 managing and regulating these pipelines, about 91 million.

14 Now to put that into context, for every dollar
15 the industry pays back about 56 cents. We are left, as
16 taxpayers, as communities, to cover the difference. Of
17 course, the percent of gas pipeline failure for reasons
18 other than natural force damage, roughly 93 percent. This
19 includes human failure, corrosion, in addition to
20 excavation, incorrect operation, et cetera.

21 MR. GOODELL: Excuse me. Dr. Brogan, all of
22 those statistics you just testified about came from, you
23 said, PHMSA?

24 DR. BROGAN: PHMSA, correct. I compiled --

25 MR. GOODELL: Could you --

1 DR. BROGAN: -- the list.

2 MR. GOODELL: Could you define PHMSA? What is
3 PHMSA?

4 DR. BROGAN: The Pipeline Health and
5 Safety --

6 UNIDENTIFIED FEMALE: The Pipeline Hazardous
7 Material --

8 DR. BROGAN: Pipeline --

9 UNIDENTIFIED FEMALE: -- and Safety
10 Administration.

11 DR. BROGAN: Pipeline Hazardous

12 MR. GOODELL: P-H-M-S-A?

13 DR. BROGAN: -- Safety Materials
14 Administration.

15 MR. GOODELL: Pipeline?

16 DR. BROGAN: Hazardous Safety Materials
17 Administration [sic].

18 MR. GOODELL: Okay. Thank you.

19 DR. BROGAN: Yeah. Yeah. They put out -- they
20 put out the report. It's available on the website. I
21 don't have -- I actually, in my report, my list of
22 citations, I actually have the report in there.

23 MR. GOODELL: Okay. All right. Thank you.

24 DR. BROGAN: You bet.

25 In addition, there's some additional -- I'm not

1 gonna go into too much detail, but recently course studies
2 find flaws in leak detection system, as taken from the
3 New York Times. Again, from the Times, 2011, about
4 safeguards under scrutiny. We've seen some changes, but
5 again, the regulation always lags behind the industry.
6 So there's a stronger call for tighter regulations in this
7 area. In addition, the course that I've just mentioned,
8 this is -- it's about 2.6.

9 Now what I'd like to do for homes in Hopewell
10 Township and, ultimately, I think for addressing concerns
11 related to PennEast, and in the regulatory framework one
12 of the things that are -- that is advocated is the idea
13 of utilizing the precautionary principle. And really the
14 method here, the precautionary principle is that when a
15 particular course of action lacks overall scientific
16 environmental economic consensus in terms of the benefit
17 of a project, then the burden of proof of the uncertain
18 nature of this project must be weighed in favor of public
19 health, safety, and environmental needs, not on simple
20 assurances.

21 So utilizing the precautionary principle, I
22 think, is a very useful term here -- useful method in order
23 to kind of contest and to challenge what is being presented
24 about the benefits of this project because, ultimately,
25 the risks and the burdens are placed upon residents. Not

1 only along the line, right, but communities that are
2 contiguous with the line.

3 So I'm not gonna go too much in terms of
4 estimating the blast zone, but, generally, what I've put
5 together in terms of the context here is the impact of
6 the line in Hopewell Township, New Jersey based on the
7 numerous routes that have been put forward. And what I
8 was able to do was to construct it based on Hopewell tax
9 map regions, and then I also mapped it back to the 2010
10 U.S. Census block group data for the State of New Jersey.
11 These are estimates.

12 Looking at this in terms of the number of homes,
13 I was able to isolate this from the Hopewell tax data and
14 then, of course, we had to estimate household size, which
15 I have taken from the U.S. Census and, of course, use this
16 as a factor in terms of estimating people in the zone.

17 Roughly speaking, in terms of putting people
18 within the danger zone here, of the proposed line, the
19 burden of proof which will be -- come onto the residents
20 not only of Hopewell Township, but residents all the way
21 up to Dallas, Pennsylvania, generally we're looking at
22 one out of seven residents who have been put into harm's
23 way as a result of this transportation line.

24 What I would like to ask the Board is to strongly
25 consider putting together a resolution to notify FERC that

1 the PennEast Pipeline poses a significant risk to Township
2 residents and the surrounding environment and that more
3 due diligence is required, not only from the environmental
4 side, but also from safety and risk. Thank you.

5 MR. GOODELL: Okay. Thank you, Dr. Brogan.

6 Any members of the Board of Health have any
7 questions of Dr. Brogan? No.

8 Okay. Thank you very much. And do you have
9 a report that you'd like to submit to u?

10 DR. BROGAN: I'll submit the PowerPoints
11 (indiscernible).

12 MR. GOODELL: Good. Thank you very much.

13 DR. BROGAN: (Indiscernible).

14 MR. GOODELL: All right.

15 Ms. Dresdner, you have other witnesses?

16 MS. DRESDNER: Yes. My next witness is Dr.
17 Scott Donofrio, and we're having a little technical switch
18 here. So there might be a slight delay.

19 THE SECRETARY: Okay. I'm gonna take --
20 (Off the record. Back on the record.)

21 DR. DONOFRIO: Hello, all. I'm Dr. Scott --

22 MS. DRESDNER: I think we're ready to go.

23 DR. DONOFRIO: -- Donofrio.

24 MS. DRESDNER: Can you wait a second?

25 DR. DONOFRIO: Oh, I'm so sorry.

1 THE SECRETARY: (Indiscernible) sworn in.

2 DR. DONOFRIO: Right.

3 THE SECRETARY: If you could raise the -- raise
4 the microphone.

5 UNIDENTIFIED MALE SPEAKER: (Indiscernible).

6 D R. S C O T T D O N O F R I O, WITNESS, SWORN.

7 MR. GOODELL: Would you state your name and
8 spell it please for the record?

9 DR. DONOFRIO: Sure. I am Scott Donofrio,
10 S-c-o-t-t D-o-n-o-f-r-i-o.

11 MR. GOODELL: Okay. Thank you. Dr. Donofrio,
12 and the record will reflect that he has been sworn.

13 MS. DRESDNER: Thank you.

14 Dr. Donofrio, would you please describe your
15 educational and professional background?

16 DR. DONOFRIO: Sure. I graduated from Boston
17 University with a BA in psychology. I graduated from the
18 New York University School of Medicine with a medical
19 doctorate, and I have been trained in general psychiatry
20 and child and adolescent psychiatry through the residency
21 and fellowship respectfully at the University of New Mexico
22 School of Medicine.

23 MS. DRESDNER: Okay. Go ahead with your
24 comments, sir. Thank you.

25 DR. DONOFRIO: Thanks.

1 MR. GOODELL: Let me just ask you. You have
2 a practice in this region?

3 DR. DONOFRIO: I do. I live in Pennington and
4 I practice in Pennington. I am not speaking for the
5 practice. I am speaking both as a psychiatrist and as
6 my -- excuse me -- as a citizen and a person who lives
7 here.

8 MR. GOODELL: Okay.

9 DR. DONOFRIO: I'm at -- I'm at Comprehensive
10 Mental Health Services and that is here in town, near Route
11 31. I'm here to talk about how some of you, certainly
12 I have been feeling over the past few commenters'
13 presentations. One of them just recently said that one
14 out of seven people is in harm's way from this. I can't
15 speak to that obviously, but I can speak to the reaction.
16 And that's the point of my presentation, the reaction
17 that people have knowing they're being put in a very good
18 chance of being in harm's way. We're at least hearing
19 that.

20 It turns out fear doesn't require logic. So
21 what does fear do? What's the point of the fear that we
22 have that I will go on and talk to tell you about how it
23 will represent the threat of some danger itself to us,
24 which is ironic, given what it does. It prepares us for
25 threats to our bodily integrity. It does this though based

1 on the idea that we're going to need to act right now to
2 solve the threat.

3 If we have to maintain our high level of fear
4 for some time because an ongoing threat does not resolve,
5 then there are consequences. So these, for us
6 individuals, I'll talk about in a moment, but the upshot
7 for the community becomes decreased productivity,
8 increased suffering and disturbed relationships, within
9 and between families, among friends and community members,
10 and within markets and among businesses. As was
11 previously talked about, those folks in those blast zones
12 would be at some risk and would be prone to the related
13 fear.

14 But how do we lose the productivity and how do
15 we suffer, and what is it that puts us at other sorts of
16 risks, like getting our anxiety that responds to this --
17 to this threat treated and managed? As I've done with
18 folks, people have come into my office with concerns, and
19 anxiety, and fear related to this project for example.
20 And when I've had to do that, I've had to take care of
21 problems that they're already having, psychiatrically,
22 prior to the -- you know, digging anything anywhere near
23 here to put the pipe in.

24 So our immune system responds to fear by, in
25 some ways, not doing its job and we can get infections,

1 we can get cancer, whether or not they come from infections.
2 We can get asthma attacks or worsening asthma. We can
3 get an autoimmune disease if the immune system is affected
4 by stress from ongoing fear.

5 We also actually are more -- excuse me. We are
6 more prone to -- I don't know how to get that back. But
7 anyway, it was about diabetes. We're more prone to insulin
8 resistance and, thus, the development of diabetes from
9 the high levels of stress hormones.

10 How else -- oh, look at that, it's back. I did
11 it. Good for me.

12 So the nervous system, you know, can produce
13 seizures in some people. Actually, all people, if there's
14 enough of a stimulus. But most people don't get anywhere
15 near that. Those who do would be more prone to it because
16 we know stress is a factor that brings on seizures. So
17 too can the headaches people experience of different kinds,
18 and movement disorders get worse with stress as well, and
19 fear.

20 So I think the -- probably the most publicized
21 version is that atherosclerosis, and arrhythmias, and
22 other threats to the heart, and also threats to other organs
23 that depend on the heart, and the blood vessels and what
24 they do can be affected by heart attack and stroke in
25 particular, as well as -- well, no, I guess I said all

1 of that. Never mind.

2 So our gastrointestinal system can be affected
3 too. People who have an abdominal reaction of some kind,
4 some discomfort or pain may be found to have some of the
5 things on the screen, peptic ulcers, et cetera, that result
6 from this. And that's another, I think, fairly commonly
7 understood to ongoing stress and fear.

8 People will eat more, some of them, and when
9 they do from the stress eating, that can result from fear,
10 they will -- they will be at risk for obesity and the things
11 that happen -- happen to people's bodies, for example,
12 degenerative joint disease from that.

13 And then sort of fear affecting -- affecting
14 the experience that people have already had of something
15 that was fearsome brings on a return, emotionally, in
16 people's memories to a time when they were previously being
17 threatened, at a much higher rate than those who haven't
18 already had that experience. And those can include some
19 very uncomfortable flashbacks, as well as a number of other
20 anxiety manifestations.

21 And of course, I'm not talking about the actual
22 fear related to an actual pipeline explosion in town, but
23 more the knowledge that one can happen. So, in other
24 words, this is worry that will affect people's daily course
25 of activities in a way that's not very appropriate because

1 it's not productive, but it happens anyway, and that's
2 how we're wired for responding to chronic fear.

3 Concentration and memory problems also are
4 primary responses to fear because we're focused on what
5 to do to get safe. But if there's really nothing to do
6 to get safe then, after a while that's not too helpful.
7 So depression is something that some people are prone
8 to, a lot of people are prone to. And that would be more
9 likely if they're chronically stressed. That's -- there's
10 -- probably the most data about that -- about ways to get
11 depression, except for family history.

12 Mania is less common, but sometimes associated
13 with folks who've had depression, or could, and that is
14 another thing than can be brought out by fear and stress.
15 And people can get actually psychotic and disorganized
16 in their thinking and their behavior from stress and fear.

17 Other mental illnesses are also susceptible,
18 as are many, as we heard before, right? General medical
19 illnesses to fear response as worsening them, or bringing
20 them on. Inter-relationally, we will not treat each other
21 as well. We won't hear each other as well when we're
22 afraid. We will use more maladaptive means to cope with
23 our situation because we, being fearful, are more prone
24 to need to do something that helps us feel safe and
25 comfortable now. But it might not really be such a great

1 strategy for the long term, which of course it will be,
2 if there's a pipeline installed.

3 Fear is prompted by news. And an example is
4 the news, those of you heard tonight, like me, that didn't
5 know some of the things that were presented, but also,
6 of course, graphic images on television, et cetera. And
7 basically, we are -- if exposed to a constant threat, we
8 have all these changes I talked about in our bodies and
9 they are not -- they are not able to resolve what they
10 need to. And so we're in a fair amount of bigger trouble
11 than we otherwise would be.

12 A short note on the effects of climate change.
13 People, I think, are rightfully increasingly fearful of
14 what that means. And when we take hydrocarbons out of
15 the earth for any reason, we increase the -- well, frankly,
16 we -- it's -- and I'm not speaking to, by the way, the
17 voracity of this because I'm not an expert in this area.
18 But my understanding, and many people's understanding,
19 hence our fear, is that the -- in the -- any hydrocarbons
20 coming out of the earth hasten a process of greenhouse
21 gas emission, causing a warming trend that will cause many
22 different problems that are very serious, among them
23 hurricanes, tornados. There's an air quality issue
24 because of the increased VOCs and the ozone that results.

25 So we can have this, which is a lovely picture

1 of how maybe we won't like our community to be and then
2 suddenly this. And that's why the fear. Thank you.

3 MR. GOODELL: Thank you, Doctor. And just so
4 that I -- I've got it straight. Based on your testimony,
5 is it fair to say that your conclusion is that as a result
6 of your training and experience, as a result of your own
7 experience with your practice and treating patients, that
8 you would conclude that if the pipeline continues to become
9 a reality, there would an -- it would lead to an increase
10 in mental illness among local residents?

11 DR. DONOFRIO: It would depend on the degree
12 of fear that people have about it. And I cannot speak
13 to an actual study. I don't know of one that's been
14 conducted in the local area as to how many people are how
15 fearful of that. However, I did present some evidence
16 that I've seen the concerns manifesting as part of the
17 stress of the people I'm already, you know, seeing that
18 in before it goes in.

19 And we were given reason to believe that there's
20 a lot of danger potentially associated with this in a number
21 of different ways. So assuming people are aware of that,
22 it is predictable that they would be fearful and then have
23 these responses I've discussed.

24 MR. GOODELL: Okay. Thank you.

25 Any other members of the Board have questions?

1 MR. CHAIRMAN: Thank you, Doctor. Harvey
2 Lester, Chair. Is it fair to say that your testimony is
3 based upon a reasonable degree of psychiatric certainty?

4 DR. DONOFRIO: That fear causes these
5 responses?

6 MR. CHAIRMAN: Your testimony in total. In
7 other words, this is based upon your view as a practitioner
8 of psychiatry, and you need a basis for your testimony
9 and I would suspect it's based on a reasonable degree of
10 psychiatric certainty based upon your training and
11 experience.

12 DR. DONOFRIO: Yes, it is.

13 MR. CHAIRMAN: Thank you.

14 DR. DONOFRIO: You're welcome.

15 MR. GOODELL: Okay. Thank you.

16 You have other witnesses?

17 MS. DRESDNER: Yes. Dr. Lisa Dobruskin

18 D R. L I S A D O B R U S K I N, WITNESS, SWORN.

19 MR. GOODELL: Could you state your name and
20 spell it please for the record?

21 DR. DOBRUSKIN: My name is Lisa Dobruskin, the
22 last name is D-o-b-r-u-s-k-i-n.

23 MR. GOODELL: Okay. Dr. Dobruskin, thank you.

24 The record will reflect that Dr. Dobruskin has
25 been sworn. You can fix that so that it's comfortable

1 for you.

2 DR. DOBRUSKIN: Is this good?

3 MR. GOODELL: Yeah.

4 MS. DRESDNER: Okay.

5 MR. GOODELL: Just --

6 MS. DRESDNER: Doctor, would you briefly go
7 through your medical background for us? Thank you.

8 DR. DOBRUSKIN: I received a Bachelor's of
9 Science from Cornell University in biology, with a
10 concentration in neurobiology and behavior. I then went
11 on to receive my medical degree from New York Medical
12 College. Subsequent to that, I did a residency in general
13 surgery at Long Island Jewish Medical Center in New York.
14 And then I did an additional fellowship training in
15 advanced laparoscopy and metabolic and bariatric surgery
16 at New York Medical College.

17 I'm speaking today as a medical doctor and also
18 as a citizen of -- a resident of Pennington, and as somebody
19 who lives one house from the field where the pipeline is
20 scheduled to end.

21 MR. GOODELL: Okay. Thank you.

22 DR. DOBRUSKIN: So briefly, what I wanna talk
23 about today is just to follow up a little bit on what's
24 been mentioned already about the medical and health effects
25 of some of these compounds that may be released from the

1 pipeline.

2 Studies have shown that a lot of these effects
3 are potentially very harmful to the human body. For
4 example, radon, which we've already heard about is a
5 radioactive gas. It's odorless and colorless, so not
6 really detectable by the layperson. We heard about the
7 byproducts of radon, polonium and lead that have a very
8 significant half-life.

9 And the problem with the polonium and the lead
10 that gets inhaled into the lungs as radon is that it remains
11 in the lungs, and it further decays and causes cancer.
12 Studies show that radon is the leading cause of lung cancer
13 in nonsmokers, and the second leading cause of lung cancer
14 in smokers. The EPA has estimated that there are 21,000
15 -- approximately 21,000 deaths related from lung cancer
16 every year as a result of radon.

17 Volatile organic compounds, or VOCs, which we've
18 heard about as well cause a lot of very serious effects.
19 Cancer is one of them. Benzene, which has already been
20 mentioned, is classified by the EPA as a human carcinogen
21 for all routes of exposure. So it doesn't matter how
22 you're exposed to benzene, when you're exposed to it, it
23 increases your risk of developing cancer. It increases
24 the risk of childhood leukemia. It increases the risk
25 of aplastic anemia and other cancers. And there is no

1 known safe level of benzene. So any exposure increases
2 your risk of toxicity.

3 We know that VOCs affect the respiratory tract.
4 Even short term exposure to VOCs causes asthma like
5 symptoms in people, things like coughing, wheezing, and
6 shortness of breath. Prolonged exposure increases the
7 risk of asthma and pulmonary infections like bronchitis.

8 We know that VOCs increase the risk of
9 cardiovascular disease so that elevated levels of VOCs
10 in the blood increase the odds of developing cardiovascular
11 disease. And that's been shown in studies.

12 VOCs also affect the immune system. So studies
13 have shown that there's an increased risk of allergies
14 that are associated with the VOCs. There's an increased
15 risk of allergic type diseases like eczema and an increased
16 develop of food allergies, like allergies to milk products
17 and to eggs.

18 And then there's a risk of complications for
19 pregnancy and also a risk to fetal development. So many
20 studies document the fact that VOCs increase the risk of
21 birth defects, low birth rate, and preterm birth. And
22 what that really means is that there is a disruption to
23 fetal development.

24 And so we know, from many studies, that VOCs
25 affect many different systems that increase your risk of

1 developing many different health problems throughout life.
2 But because of this disruption to fetal development, these
3 fetuses who have born and become humans, become grown
4 people, can develop all these problems throughout their
5 lifetime. So it really affects babies that are born that
6 are exposed to this through maternal exposure.

7 The real problem though, is that a lot of these
8 studies show that a lot of these effects occur at levels
9 below what's set as safe by the EPA. I think part of the
10 problem, and a lot of studies, a lot of the more recent
11 studies are showing that the issue is that the way that
12 the levels are currently measured may not really accurately
13 reflect the risk because, as has been mentioned, it's not
14 necessarily the level in time or an average level. It's
15 peak levels. It's how frequent exposure occurs.

16 We know that different organs, organ systems,
17 different cells, different receptors on cells are affected
18 differently by these toxins. We know that there's effect
19 that's determined by duration of intensity. So if you
20 have a brief, but significant exposure to these toxins,
21 you may have more toxicity from these toxins. Studies
22 show that, you know, the effect may be immediate or it
23 may occur at some point further down the line. And so
24 this is all very difficult to measure.

25 The other thing is that the effect, the toxicity

1 may not be linear. It may be exponential. So a single
2 effect may cause toxicity. It may cause disease. An
3 exposure a second time may not double the risk. It may
4 triple or quadruple the risk. And when these levels are
5 measured, episodic levels are not measured. They're not
6 documented. And so we really don't know the effect.

7 Another issue is the distance to the agent.
8 A lot of the more recent studies show that people who live
9 closer to pipelines and to pipeline facilities are more
10 likely to experience symptoms than those who live further
11 away. So to me, as somebody who lives very close to where
12 this pipeline is proposed, that's a particular concern.

13 We also know that children, pregnant women, and
14 the elderly are more susceptible and are more likely to
15 be affected and are more likely to have more series effects.

16 And so after studying the data and reviewing
17 the scientific literature regarding the health effects
18 of the pipeline, I am extremely concerned about the safety
19 and well-being of my family and of the community as a whole.

20 Thank you.

21 MR. GOODELL: All right. Thank you, Doctor.

22 Any members of the Board of Health have any
23 questions? No? Okay.

24 Thank you very much.

25 DR. DOBRUSKIN: Thanks.

1 MS. DRESDNER: Thank you. That's my last
2 witness. I have curriculum vitae from three of the
3 witnesses that have testified that I'd like to enter into
4 the record and also I believe the PowerPoints which will
5 be submitted for the others have their CVs attached to
6 them.

7 MR. GOODELL: Okay.

8 MS. DRESDNER: So I have a CV for Dr. Dobruskin,
9 Dr. Brogan, and Dr. Donofrio that I'd like to hand in for
10 the record. I haven't marked them. And then I'd just
11 like to make a brief summary statement.

12 MR. GOODELL: Okay. Go ahead.

13 MS. DRESDNER: With some slides. Thank you.

14 MR. GOODELL: All right. And you're gonna be
15 making a statement yourself?

16 MS. DRESDNER: Yes. On behalf of Hopewell
17 Township Citizens against PennEast Pipeline, my name is
18 Katherine Dresdner, I'm a resident --

19 MR. GOODELL: If you're gonna offer testimony,
20 I'll swear you in.

21 MS. DRESDNER: Okay. Sorry.

22 MR. GOODELL: Even though you're the lawyer.

23 K A T H E R I N E D R E S D N E R, WITNESS, SWORN.

24 MR. GOODELL: Okay. Could you state your name
25 and spell it please?

1 MS. DRESDNER: Katherine Dresdner,
2 D-r-e-s-d-n-e-r.

3 MR. GOODELL: All right.

4 MS. DRESDNER: I'm a resident of Hopewell.

5 MR. GOODELL: All right.

6 MS. DRESDNER: And I am attorney for Hopewell
7 Township Citizens Against PennEast Pipeline. We were the
8 applicant for the hearing, and I'd like to thank the Board
9 for giving us this extremely important opportunity to
10 present to the public and to the Board these concerns.

11 I have just a very short summary presentation.
12 This is the -- these are the icons and the names of the
13 companies that make up PennEast. PennEast is a
14 consortium. It's essentially a shell corporation.
15 PennEast itself has no record because it was formed just
16 for the purpose of this pipeline. You have to look beyond
17 to the actual companies that are the shareholders and the
18 primary company to look at is UGI Energy Services. They
19 are the project manager and they will -- if the proposed
20 pipeline goes forward, they would operate, construct, and
21 maintain the pipeline.

22 The other major involved in the gas industry,
23 Spectra Energy, PSE&G, Elizabethtown Gas, South Jersey
24 Industries, New Jersey Resources. PSE&G delivers gas,
25 but these other companies are actually more involved in

1 transmission. Spectra Energy has operating pipelines all
2 through New England, going up to Canada. Okay.

3 We -- this is just a short documented piece of
4 information about what's happened. PSE&G was involved
5 in a fatal gas explosion nearby, in Ewing. And they
6 received the largest fine in the state history from the
7 Bureau of Public Utilities, a million-dollar fine.

8 Spectra, who is one of the PennEast partners,
9 has been cited by the Federal Government for multiple
10 safety violations. A division of Spectra Energies called
11 Texas Eastern Transmission, they've been cited 14 times
12 for natural gas safety violations since 2006, by PHMSA,
13 and have been fined more than \$134,000 in fines.

14 Williams -- Williams, which is nearby in
15 Princeton, and we had some photographs of that situation,
16 they have not a very good record either. But they are
17 one of the largest national pipeline companies and they
18 have been fined for failure to conduct inspections and
19 they've had explosions as well. New Jersey Gas had an
20 explosion and was fined in 2014.

21 In Allentown, Pennsylvania in 2013, UGI was
22 found responsible for a fatal gas explosion and paid
23 half-a-million-dollar fine.

24 UGI's record from -- through 2014 is listed here.
25 1976, 14 dead, 14 injured, four buildings damaged. That

1 was in Allentown. Another explosion in Allentown in 1990,
2 one dead, nine injured, two buildings involved. 1994,
3 again in Allentown, one dead, 66 people injured, a
4 5-million-dollar building damaged. That's the
5 half-a-million-dollar fine.

6 In 2006, in East Lampeter, one home was
7 destroyed. 2011, again in Allentown, five dead, three
8 injured, eight homes, half-a-million-dollar fine. 2002,
9 this is a very distressing situation. UGI was notified
10 of a gas leak and they let it go and did nothing about
11 it for a month. And it was re-reported and very
12 fortunately, an explosion did not occur. But they failed
13 to address the report of the gas leak, and they got a
14 million-dollar fine for that. And what concerns me about
15 that is they essentially covered up a report of a gas leak.
16 And I find that unconscionable.

17 In 2012, there was a ignition of gas in Hazleton.
18 2012, in Millersville, a driller hit a line, a house was
19 destroyed, and then in 2014, in Dunmore, one dead and two
20 homes damaged.

21 What we have seen in looking at a lot of the
22 safety records is that sometimes the company is at fault,
23 as in these situations here with UGI. And remember, that's
24 -- this is the company that's gonna run this pipeline.

25 In other cases, third party contractors are

1 involved through improper excavation practices. This is
2 the UGI report card. It shows that with respect to gas
3 operations, it needs -- significant improvement is
4 necessary. And materials management, significant
5 improvement is necessary.

6 So -- and then this is also very of -- of great
7 concern. This is from PHMSA. This shows all pipeline
8 incidents from 1995 through 2014. And you can see that,
9 I don't know why, but in 2002, there was a sudden jump
10 from under 400 incidents per year to upwards of 700
11 incidents per year and this has continued. So for 2014,
12 there were just over 700 incidents, nationally, in the
13 year of 2014.

14 So that's a lot of incidents. We're not just
15 talking about an occasional random situation. There is
16 a trend of risks and safety issues here. Thank you.

17 MR. GOODELL: Okay.

18 Any members of the Board have any questions for
19 Ms. Dresdner?

20 All right. Thank you very much. Does that end
21 your presentation?

22 MS. DRESDNER: Yes. Thank you.

23 MR. GOODELL: Okay. Mr. Pogorzelski, can you
24 briefly come up.

25 P A U L P O G O R Z E L S K I, WITNESS, SWORN.

1 MR. GOODELL: State your name and spell it
2 please?

3 MR. POGORZELSKI: Paul Pogorzelski, P-a-u-l,
4 E middle initial, P-o-g-o-r-z-e-l-s-k-i.

5 MR. GOODELL: Mr. Pogorzelski, you are the
6 Township administrator and Township engineer for Hopewell
7 Township?

8 MR. POGORZELSKI: Yes.

9 MR. GOODELL: And in that capacity, did you have
10 occasion to retain a blasting expert for -- on behalf of
11 the Township?

12 MR. POGORZELSKI: Yes.

13 MR. GOODELL: That was Frank Chiappetta?

14 MR. POGORZELSKI: Yes.

15 MR. GOODELL: C-h-i-a-p-p-e-t-t-a?

16 MR. POGORZELSKI: Yes.

17 MR. GOODELL: And who is Mr. Chiappetta?

18 MR. POGORZELSKI: He's a blasting analysis
19 engineer with Blasting Analysis International.

20 MR. GOODELL: Did Mr. Chiappetta prepare a
21 report for you?

22 MR. POGORZELSKI: He did, dated July 24th, 2015.

23 MR. GOODELL: All right. And at this time,
24 would you like to submit that report into evidence for
25 the committee?

1 MR. POGORZELSKI: I would.

2 MR. GOODELL: All right. And so we will allow
3 that report to go into evidence and the Board can consider
4 it as well. Okay.

5 MR. POGORZELSKI: Thank you.

6 MR. GOODELL: Thank you.

7 Okay. At this time, we've concluded the
8 presentation from the experts, and we have a list of five
9 people who've indicated that they wanted to present
10 testimony. First is Terese Buchanan. Is Ms. Buchanan
11 here? Here? Okay.

12 You go up here.

13 T E R E S E B U C H A N A N, WITNESS, SWORN.

14 MR. GOODELL: Ms. Buchanan, can you state your
15 name and spell it for the record please?

16 MS. BUCHANAN: Yes. Terese, T-e-r-e-s-e,
17 Buchanan, B-u-c-h-a-n-a-n.

18 MR. GOODELL: Thank you. And I understand that
19 you have some information, some facts that you'd like the
20 Board to consider?

21 MS. BUCHANAN: Yes. I'm not a resident of
22 Hopewell Township, but I am a resident along the pipeline
23 route. I live on a farm because. I have chemical and
24 electrical sensitivities, I get very ill from
25 petrochemicals, pesticides, anything that's not natural.

1 And I'm actually hoping to speak for myself and other
2 people who have chemical sensitivities.

3 The pipeline -- on our farm, we grow our own
4 food so that I can have a safe food source. My husband
5 hunts, so I can have protein -- and fishes, so we can have
6 a protein source that doesn't have antibiotics,
7 pesticides, hormones in it, so that I can eat healthy food
8 because I get very ill from all those things. And I'm
9 not -- I'm not the only person who's like this. And right
10 now, the pipeline is scheduled to wipe out all of our fruit
11 trees. You know, it's a big section of our farm, and a
12 lot of the food that I would be canning and freezing for
13 our winter food.

14 Also, it would take out half of our happy hunting
15 -- my husband's happy hunting ground, half of the wood
16 lot that we use to heat our home. And one of the reasons
17 I wanted to speak to the Board is that I'm sure -- I know
18 there are other people like myself, and when you have
19 chemical sensitivities, the reactions can be anything from
20 just simple things like headache, and nausea, and not being
21 able to think straight, being confused, being dizzy, losing
22 control of your limbs falling, but it can be
23 life-threatening.

24 I know two people who exposure to natural gas,
25 petrochemicals can be life threatening. In my case, I

1 cannot go in people's houses that have natural gas. For
2 the natural gas pipeline on my property that I know will
3 leak, I won't be able to live there. I cannot -- just
4 the construction process itself, with all of the machinery
5 burning, you know, the fossil fuels, the petrochemicals
6 that will be released, that'll be burned, I will be very
7 ill. We won't really be able to go live somewhere else.
8 The pipeline would devalue our property to the point
9 where we could not sell it and then replace it with
10 somewhere else where I could go to live safely.

11 And so I'm -- would like the Board just to be
12 aware that there are people like myself and I'm sure there
13 are some in your community, even if it's not on their
14 property, it will affect their health very, very
15 negatively, and so that's why my testimony. And I gave
16 you a lot more detail in my -- in my written --

17 MR. GOODELL: Sure.

18 MS. BUCHANAN: -- comments.

19 MR. GOODELL: Okay. And just for the record,
20 where are you a resident?

21 MS. BUCHANAN: I'm in Delaware Township, on
22 Lower Creek Road, in -- Stockton mailing address.

23 MR. GOODELL: Okay. Thank you. And I do have
24 a letter here dated July 28th, 2015 signed by you. This
25 is the letter that you would like the Board to consider?

1 MS. BUCHANAN: Yes.

2 MR. GOODELL: Okay. We will enter that into
3 the record.

4 MS. BUCHANAN: Thank you.

5 MR. GOODELL: Thank you very much.

6 Next is Sari Decesare. Is that how you
7 pronounce that?

8 MS. DECESARE: (Indiscernible).

9 MR. GOODELL: Okay.

10 S A R I D E C E S A R E, RESIDENT, SWORN.

11 MR. GOODELL: State your name and spell it
12 please?

13 MS. DECESARE: It is Sari Decesare. My first
14 name is S-a-r-i. My last name, D-e-c-e-s-a-r-e.

15 Just a few comments to add to this. I'm a
16 layperson, a citizen. I've been following this PennEast
17 story from the first time I --

18 MR. GOODELL: Tell us where you live.

19 MS. DECESARE: Oh, yes. 26 Shara Lane.

20 MR. GOODELL: Okay. In Hopewell Township?

21 MS. DECESARE: That is correct.

22 MR. GOODELL: Okay.

23 MS. DECESARE: So I've been following this since
24 I had seen my first sign, I guess back in September. And,
25 you know, following with concern as a citizen. And just

1 for the record, the most recent change in the pipeline
2 route, which occurred on Thursday does take that pipeline
3 onto the -- onto the fringe of my property. So I'm just
4 making you aware.

5 So, you know, one of the things that I wanted
6 to raise in this to the Board here -- and thank you for
7 the opportunity to do so -- is -- I need my glasses because
8 I can't see without them.

9 Dr. Trachtenberg, I believe it was, who had spoke
10 about the gas release. And I just wanted to raise, you
11 know, a letter that had shown up in my mailbox on July
12 20th, from Williams Transco. Starting with a very friendly
13 opening, "Dear Neighbor," that they wanted to let me know
14 that they were gonna do a gas release.

15 Basically they said beginning on July 21st,
16 possibly beginning as early as 7 a.m., Transco Gas Pipeline
17 Company will be conducting a controlled venting of natural
18 gas at its above ground facilities, located at the location
19 referenced above. It's the one on Blackwell Road.

20 And it said once begun, the venting will be
21 intermittent and continue through the evening of July 27th,
22 2015, just virtually a week-long like that. During that
23 time you may notice noise coming from the direction of
24 Transco's facility, and you may smell the odor of natural
25 gas. Please be advised that Transco is controlling and

1 supervising the planned release of natural gas in the area
2 of this -- of its facility on these dates, and it should
3 not be a cause for alarm.

4 Well, I think that's very easy for them to say.
5 This -- the odor coming through, you know, that I could
6 smell on my property was -- you know, it made me nauseated.
7 I mean, it was a very uncomfortable, unpleasant thing.
8 The idea of yet another pipeline coming into this area
9 and other opportunities for these types of unnatural
10 substances to be released into our
11 -- you know, to impact our quality of life is something
12 that I find just not acceptable.

13 And I would hope that the Board of Health would
14 share that concern, as well for the citizens and the
15 well-being of our citizens. I believe that was one of
16 the things that was mentioned in the first ten principles
17 when we started this meeting.

18 Another piece of health related information that
19 concerns me too is, you know, we moved to the Township
20 ten years ago. We moved onto a property, like many
21 properties in the Township that is dependent on well water,
22 and our own sewer. You know, we have septic. So we supply
23 our own sewer and our own water.

24 When I did move into the -- into the Township,
25 we were told that, you know, it was a good idea to monitor

1 our water system to make sure that we were getting our
2 water tested regularly because this was an arsenic hot
3 zone. And we just heard Professor Onstott, you know, make
4 testimony to that effect. So now at least I know that
5 the people who are giving me this information are probably
6 giving me very good information.

7 We continue to get our water tested on a fairly
8 regular basis. Now I believe he said the threshold that
9 was acceptable by the state was the number 5. Again, I
10 don't -- I'm a layperson. I don't know the technical
11 terms. And I know that I have always been told that we
12 need to stay under that level of 5 and we're okay, we have
13 safe water. And our recent test, it's generally -- it's
14 on the high side of normal. It's under 5, but it's like
15 4.5.

16 So the idea of, you know, releasing the arsenic
17 into our -- potentially into our water supply, and it sounds
18 like at a -- if you, you know, listen to what Dr. Onstott
19 said, at a very exponential level. I think it's gonna
20 threaten, you know, my own personal water supply and the
21 supply of my neighbors who are dependent on this as well.
22 It's a worry and concern that we won't have potable water,
23 and what are we gonna do about that, and who's gonna take
24 care of that? So that's an issue for me, as well.

25 You know, radon, the release of radon, we're

1 also in a radon hot zone. So those kinds of potential
2 to increase radon is also something that worries me too.

3 I just, you know, would want that -- you -- one
4 of the statements, I think, in the beginning was -- again,
5 glasses. Okay. To ensure the safety of the residents
6 of Hopewell Township. And everything about this pipeline
7 is really introducing known carcinogens into our everyday
8 lifestyle, and I'm not okay with that.

9 These are things that cause me worry and, you
10 know, well anxiety. I'm not gonna go there. But -- so
11 I just wanted to raise that as well. One other piece too
12 -- I know Katherine gave a wonderful list of, you know,
13 just the horrific types of records that these companies
14 had. My husband had shared with me something a little
15 more recent on Spectra Energy. I'm just gonna go with
16 the, you know, with the headline here.

17 "Canada's energy regulator orders Spectra
18 Energy to clean up practices." This is an article dated
19 July 14th of this month. "Canada's national energy
20 regulator has ordered Spectra Energy Corporation to
21 correct a series of management system failures following
22 more than two dozen safety and security incidents at its
23 Canadian plants and facilities since 2014."

24 So, you know, I don't have a lot of faith in
25 these companies to do this job, do this job well, do this

1 job right. I would like to, you know, see that our Township
2 continue to do everything they can to protect the
3 well-being of the citizens. So thank you for the
4 opportunity to speak with you.

5 MR. GOODELL: Thank you very much.

6 Mr. Pisauro, I assume you already testified?

7 Okay.

8 Kim Robinson?

9 K I M R O B I N S O N, RESIDENT, SWORN.

10 MR. GOODELL: Thank you. Ms. Robinson, please
11 state your name and spell it for the record?

12 MS. ROBINSON: Kim Robinson, R-o-b-i-n-s-o-n.

13 I live at 1568 Harbourton-Rocktown Road, in Hopewell
14 Township.

15 MR. GOODELL: Okay. Thank you.

16 MS. ROBINSON: I just wanna touch on three
17 topics, but due to time, I will give the Board, for the
18 record, copies of three comments that I have submitted
19 that has more detail in them.

20 The first topic is safety. PennEast plans to
21 build a different pipeline for different people. It has
22 assigned citizens to classes, based on where they live,
23 and plans to build a thicker and safer pipe for some
24 citizens, and a thinner, less safer pipe for others.
25 Residents of Hopewell Township are in the latter category.

1 PennEast has stated that they would build a pipe
2 that is 50 percent thicker for a Class 4 child than they
3 would for my child, who they consider a Class 1, but are
4 graciously bumping up to a Class 2. No, my child's life
5 is worth just as much as the life of a child living in
6 a Class 4 area. She is not a number, and she is not an
7 acceptable casualty. We cannot allow such discrimination
8 against our citizens when it comes to safety.

9 My next topic is stress. PennEast has caused
10 many of our residents stress for almost a year now and
11 the project hasn't even started. It will just get worse,
12 especially for those who've had past experiences with gas
13 leaks and explosions.

14 When I was six, the church next to my aunt and
15 uncle's house exploded, taking part of their house with
16 it. The ceiling collapsed onto my Aunt Anna, and their
17 house sustained major damage. When I was college age,
18 my Uncle Mike woke up one morning and smelled gas. He
19 called the number and got the answering machine twice.
20 The safety measures did not work. He was getting ready
21 to leave when the apartment exploded.

22 He managed to get outside, but he was burning
23 with even his head on fire. The apartment building was
24 gone. When he was released from the hospital, he came
25 to live with us, but he didn't feel safe. Anytime a dish

1 banged, anytime a glass dropped, he would start shaking,
2 and he would close his eyes and cover his head with his
3 arms. He never returned to the same person I had
4 previously known as my Uncle Mike.

5 Stress and the prolonged stress many of our
6 residents would have living next to, or driving over what
7 is essentially a bomb, could have a tremendous effect on
8 their health. Chronic stress has been linked to a myriad
9 of health problems, which we've heard, including but not
10 limited to depression, heart arrhythmias, high blood
11 pressure, and even a shorter life span. We cannot let
12 PennEast impose such stress and health issues on our
13 citizens.

14 And my last subject is asthma. My daughter has
15 been hospitalized for asthma. 8.3 percent of adults and
16 7.9 percent of children in Mercer County have asthma.
17 The NJDEP notes an association between asthma and ozone
18 levels. The EPA has stated that green house gases,
19 including methane, threaten the public health and can lead
20 to increases in ground level ozone pollution linked to
21 asthma and other respirator illnesses.

22 According to the EPA, of the methane released
23 by the natural gas industry, 37 percent comes from
24 transmission and storage. The construction and operation
25 of the PennEast Pipeline will increase methane in the

1 atmosphere, increasing the amount of ozone and worsening
2 the medical conditions of all Hopewell Township residents
3 with respiratory illnesses. This pipeline is a threat
4 to our safety, our health, and our well-being. Thank you.

5 MR. GOODELL: Thank you, Ms. Robinson. And you
6 have a document you'd like to present to us? All right.
7 Thank you.

8 Carrie Dyckman?

9 C A R R I E D Y C K M A N, RESIDENT, SWORN.

10 MS. DYCKMAN: I am a resident of Lawrence
11 Township.

12 MR. GOODELL: Okay. Spell your name please?

13 MS. DYCKMAN: Dyckman, D-y-c-k-m-a-n.

14 MR. GOODELL: And is Carrie, C-a-r-r-i-e?

15 MS. DYCKMAN: Yes.

16 MR. GOODELL: All right.

17 MS. DYCKMAN: And I just wanna relay one
18 incident that happened to me. I live below the transfer
19 station, between Carter Road.

20 MR. GOODELL: Can you give us your address?

21 MS. DYCKMAN: 233 Carter Road. It's also known
22 as Pole (phonetic) Road.

23 MR. GOODELL: Okay.

24 MS. DYCKMAN: And I'm just downwind of the
25 transfer station, and I think -- I believe I was a victim

1 of one of the uncontrolled -- or release of methane gas
2 from the pipeline. I was in my resident one evening with
3 my family when we smelled a strong odor of gas. And I
4 called 911.

5 It was probably late
6 -- October, maybe November. And I smelled strong gas,
7 strong enough that I was frightened for my -- safety of
8 my family. And we called 911 and they suggested we
9 evacuate. And we did so to -- and left and I think our
10 H and H (phonetic) guys came because they thought maybe
11 it was propane. That was my initial thought, that it was
12 propane. And when they got there -- it was strong enough
13 in my house that it was in my covered porch. It was inside
14 the house. And it was alarming enough that I left.

15 And when we later returned, there was no sign
16 of it. The propane gas guy found nothing. And we thought
17 maybe it was coming from this transfer station, which we
18 called the next day and, sure enough, there was a light
19 snow storm. So the conditions were right for the, you
20 know, atmosphere to sort of be heavier, we were downwind
21 and Romesco (phonetic) said that they had released gas
22 that evening, and I was really not aware of it. It must
23 have been something that they did to release whatever.

24 So it was just something very alarming to me
25 as a resident to feel that alarmed and concerned. And

1 my son has unexplained nose bleeds. I don't know if that's
2 respiratory or not, but I just feel like I wanted to
3 register that as someone who is living near a pipeline,
4 right along side of it, and below a transfer station, I
5 am very alarmed what's happening in our area, not only
6 in Hopewell, but in Lawrence as well.

7 MR. GOODELL: Okay. Thank you very much.

8 Okay. That concludes the list of people. Is
9 there anybody else that did not get a chance to sign up?

10 MS. CRONHEIM: Yes, I'd like to speak.

11 MR. GOODELL: Okay.

12 MS. CRONHEIM: You'll have to give me just a
13 moment to just get out a PowerPoint (indiscernible). Come
14 on. Everybody else's PowerPoint works, except mine? All
15 right. Well, I'm gonna have to just do without.

16 MR. GOODELL: (Indiscernible).

17 MS. CRONHEIM: No, that's okay.

18 P A T T Y C R O N H E I M, RESIDENT, SWORN.

19 MR. GOODELL: Okay. Thank you. Please state
20 your name and spell it for the record?

21 MS. CRONHEIM: My name is Patty Cronheim,
22 P-a-t-t-y, Cronheim, C-r-o-n-h-e-i-m.

23 And maybe just click on the second one.

24 First of all, I wanna thank the Board of Health
25 for having this hearing, and I wanna thank -- and giving

1 us the opportunity to express our concerns. I also wanna
2 thank all the people who came and testified today about
3 the PennEast Pipeline and about the cumulative impacts
4 that the Transco compressor station would have on the
5 Township as well.

6 I'm Patty Cronheim and I'm with the Hopewell
7 Township Citizens Against the PennEast Pipeline. And I
8 had a bunch of remarks prepared for tonight, but instead,
9 I recently received a letter sent to me by Angele Switzler
10 from Delaware Township that tells her story in her words,
11 and I'd like to read that.

12 "On May 15th, I woke up with what I assumed was
13 a migraine. These had been happening regularly since I
14 first became anxious at the threat of having our
15 four-generation family home and land destroyed by the
16 PennEast Pipeline. PennEast was ramping up the pressure
17 on landowners to allow surveys. This pressure was very
18 stressful. I was called daily by the survey company and
19 taunted that they had very important information that I
20 needed to hear.

21 "Even more upsetting, a land agent showed me
22 a map of the route through my property, with my house
23 missing. He stated to me that unless I let them survey
24 my property, they would use a Google Earth map that did
25 not show my house. There is no Google Earth map without

1 my house on it because my house predates Google Earth.

2 "My headache, it turns out, was not a migraine,
3 but a brain hemorrhage. I was paralyzed on the left half
4 of my body. I spent almost two weeks in intensive care.

5 It was doubtful whether I would ever be able to walk or
6 live independently again. I then spent another six weeks
7 in rehab. On the very day I finally returned home, I found
8 surveyors on my property. The stress is relentless.

9 "This is a very hard account for me to write.

10 I firmly believe that my health crisis was a direct result
11 of the stress of having my home and family threatened.

12 Sleep was almost impossible. It was small solace to hear
13 that the pipeline was not likely to explode. In fact,
14 they do rupture and blow up. I do not have faith in a
15 company that uses scare tactics to intimidate homeowners.

16 "Just as upsetting, PennEast has labeled us as
17 irrational and ignorant. I once overheard PennEast reps
18 laughing and mocking landowners. Their attitude was we
19 stand to make millions, your land's in the way. Haven't
20 they ever been filled with the pride of ownership, made
21 the mortgage payments, paid the taxes, and built the
22 foundation for a life?

23 "If the PennEast proceeds" -- "If PennEast
24 proceeds, we will despair over our lost daylilies, grown
25 over generations and the chainsawed trees, knowing that

1 in our lifetime, we will not see new trees reach a similar
2 size. I have had to train myself to sit, to relearn to
3 walk, and I still do not have proper balance. I now have
4 a 30 percent chance of having a second incident in the
5 next two years, one that, in all likelihood, could kill
6 me. This is the true cost of the pipeline for our family."

7 As Angele's story shows, our health and our land
8 are intimately connected. We are not separate from our
9 environment. Our well-being is rooted in our sense of
10 place, our communities and our love of home. When our
11 homes are threatened, as is the case with the proposed
12 PennEast Pipeline, our health suffers. We suffer.

13 We are asking the Hopewell Board of Health to
14 set an example and say no to PennEast. Let's write a
15 resolution sending the strong message that the proposed
16 PennEast Pipeline poses an unreasonable risk to the health
17 and safety of Hopewell. By doing so, we say yes to the
18 health and well-being of us all. Thank you.

19 MR. GOODELL: Thank you, Ms. Cronheim. And did
20 you have a letter you wanted to submit?

21 MS. CRONHEIM: Yes. (Indiscernible). This is
22 the letter from the transcript (indiscernible). And this
23 is (indiscernible).

24 MR. GOODELL: Okay. All right. So we have
25 some other documents. You submitted a July 20, 2015 letter

1 from Williams' Pipeline, your own remarks, and a document
2 entitled "Human Health Impacts of the Proposed PennEast
3 Pipeline," submitted by Lorraine Crown (phonetic) on
4 behalf of the Concerned Citizens Against the Pipeline.

5 Okay. That appears to be the end of the
6 testimony. And so now I turn to members of the Board.
7 Is it your pleasure to adopt a resolution tonight based
8 on what you have heard?

9 MR. CHAIRMAN: Members of the Board, as your
10 chair, I would ask that we do, indeed, conclude these
11 hearings with a resolution with appropriate language.
12 I know that Ms. Cronheim just suggested some language.
13 I believe our attorney has some language for us. But I
14 do believe before we leave here, we need to make a statement
15 and put a conclusion on these proceedings.

16 And the statement and the conclusion that I think
17 would be appropriate is a resolution along the lines of
18 what Ms. Cronheim suggested to us.

19 Mr. Goodell, do you have a proposed -- some
20 proposed language for us that we can consider?

21 MR. GOODELL: So if it's the pleasure of the
22 Board, something of the -- like the following, I think
23 is based on the testimony that you've heard tonight. The
24 Hopewell Township Board of Health, having heard the
25 testimony of experts and individuals regarding potential

1 adverse health effects on the citizens of Hopewell Township
2 as a result of the construction and operation of the
3 proposed PennEast natural gas pipeline, the Board of Health
4 hereby resolves that the proposed PennEast natural gas
5 pipeline will adversely affect the health and -- health
6 of the citizens of Hopewell Township, as a result of, among
7 other things, potential groundwater contamination, air
8 quality degradation, blasting risk, increased mental
9 health illness, and increased risk of physical illness.

10 The Board of Health will forward this resolution
11 and the record of these proceedings to the Hopewell
12 Township Committee for use in any proceedings brought by
13 the New Jersey Department of Environmental Protection,
14 the Federal Energy Regulatory Commission, or other public
15 body considering approval of the pipeline, or for other
16 purposes which the Township Committee deems appropriate.

17 MR. CHAIRMAN: Does any member of the Board have
18 any suggestions as to the appropriateness of the language,
19 or different language that would be preferred?

20 Before we move it, Steve, I heard the indication
21 that the Board of Health resolves. I'm thinking that since
22 we actually heard the testimony and digested the
23 information, that we're more determining than we are
24 resolving because we heard the information and I believe
25 that we are making a determination that the PennEast

1 Pipeline does pose an unreasonable, as well as significant
2 risk to the health and safety of the residents of Hopewell
3 Township. Unreasonable and significant risk to the health
4 and safety of the residents of Hopewell Township.

5 MR. GOODELL: So -- so that second paragraph
6 which said "the Board of Health hereby finds that the
7 proposed PennEast natural gas pipeline will pose an
8 unreasonable and significant risk to the health and safety
9 of the citizens of Hopewell Township," correct?

10 MR. CHAIRMAN: Yes. Yes. It sounds good and
11 -- yes. Unless a member of the Board has any additional
12 language that they think would be appropriate, I would
13 entertain a motion --

14 MS. SANDOM: I have a question.

15 MR. CHAIRMAN: Of course.

16 MS. SANDOM: Thank you. In addition to doing
17 a resolution, I was wondering if there's any advice that
18 you could provide for what other kinds of steps the Board
19 of Health could take to reinforce the message that we're
20 -- we would like to send today by doing a resolution.
21 Is there anything else we can do? Because, obviously,
22 there's a lot of concern in the Township and there's --
23 and it's not just the folks that have come out tonight.

24 I appreciate the fact that you have come out,
25 but there are a lot of people in the Township who are not

1 able to come out tonight and who have shared their concerns
2 about this for many months now. Are there things we can
3 do besides this resolution?

4 MR. CHAIRMAN: (Indiscernible).

5 MS. SANDOM: Anybody who might know the answer
6 to that?

7 MR. GOODELL: Ms. --

8 MS. DRESDNER: I know we're -- we would be very
9 interested in having Hopewell Township, either the
10 Township Committee or the Board of Health reach out to
11 other municipalities that are affected along the pipeline
12 route in New Jersey. And I think, honestly, Hopewell
13 Township has been in the lead in -- you know, in doing
14 particular steps like this, and providing a model and
15 information about how to do this.

16 Perhaps they could hold their own public health
17 hearings and hear from their residents in their
18 municipalities. And that would help increase awareness
19 and knowledge about the risks from this proposed pipeline.
20 That's one thing I can think of that would be very helpful.

21 MR. GOODELL: Okay. Thank you, Ms. Dresdner.

22 Mr. Pisauero, do you have something?

23 MR. PISAURO: One quick thing. In the
24 resolution, I'm not sure if I heard it. You talked about
25 groundwater degradation, but surface water degradation

1 or impacts would be appropriate --

2 MR. GOODELL: Okay.

3 MR. PISAURO: -- as well, I believe.

4 MR. GOODELL: All right. That's a good point.

5 As a result of, among other things, potential groundwater
6 and surface water contamination. Okay. All right.

7 MS. SANDOM: And one of the other things I was
8 thinking, I'm not sure how to add this to the resolution,
9 but we heard from a number of different individuals from
10 different areas speaking about different things. And
11 here, all we say is having heard the testimony of experts.
12 Do we want to detail a little bit more what kinds of experts
13 they were, or what their backgrounds were in this
14 resolution, or is it sufficient to just have the transcript
15 of the proceedings go to the individuals?

16 MR. GOODELL: I think for our purposes here
17 tonight, a resolution like this is sufficient. We will
18 have a transcript and so we'll have the testimony of each
19 of the experts recorded. That can speak for itself. If,
20 in the future, the Board would like to go further and have
21 additional findings of fact based on that, I think that
22 that could certainly be done. That, obviously, though
23 is more time consuming. I think for purposes of tonight's
24 hearing, a resolution of this nature sums up the testimony
25 in a concise way, and makes sure that the public and the

1 other agencies are aware of the Board's determination in
2 a very prompt manner.

3 MR. KUCHINSKI: I think the other thing beyond
4 the resolution, we need to consider moving forward as a
5 board of health is there were some very serious dangers,
6 and health risks, and safety risks delineated tonight,
7 and depending, as this moves forward, we need to consider
8 other steps that we should take, as a board of health,
9 to protect things such as our drinking water resources
10 for our residents, the wells, the septic systems, the
11 protection of the C-1 stream corridors, and other sensitive
12 environmental areas in the Township that support both
13 mental health and the health and safety of our residents.
14 So I think tonight this is a first step, but I think we're
15 gonna need to go further.

16 MR. GOODELL: Okay.

17 MS. SANDOM: So does the record close tonight
18 then? So if people do want to come and add testimony to
19 this, how do they do that?

20 MR. GOODELL: Well, the record would close
21 tonight. This is the hearing. You've got a resolution.
22 I think that certainly the Board of Health meets monthly
23 and to the extent that this is a continuing investigation,
24 nothing precludes you from raising issues in the future,
25 or hearing from people in the future at your monthly

1 meetings. But, certainly, for this particular hearing,
2 the record would be closed. We've got a transcript now
3 of -- we will make a transcript of these particular
4 proceedings, but, again, as, you know, based on the
5 information that Mr. Lester read at the beginning, I think
6 it's the Board's continuing duty to monitor health impacts
7 and effects of an issue like this in the Township.

8 MS. SANDOM: So, Mr. English, when is our next
9 Board of Health meeting, if anybody wants to continue to
10 provide testimony?

11 MR. ENGLISH: September --

12 MS. SANDOM: September --

13 MR. ENGLISH: -- 14th.

14 MR. GOODELL: September 14th. Okay. Okay.

15 Thank you.

16 Okay. So the question is -- there's a motion
17 that's been suggested. Is there anybody who wants to make
18 that motion?

19 MR. HART: On motion, to move the resolution.

20 MR. CHAIRMAN: Is there a second?

21 MR. KUCHINSKI: Second.

22 MR. CHAIRMAN: Any questions or comments before
23 we vote?

24 Then let's vote. All in favor.

25 MR. BRANT: Aye.

1 MR. HART: Aye.

2 MR. KUCHINSKI: Aye.

3 MS. SANDOM: Aye.

4 MR. CHAIRMAN: Aye.

5 Any opposed?

6 Any abstentions?

7 The resolution passes unanimously.

8 MR. GOODELL: Thank you, everybody, for coming,
9 and the meeting is now adjourned.

10 Need a motion to close this hearing?

11 (Proceedings concluded)

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

I, STEFANIE LUCAS, the assigned transcriber, do hereby certify the foregoing transcript of Hopewell Township Board of Health, Special Meeting, on July 28, 2015, is prepared to the best of my ability and is a true and accurate non-compressed transcript of the proceedings, as recorded.

/s/ Stefanie Lucas

AD/T 570

Guy J. Renzi & Associates

August 26, 2015

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