

**SENATE OF PENNSYLVANIA  
PUBLIC HEARING  
MERCURY EMISSION REDUCTION  
HEARING OF THE SENATE ENVIRONMENTAL RESOURCES AND ENERGY  
COMMITTEE**

Before:

SENATOR MARY JO WHITE, Chairman  
SENATOR RAPHAEL MUSTO, Democratic Chairman  
SENATOR EDWIN ERICKSON  
SENATOR DONALD WHITE  
SENATOR ANTHONY WILLIAMS

Staff :

Patrick Henderson, Executive Director  
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Date: May 2, 2006, 9:06 a.m.

Place: Room 8E-B, East Wing Capitol Building Harrisburg, Pennsylvania

By: Bethann M. Mulay, Notary Public Registered Professional Reporter

SENATOR MARY JO WHITE: I'm going to call this hearing to order. This is of course a hearing of the Senate Environmental Resources and Energy Committee on a proposed mercury emission reduction rule, a state-specific rule. This is the second hearing we have scheduled on this topic. And in the interest of hearing from all of the witnesses, I think Senator Musto and I will both waive opening statements, and we will proceed right into the testimony.

MR. HENDERSON: Our first witness is Dr. Jack Snyder of the Annapolis Center for Science-Based Public Policy.

SENATOR MARY JO WHITE: Good morning, Dr. Snyder.

DR. SNYDER: Good morning, Madame Chair, Chairman Musto, and members of the committee. On behalf of the Annapolis Center for Science-Based Public Policy, I thank you for the opportunity to participate in this most important forum. I am a physician, a certified medical toxicologist, and a public health information specialist, and I am licensed to practice medicine in the Commonwealth of Pennsylvania. For fifteen years I served on the full-time faculty of the Jefferson Medical College in Philadelphia where I also served as physician to the Philadelphia Fire Department, worked the emergency rooms, served as an on-call physician for the Philadelphia Poison Control Center, and saw patients in the Jefferson and other hospital emergency rooms. In the course of my 30-year professional career, I've testified more than 200 times in local, state, and federal legislative, regulatory, and judicial proceedings. And in many of these forums I have addressed issues related to health of the public as well as health of the environment. At the Annapolis Center we promote the use of sound science and decision making. And, consequently, from our perspective, one of the important issues in this forum is whether the attempts to reduce manmade mercury emissions in Pennsylvania or elsewhere will measurably improve or otherwise decrease risks to the health of the public. Our assessment of the state of the science leads us to conclude that it will not. We would like to ask this committee to keep the following points in mind as you strive to balance public health concerns with social, economic, and political considerations.

As of May 2nd, today, you have not to the best of my knowledge been provided credible -- and by credible, I mean valid, reliable, and generally accepted -- forms of evidence supporting speculation that burdens of mercury have increased in the past decade, century, or even millennium in fish, in humans, or in the total environment of the Commonwealth, of the United States, or even of the world. You have not been provided credible evidence supporting speculation that U.S. power plants account for any increase in or for any more than 1 percent of global mercury emissions. You have not been provided credible evidence supporting speculation that mercury emitted from U.S. power plants will accumulate in so-called hot spots of pollution or that cutting emissions will reduce mercury in fish. You also have not been provided credible evidence supporting speculation that any women, children, or fetuses have been harmed or have been placed at increased risk of harm as a result of eating fish obtained from bodies of water in Pennsylvania or from other parts of the United States. You also have not been provided credible evidence supporting speculation that mercury is a growing threat or that mercury is lead's evil twin for purposes of regulating potential threats to human and environmental health.

By contrast, the Annapolis Center recommends that the committee give considerable weight to documents and studies that indicate the following four points. Mercury emissions and depositions in the United States have been decreasing for many years in the absence of attempts to reduce emissions from power plants. The recent increase in the number of fish advisories is due to an increase in the number of mercury measurements in fish and not due to an increase in levels of mercury in fish or in the environment. Increased fish consumption by pregnant women and young children has been associated in the literature with improved intelligence and higher mental development scores in the children while increased fish consumption by adults has been associated with slowed cognitive decline. Finding a measurement amount of mercury in blood or urine does not mean that the level of mercury causes an adverse health effect. Importantly, the blood mercury levels in U.S. women of child-bearing age have been shown consistently to fall orders of magnitude below levels considered associated with known health effects.

So in conclusion, as a promoter of the use of sound science in decision making, the Annapolis Center believes it is time to stop the science charading used in support of environmental regulation. When speculation, modeling, and novel assumptions are interspersed with or used as substitutes for verifiable and reproducible measurements in the course of issuing regulations, our lawmakers and our citizens deserve now more than ever to have the details of that science behind lawmaking subjected to intense scrutiny by all interested parties.

Thank you for the opportunity to offer some comments.

SENATOR MARY JO WHITE: Senator Musto.

SENATOR MUSTO: Thank you, Madame Chairman. Good morning, Doctor.

DR. SNYDER: Good morning.

SENATOR MUSTO: I am not very familiar with the Annapolis Center. Has the center done any research of its own on the mercury issue?

DR. SNYDER: The center has a number of publications that we would be happy to make available to the committee upon request.

SENATOR MUSTO: I'm making that request now.

DR. SNYDER: Yes, sir. We'd be happy to provide the documents published by the Annapolis Center.

SENATOR MUSTO: How many employees are staffed by the center, Doctor?

DR. SNYDER: To the best of my knowledge, I think there are six or seven employees at the Annapolis Center. I do not work for the center. I am a member of the board of directors.

SENATOR MUSTO: Very well. You have given us quite a bit of information that I think is very important because this committee has been hearing views from other individuals and

organizations, and I think your testimony here and what you have provided -- and which you will provide for us is very, very important to give us some balance as members of this committee. We certainly appreciate it. Thank you.

DR. SNYDER: You're welcome.

SENATOR MARY JO WHITE: Senator Erickson.

SENATOR ERICKSON: Thank you, Madame Chairman. Good morning, Doctor. Thank you for being here this morning. You indicated that you would provide documents to us, and we certainly appreciate that. Do those documents directly address this issue in terms of the risk to either fetuses, to children, to pregnant women, to adults as a matter of fact?

DR. SNYDER: Among other things, yes, they do.

SENATOR ERICKSON: That's great. We apparently here in the Commonwealth are trying to come to grips with an issue that may be likened in my mind at least, and I hope I'm not being overly -- not overstating this, the old Alar apple situation where people do scare tactics without having some good scientific knowledge. Would you be willing to help us if we so desire to design some kind of a scientifically based risk assessment study to address this issue?

DR. SNYDER: I would be happy to participate as a physician and as a scientist in such an opportunity.

SENATOR ERICKSON: That sounds wonderful. It seems to me that that may well be the direction which we need to go with this issue. So I appreciate your being here this morning. I appreciate your comments. Thank you.

DR. SNYDER: You're welcome.

SENATOR MARY JO WHITE: Senator White.

SENATOR DONALD WHITE: Good morning. Thanks very much for your time today.

DR. SNYDER: Good morning, Senator.

SENATOR DONALD WHITE: This is very eye-opening, pretty incredibly frank statements. And the one I'm particularly interested in is the, we have not been provided credible evidence supporting the speculation that U.S. power plants account for any increase in or for any more than 1 percent of global mercury emissions. So in regards to the remarks that Senator Erickson made, is that same kind of information, the kind of studies, background studies, statistics available to us for -- That 1 percent, I mean, that's -- I haven't heard anything quite that low.

DR. SNYDER: I'll be happy to provide you the documentation for each and every statement in my testimony as the need arises.

SENATOR DONALD WHITE: Thank you very much.

SENATOR MARY JO WHITE: Doctor, you state here that we have not been provided credible evidence supporting speculation that any women, children, or fetuses have been harmed or placed at risk of harm as a result of eating fish from bodies of water in Pennsylvania or the U.S. We have repeatedly been told -- and I was trying to find the source of the information. I think it's in my papers which are in my back seat of my car -- that 1 in -- I believe the number was 1 in 500 women of child-bearing age have mercury levels -- blood mercury levels that would pose a threat to a fetus. You're telling me that is not credible evidence?

DR. SNYDER: I'm suggesting not only is it not credible, but it's not based on any particular scientific or medical information. I would emphasize --

SENATOR MARY JO WHITE: Have you heard that statement made?

DR. SNYDER: Yes. And I've addressed the question in --

SENATOR MARY JO WHITE: Do you remember the source of it?

DR. SNYDER: The source -- What one should distinguish is sources of information from agency positions. It is one thing for an employee of a state or federal agency to make a statement. It is another thing for an agency to take a position. I would suggest to the committee that the statement arises from statements made in public forums by particular agency employees as opposed to being -- It should not be construed as a position of, quote, any particular governmental agency. So, yes, I have heard the statement before, and I would like to emphasize to the committee that one should not confuse possibilities with probabilities, and one should not confuse -- The fact that 5 percent of women have been estimated to have blood concentrations that move into what is known as a safety zone, that is not to be construed as either evidence of an increased risk of harm or of actual damage, whether we talk about brain damage to fetuses, health problems for women, or learning disabilities for children.

SENATOR MARY JO WHITE: Well, this is particularly important because there is one group here in Pennsylvania that is putting out literature with pictures of babies and alleging that the actions proposed by the Senate bill that some members of this committee are supporting is putting babies at risk.

DR. SNYDER: And I would like to suggest that the scientific and medical evidence does not support what I believe is an irr -- That is an irresponsible position and a statement that is not supported by science and medicine.

SENATOR MARY JO WHITE: Do you know of any case in the United States where fish consumption has caused developmental disabilities or other health -- adverse health effects to an infant?

DR. SNYDER: I do not.

SENATOR MARY JO WHITE: Do you believe there is such a case?

DR. SNYDER: I do not believe that there is any evidence of harm to any fetus or any pregnant woman as the result of consuming fish derived from waters in either the Commonwealth or any other part of the United States.

SENATOR MARY JO WHITE: And let's back up a minute for the benefit of people who weren't at the first hearing. That is the primary pathway, is it not, for mercury to reach individuals is through ingestion of fish as opposed to breathing in the air or inhaling it or other exposures?

DR. SNYDER: For purposes of what we are --

SENATOR MARY JO WHITE: Yes.

DR. SNYDER: -- what you are dealing with here --

SENATOR MARY JO WHITE: Power plant emissions.

DR. SNYDER: Yes. -- the only relevant health concern is the presence of organified mercury in fish, and the important point is that there has been no demonstration by anyone that that which is emitted from power plants ends up in organified form in the fish, whether it be again the waters of the Commonwealth or beyond.

SENATOR MARY JO WHITE: One other issue that is of great concern to this committee concerns hot spots. If we do nothing in Pennsylvania, we still will be covered by a federal proposal to reduce mercury emissions by -- What's the year, Patrick?

MR. HENDERSON: 2018.

SENATOR MARY JO WHITE: -- 2018, and that proposal permits power plants to trade emissions caps -- credits, emission credits, so that smaller plants that perhaps cannot afford to make the investment can buy credits from larger plants that can overcomply. The principal objection of the secretary of DEP to that proposal is that the fear that it will create hot spots. You indicate that we've had no credible -- again, credible evidence supporting that speculation. But I'm puzzled as to how a hot spot would exist anyway. Would it require a body of water to be around a power plant? Where's this hot spot going to actually exist?

DR. SNYDER: I asked myself the same question. I think I would respond to your question by suggesting very strongly that the committee seek whatever evidence it can from whatever credible sources it can of the existence of these, quote, hot spots because at the moment I do not believe either at the federal or at the state level that anyone is going to be able to come before this committee and demonstrate most importantly that the emissions from power plants will create a hot spot. And perhaps even more importantly, please keep in mind that what is biologically relevant is that organic mercury in the fish. There is no evidence that the amount of it now, a hundred years ago, or in the near future is -- will increase. And so I would simply have

the committee ask -- ask for that evidence of hot spots because I don't believe it's forthcoming. Right now it's speculation, and I'd like to emphasize that it is speculation.

SENATOR MARY JO WHITE: Well, when other witnesses testified here last week, they gave us a rather long bibliography, if you will, of so-called studies and didn't link necessarily particular studies to particular conclusions but certainly gave us the impression that the statements they were making were supported by various scientific studies. Are there older studies that support this? Is it changing? Are they simply not telling us the truth? What's happened here?

DR. SNYDER: The most important thing that the committee might want to consider is to have one or more scientists or groups actually take each and every one of those studies that was cited to you and demonstrate, as we've had to do in my career in federal court occasionally, demonstrate how those studies do not support the conclusions that are made. This committee should be very skeptical of simply appending a bibliography -- a set of bibliographic references to a set of statements. This issue deserves looking behind the scenes and actually checking those citations to see whether or not they actually support the statements that can be made. And I will suggest that not only at the Annapolis Center but in a number of other -- a number of other nonprofit educational organizations have taken a hard look at that evidence. And it is my conclusion and the conclusion of the Annapolis Center that those bibliographies do not support the conclusions that have been offered to you.

SENATOR MARY JO WHITE: Unfortunately we only have one genuine scientist on our committee, and that's Senator Erickson. We may have to give him the assignment of verifying those bibliography --

DR. SNYDER: He may not want the job, but he's certainly capable. I know from his past career that he certainly is capable.

SENATOR MARY JO WHITE: Are there any other questions?

SENATOR ERICKSON: I have one follow-up. My microphone isn't working, so I'll just talk loudly. Thank you, Doctor, for that comment. You mentioned historic data. Is there historic data that exists on the levels of organified mercury in fish, do you know?

DR. SNYDER: The answer is yes. Not only have fish from 50 -- well, 30, 50 and even over a hundred years ago been studied, but mercury levels in such exotic things as human mummies have been studied. And I think it would be important for this committee to understand that mercury concentrations in mummies from several hundred years ago as well as mercury concentrations in fish during the last 120 years have not changed significantly. And if you look at the numbers, they're actually slightly lower today than they were in the past in the fish.

SENATOR ERICKSON: Thank you.

SENATOR MARY JO WHITE: Just one last statement. You mentioned that the blood mercury levels of United States women of child-bearing age have been shown to consistently fall orders

of magnitude below levels considered associated with known health risks. What are those levels? What is the level of known health risk, or has that been established?

DR. SNYDER: The level of known health risk has not been established. However, there is a number that has been put forth by the United States EPA of 58. And what I think is important to understand here is that we don't have any evidence that any American woman, child, or fetus has concentrations of mercury at that level. And perhaps even more importantly there are studies that demonstrate that over half, indeed as many as three-quarters of the Japanese population, children and adults, have mercury levels exceeding the 58 level identified by the EPA. And we do not to my knowledge have any evidence of brain damage or adverse health effects or problems with the intellectual capacity of the Japanese population.

SENATOR MARY JO WHITE: That's because of high fish consumption?

DR. SNYDER: Well, yes, in a word, yes.

SENATOR MARY JO WHITE: So what you're telling me is the 58 is a conservative number?

DR. SNYDER: Senator, I'm not sure what you mean by conservative number. That's the EPA's number.

SENATOR MARY JO WHITE: But, I mean, you're saying that even at 58 there are populations that show no adverse health effects, so it would appear that there is perhaps a cushion in that 58 number?

DR. SNYDER: Yes, yes.

SENATOR MARY JO WHITE: Would that be your opinion?

DR. SNYDER: Yes, that would be my opinion.

SENATOR MARY JO WHITE: Any other questions?

(No response)

SENATOR MARY JO WHITE: Thank you very much, Doctor. We will be back with additional questions I'm sure if you will --

DR. SNYDER: I welcome the opportunity. Thank you very much.

MR. HENDERSON: Our next witness is George Ellis, president of the Pennsylvania Coal Association.

MR. ELLIS: Good morning, Madame Chairman, Senator Musto, Senator White, Senator Erickson, staff. My name is George Ellis, and I'm president of the Pennsylvania Coal Association. PCA is a trade organization representing bituminous coal operators and other

businesses whose livelihood depends in part on the thriving coal industry. We thank the committee for this opportunity to provide our perspective on regulating mercury emissions from Pennsylvania's coal-fired power plants. This is a very critical issue for my members since the outcome of this debate will significantly affect our major market. First, Attachment 1 of my testimony contains a memo from PCA and United Mine Workers to all State House and Senate members responding to misleading statements about our position on the mercury control issue made by Secretary Kathleen McGinty in testimony before this committee last week. And I ask that the attachment be included in the record as part of my testimony. I've done it in this manner instead of addressing it in my remarks to maximize my allotted time on the substance of the issues. We do not take these allegations lightly. I will be happy to address this issue during the Q and A portion of my testimony.

By way of background, Pennsylvania is the fourth largest coal-producing state. Fifty-six percent of our electricity comes from coal, and coal is by far the least expensive source of electricity. Because of our reliance on coal and given coal's availability, reliability, and price, the Commonwealth is operating from a position of strength right now in respect to its electric generation capacity. As you would expect, the steam coal market is by far our largest customer. About 70 percent of Pennsylvania's annual coal production goes to the utility sector principally, but not exclusively, Pennsylvania's electric generating units. Of the 52 million tons of coal consumed by Pennsylvania's electric utilities in 2003, 34 million tons was mined in Pennsylvania. So clearly preservation of this market is essential to the continued viability of the Pennsylvania coal industry. PCA supported the law that deregulated the electric utility industry because we believe that competition would place a premium on the cost effectiveness and reliability of a fuel source. As generation becomes more and more competitive in the future, the most attractive source would be the lowest cost which in any scenario would be coal. However, competition depends on the existence of a level playing field on which various fuel options can equally compete. Unfortunately this is not always the case particularly given the unevenness and uncertainty surrounding air quality regulations.

A case in point is the mercury control issue. PCA's position has been consistent throughout the development of mercury control regulation and legislation. We have worked towards a program that balances public health concerns with economic interest. Given the high content of mercury in Pennsylvania's coal and the unavailability of mercury control technology, we recognized that any attempt to curb mercury emission at coal-fueled power plants including the federal rule and the state rule could offer a potential for disrupting coal markets and jobs. We, therefore, sought to pursue all appropriate remedies on both the federal and state levels to minimize the potential for displacement of coal and jobs. In this regard, PCA has supported the federal Clean Air Mercury Rule and its cap and trade program with one exception, the mercury allowance allocations provision that disadvantaged eastern bituminous coal. By inflating the allowance allocations of electric generating units that use subbituminous or lignite coals produced out west, that provision allows utilities that burn these type of coals to emit more mercury than those burning bituminous coal.

To address this provision and with the knowledge and encouragement of Secretary McGinty, PCA joined with six other state coal associations, bituminous coal operators, and the UMWA in filing a lawsuit. The lawsuit is narrowly focused on challenging only the allowance allocation

adjustment factor. It is not designed to overturn the entire rule as was clearly explained and understood by the secretary before the lawsuit was actually filed.

We remain concerned about the effects of this provision on Pennsylvania coal and jobs. We have always agreed with the Department that this facet of the federal rule puts Pennsylvania coal at a competitive disadvantage. However, we strongly believe that we'll prevail in court. In the meantime, PCA has consistently maintained its support of the federal rule's other provisions. We do not and have not supported a state regulation. Our view sharply differs with the Department's contention that its proposal encourages use of Pennsylvania coal and protects Pennsylvania's coal mining jobs. Despite our repeated requests, the Department has not done any type of analysis to substantiate its claim. On the contrary, the ban on trading and banking is a prescription for retirement of aging coal plants. And the 100 percent bituminous compliance provision -- presumption may at best be an illusion and at worse an inducement for Pennsylvania's EGUs to burn bituminous coal mined outside the Commonwealth. DEP has mistakenly used the phrases bituminous coal and Pennsylvania coal interchangeably to justify how it protects the Pennsylvania coal market. Pennsylvania coal is bituminous coal. Bituminous coal includes all coal essentially produced east of the Mississippi with the exception of the anthracite reserves that are located in northeastern Pennsylvania.

Critics of trading are wrong to assert that there are no guarantees that Pennsylvania will see any significant reductions in mercury emissions if utilities are allowed to purchase allowances from out of state. The mercury removal achieved as a co-benefit of SO<sub>2</sub> and NO<sub>x</sub> control requirements installed for utility compliance with the Clean Air Rule -- Clean Air Interstate Rule will result in dramatic emission reductions. DEP recognizes this, and its own program is predicated in part on these reductions occurring. Electric utilities have told us repeatedly and unequivocally that without a mercury trading and banking program their options to comply with the state regulatory mandate would be, one, prematurely retire those older, smaller coal-fueled plants in which investments in control technologies would be uneconomic and/or switch to bituminous coal with a lower mercury content mined outside the state. Both options obviously would result in significant disruptions to coal markets and jobs.

The power plants that are most at risk for shutdowns are less than 250 megawatts in size and over 40 years in service. These 30 some units represent 4100 megawatts or about 21 percent of Pennsylvania's total coal-fired capacity. The loss of this capacity will obviously disrupt Pennsylvania coal production and jobs, but it will also have an impact on the retail electricity prices and expenditures across all sectors, residential, commercial, and industrial.

Again, we don't agree with the Department that its preference in its proposal for 100 percent bituminous coal will preserve jobs or coals' share of the utility market. Because coals -- Pennsylvania coals are comparatively high in mercury and recognizing that Pennsylvania -- that bituminous coal is not just produced in Pennsylvania, we are concerned that the preference could have the unintended consequence of inducing Pennsylvania's units to buy bituminous coal mined outside of the state.

Attachment 2 to my testimony is a chart that provides a statistical distribution of coal mercury content by state for the major producers. It shows that Pennsylvania coals have on average the

highest mercury concentration of all coals in the eastern United States and twice as much on average as coals produced in West Virginia and Kentucky.

The Department's attempt to impose its own mercury regulation with a preference for bituminous coal combined with the mandate of SO<sub>2</sub> and NO<sub>x</sub> emission reductions required under CAIR may force electric utilities to move towards bituminous coals that are lower in both sulfur and mercury content. Those coals just happen to be available in West Virginia and eastern Kentucky historically our major competitors.

The 100 percent preference may not even be a benefit to utilities. Under the Department's proposal, each EGU is required to meet the annual emission limit or cap as well as an emission standard.

The compliance presumption applies only to the emission standard. However, the unit must also comply with the emission cap. If it exceeds its cap but it's presumed to be in compliance with the standard, the utility of the Department's proposal may petition for additional mercury allowances to meet its cap from a supposed surplus allowance pool managed by the Department. These allowances essentially are to come from units that overcomply.

Allowances are awarded on a priority basis essentially from a unit with the most controls to a unit with the least controls.

The problem with this scenario is that there is no guarantee that there will be excess allowances available in the pool. Conceivably, an EGU could be presumed to be in compliance with the state emission standard, but by not meeting the cap be in violation of the federal cap. We asked DEP on several occasions to share with us the details of the modeling they did to support their contention that a surplus pool would exist, but they failed to provide a timely and adequate response. Mercury specific control technology, particularly its use with high sulfur eastern bituminous coal, is still a work in progress. Only 4 out of 19 full-scale tests conducted to date used high-sulfur bituminous coal. And only 2 of 15 scheduled tests will use this type of coal. Preliminary results of the test cases that used high-sulfur coal found the technology to perform more poorly than western subbituminous coals. Based on these comments, PCA supports the state legislation, Senate Bill 1201 and House Bill 2610, to preclude adoption of a state mercury regulation that would inevitably lead to a dramatic loss of Pennsylvania coal production and jobs. While this result would give us the very strict federal program for controlling utility mercury emissions that includes the allowance allocation formula, this option would better preserve our markets and jobs going forward than the proposed state reg while still preserving our opportunity to challenge the allocation provision in federal court.

Thank you for the opportunity to provide these comments on these critical issues, and I will try to respond to any questions.

SENATOR MARY JO WHITE: Thank you, Mr. Ellis. Senator Musto.

SENATOR MUSTO: Thank you, Senator White. Good morning, George.

MR. ELLIS: Good morning, Senator.

SENATOR MUSTO: I do have a graph here regarding the mercury content of bituminous as compared to other states. Does Pennsylvania have any low mercury coal? Are we producing the low mercury coal in Pennsylvania?

MR. ELLIS: This is an average, okay, so there are going to be some coals below the average, some coals above it. But on its face Pennsylvania is a very -- has a significant amount of high -- of mercury in its coals. The reason under the federal program Pennsylvania has the most stringent emission reduction program is because Pennsylvania burns the highest mercury content coal. So, yeah, in pockets of Pennsylvania there may be coal with a low mercury content. But most in Pennsylvania that's not the case. It's significantly high.

SENATOR MUSTO: I see where Ohio is just about equal to Pennsylvania --

MR. ELLIS: That's correct.

SENATOR MUSTO: -- regarding the content --

MR. ELLIS: That's correct.

SENATOR MUSTO: -- mercury content. Maryland is very close and West Virginia.

MR. ELLIS: Right. West Virginia and Kentucky are our main concern because historically they have been our major competitors because they also -- In eastern Kentucky and West Virginia you also have a lower sulfur type coal.

SENATOR MUSTO: So the coal industry in Pennsylvania has been taking steps in the past to reduce the mercury emission?

MR. ELLIS: Well, we have -- I mean, there's mercury in coal, in Pennsylvania coal. There's really nothing we can do about it. We can work for a -- towards a program that when burning those reductions, you know, significant reductions would be made. And that's what we have been doing. And what we're trying to do is find a program that balances that against the potential impacts of displacing Pennsylvania coal because when utilities have to comply with these rules, the cost of those controls are prohibitive.

SENATOR MUSTO: Tell me, what was the effect of the sulfur dioxide trading program on Pennsylvania's coal industry? Of course we have had many years of experience with that program.

MR. ELLIS: Senator, in the past 10 years basically our coal production has been pretty stable, between 70 to 80 million tons. So, I mean, from that standpoint, I can't say it's had a positive or negative difference.

SENATOR MUSTO: So you would say the effects of the sulfur dioxide trading program on Pennsylvania's coal industry was more or less neutral?

MR. ELLIS: I wouldn't have any evidence to suggest otherwise. If you're referring to what the secretary said last week about trading, I think she was referring more to the Illinois coal market on SO<sub>2</sub>.

SENATOR MUSTO: What would you think of a trading effect of mercury? Do you feel it would have any positive results?

MR. ELLIS: What we're being told, Senator, by the utilities is there's about 21 percent of coal-fired capacity that's old and it's small. And for them to install mercury specific control technologies, it would be cost prohibitive, and they would probably have to shut those coal plants down. So that's one of the reasons why we think trading is critical in any mercury control program.

SENATOR MUSTO: Thank you.

SENATOR MARY JO WHITE: Senator Erickson.

SENATOR ERICKSON: Nothing.

SENATOR MARY JO WHITE: Senator White.

SENATOR DONALD WHITE: Good morning, Mr. Ellis.

MR. ELLIS: Morning, sir.

SENATOR DONALD WHITE: My district, 41st district, you're pretty familiar with. I have one question. Basically it's a question after revelations of Dr. Snyder's earlier comments. The district I represent has three power plants within -- coal-fired power plants within a 20-mile radius as you're familiar with. Now, when you're talking about hot spots and you're talking about mercury emissions and the effects thereof, there has never been any documented scientific information that's ever shown any kind of information to me that the reduction in mercury emissions is going to help. Now, after listening to Dr. Snyder, I'm more convinced. And is the technology even out there that is substantially -- if we would go to the DEP suggesting mercury emission standards?

MR. ELLIS: I certainly don't have the pedigree of the previous speaker, but I did -- I sat in on all the state mercury work groups that the Department developed to kind of entertain comments on a mercury reg. And throughout there were repeated questions on what would be the measurable -- would there be any measurable additional health benefits are there between a federal program and a state program, and the answer was we can't qualify that, no. So from that perspective, at least I'm convinced that you're not going to see any measurable benefits in health between a federal program or a state reg.

SENATOR DONALD WHITE: Then the emissions, the control of such emissions, control of mercury emissions, is that technology, is it out there?

MR. ELLIS: No. And the Department -- I mean, yeah, the Department of Energy last week I think in response to some of the claims that were made at last week's hearing issued a press release clarifying its perspective that at this point mercury-specific technology is not -- it's not available. It's not available for commercial use. They're still researching it. We hope, you know, within the next five, six years it will be available. But right now, no, the technology is not there.

SENATOR DONALD WHITE: Thank you, Mr. Ellis.

SENATOR MARY JO WHITE: To follow up on that point, I was just discussing with Patrick that the U.S. Department of Energy did issue a clarification, a press release, that said that it felt that The Pennsylvania Federation of Sportmen's Club had presented a somewhat inaccurate account based on a TV interview with Secretary McGinty and their -- Thomas J. Feeley, III, their technology manager, for the innovations for existing plants' R and D program.

I am going to ask that the website information given in that press release be put into the record of this proceeding as well, so we will provide it to the stenographer at the conclusion of the hearing. Senator Williams.

SENATOR WILLIAMS: Thank you, Madame Chairman. A couple items. The association that you represent obviously exists as an advocacy group in some regard --

MR. ELLIS: That's correct.

SENATOR WILLIAMS: -- linked to the coal industry. I want to understand for the record that the advocacy does not supersede human interest in terms of safety.

MR. ELLIS: No, it doesn't.

SENATOR WILLIAMS: And so the issue as it relates to mercury and its either potential negative impact around emissions is I'm assuming considered when you all formulated your opinion about whether you support public policy that would increase regulation and, therefore, maybe increase cost, how did you -- how does the association factor in human interest versus employment which becomes a big issue in this conversation?

MR. ELLIS: Well, I mean, if you look at all the filings on the federal rule, Senator, the regulations -- the impact of the regulations on -- will preserve public health. I mean, there's clearly no evidence that burning of coal and release of mercury as controlled under the federal regulations are going to affect the health of fetuses, mothers, whatever.

SENATOR WILLIAMS: I guess my point is that as an association that's an advocate for this industry, you did even consider -- you did consider --

MR. ELLIS: We have to.

SENATOR WILLIAMS: -- you did consider the consequence to human beings beyond just your narrow focus daily of advancing employment opportunities and economic consequences within your industry?

MR. ELLIS: Senator, our employees work and live in the same area they work. The salaried people do, too. We take these issues very seriously. I've been with the coal association since 1982. The environmental issues are not marginal. I mean, it's a new generation. There's a new conscience both environmentally and from a health perspective. And if we're going to continue to operate, those two components have to be part of our decision, so yes.

SENATOR WILLIAMS: And what I think unfortunately sometime is overlooked, in fact, those who are most concerned about safety and impact are the people who have to work in these environments. For some strange reason, the advocates on the other side don't ever seem to bring that up --

MR. ELLIS: Very good point, Senator.

SENATOR WILLIAMS: -- which is curious to me. The other thing is -- that is also curious to me is that the secretary testified, and I guess I'm reading your memo, and if you'd be -- If I can, I'll read from what I have in front of me. Position of the UMWA, PCA has been consistent throughout the development of mercury control regulations and legislation. We're deeply disappointed that DEP would unjustly challenge our integrity to draw attention away from the merits of its regulatory purpose.

Earlier it talks about the fact that it was portrayed in I guess Secretary McGinty's testimony, which I personally did not hear, but I have the transcript from it, suggested that you all had a different position. And I'd like to know if you know how it occurred that your organization -- or your association was represented in a different light.

MR. ELLIS: I attended the hearing, and I think it was pretty clear from the start that -- First of all, when the secretary said that she had found out yesterday I believe that we had filed a lawsuit challenging portions of the federal rule, it seemed to be all news to her when, in fact, we had talked with her -- in fact, she had initiated the talks -- encouraging us to file the lawsuit and us explaining to her why we were filing a lawsuit that was just on this one aspect of the federal rule. We weren't trying to overturn the entire rule. I don't want to speak for the secretary, but I think the e-mails attached to the memo explain those events chronologically. She called -- If you look at the lawsuit, third e-mail, it's dated -- Subject is mercury lawsuit. It's dated July the 15th. It's the next to the last page of the testimony. Secretary actually wrote to me on July 14th asking if we would -- reminding us that the deadline for filing is approaching and encouraging us to file the lawsuit. I wrote back to her saying we are going to file as a part of the coalition but we are just going to challenge that one provision, to which she responded to me she understands our position on these other issues and why we're just filing the lawsuit on the one provision. At the hearing last Tuesday she basically said that both PCA and UMW were inconsistent in their

positions and made it sound like she had just discovered what we were doing on the federal level. We just want to set the record straight.

SENATOR WILLIAMS: I'd like to conclude with that one of the most important parts of your testimony today of which this issue is taken very seriously by a member of this committee because it does have consequences to not only the economy but the environment for generations beyond, and those people that are participating in it have to come with clean hands even when you have an agenda. And this has unfortunately been a pattern in this process in that the information we received those were advocating against us -- And understand I come to this -- I don't come from a coal mining community. I don't come from an area that necessarily is affected by employment. I certainly represent constituents who can have an indirect adverse impact, and probably I have more advocates who are opposed to this legislation than would be in favor of it. But I tried to come with a balance. And what has concerned me is consistently those who were advocating against it appear to be a bit manipulative of the information, if not disingenuous. In that regard, when you have a secretary of a department, Madame Chairperson, it's been more than one testifier who's indicated a difference in the facts. This particular area I would like the secretary to come back because I have very particular concerns about, one, how the committee has been portrayed in this process as if we were sort of railroading public policy and, in fact, blocking the government's initiative. But if I have testimony that sort of directly refutes actual facts that are being portrayed, I think it's sort of incumbent by the secretary or her representative to come and explain to us why she would say A when it, in fact, is X. And I'd ask that if we could if we have time to invite her back.

SENATOR MARY JO WHITE: Senator, we are looking at perhaps the week of May 22nd when we return, and we will see if such a rematch, if you will, can be scheduled.

SENATOR WILLIAMS: Thank you.

SENATOR MARY JO WHITE: You make an excellent point, though. What we're really looking at here is a cost benefit analysis. And on the cost side in addition to the impact on Pennsylvania's very large coal industry, we also have the potential impacts on the cost of electricity if our generators are put at a competitive disadvantage by not being able to avail themselves of this credit system that the rest of the country will have. The caps are going to come off electricity here -- What year is that? Does anybody remember the year?

MR. FOX: 2010 I think.

SENATOR MARY JO WHITE: 2010 the caps come off. If we add onto the -- to that potential shock the disadvantage to our own electric generators, I am afraid that consumers in Pennsylvania will really see in spades what they saw in natural gas this past winter. You know, when the faith-based community, as I said last week, comes out and says, you know, we need this rule and I'm reminding them how many came to my office last winter saying they could not afford to heat their churches, and I need to tell them there is a strong connection here. These are not isolated issues. They are strongly related. And we need -- If we really care about our constituents and if they care about their parishioners and their congregations, we are going to have to keep electricity and -- affordable to people of this Commonwealth. And that means not

burdening it with regulations that really do not confer a commensurate benefit on our people. And the secretary represented to us that there were two primary goals of this program. One was cleaner air for Pennsylvania. Well, unless we're putting a dome over the state, I don't quite know how that's going to work. But the second one was protection of the coal industry, of Pennsylvania's coal industry, and I take it you do not agree that that second objective is met with the state-specific plan.

MR. ELLIS: No. I mean, we can't see it. Believe me, we've worked with the Department. We've asked them to do an analysis to kind of substantiate that claim, Senator, but they keep on talking about the 100 percent bituminous preference. That 100 bituminous preference the way it's cast in those terms means coal beyond Pennsylvania's border. And you've seen the high mercury content of our coal. So, I mean, our -- And without a trading program, as I said, the utilities have repeatedly said they're not going to be able to keep those smaller plants open. So they're the questions we have. And, you know, just logic says, you know, the utilities are going to retire to small power plants, and, you know, they're going to have to go to a coal in less mercury content just doesn't see how from our perspective how that helps the Pennsylvania coal market.

SENATOR MARY JO WHITE: And losing those smaller plants does impact the electric supply in Pennsylvania.

MR. ELLIS: It's a little over 20 percent of our -- of the total coal generating capacity, so yes.

SENATOR MARY JO WHITE: So we lose the electricity, and we lose the jobs that supply those plants.

MR. ELLIS: That's correct.

SENATOR MARY JO WHITE: Thank you. Any other questions?

(No response)

SENATOR MARY JO WHITE: Thank you, Mr. Ellis.

MR. ELLIS: Thank you.

MR. HENDERSON: Our next witness is Eugene M. Trisko of the United Mine Workers of America and International Brotherhood of Electrical Workers. Mr. Trisko: Thank you. Good morning, Madame Chair, Chairman Musto, distinguished members. I am Eugene M. Trisko.

SENATOR WILLIAMS: Excuse me, I like you already. He called us distinguished members. That's all very helpful. Mr. Trisko: I know it when I see it. I am Eugene Trisko, an attorney admitted in the District of Columbia. I represented the United Mine Workers as a member of EPA's working group on mercury MACT and served as UMWA's representative on DEP's mercury stakeholder group. I also serve as a member of U.S. EPA's Clean Air Act Advisory Council. The interests of the IBEW and the mine workers are closely related. If DEP's proposed

rule prohibiting emissions trading and banking leads to the closure of many older and smaller generating plants, as we believe it would, our members will lose their jobs. We both view the EPA mercury rule's emission trading program as a superior means to level the playing field for Pennsylvania coals and power plants.

U.S. EPA estimates that domestic electric utilities contribute 11 tons of the 144 tons of mercury deposited annually in the continental United States. When EPA's Clean Air Mercury Rule is fully implemented, domestic utility deposition will decline from 11 tons to 3 tons annually. There is no evidence that controls on U.S. power plants would reduce the number of mercury-related fish advisories in Pennsylvania or other states. Remember, electric utilities account for only 8 percent of the 144 tons of mercury deposited annually in this country. EPA projects that an additional 60,000 megawatts, that's 60 very large coal-fired power plants, 60,000 megawatts of electric generating capacity will be retrofitted with scrubbers by 2010 as a result of compliance with the Clean Air Interstate Rule. Most of the capacity to be controlled is located in Pennsylvania and in states upwind of Pennsylvania. These scrubber retrofits will provide major air quality and mercury deposition benefits in the Commonwealth. The national average mercury reduction required by EPA's rule is 70 percent. But Pennsylvania must achieve an 86 percent reduction simply due to its use of higher mercury bituminous coal. This is a result of the EPA allowance allocation adjustment scheme that awarded extra allowances to units burning western subbituminous and lignite coal.

Under EPA's allocation, Pennsylvania confronts the most stringent mercury reduction requirement of any state in the nation. This bias against bituminous coals led the UMWA along with PCA and several eastern coal associations to challenge EPA's allowance allocation in lawsuits filed last year. We argue that EPA's mercury allocation was arbitrary and capricious and penalized eastern bituminous coal. Our position has been reinforced by recent evidence showing that western coals can obtain 90 percent reductions of mercury with relatively low cost carbon injection technologies without the need for installing expensive scrubbers. DEP also has sued EPA but on very different grounds. DEP is seeking to overturn the mercury trading rule in its entirety on the ground that the Clean Air Act requires maximum achievable control technology for mercury control at all power plants. If UMWA and PCA's narrowly targeted litigation against EPA's allowance allocation is successful, some of the allowances given to western coals may be returned to Pennsylvania and to other eastern states.

On the other hand, if DEP's challenge to the EPA rule is successful, Pennsylvania may be saddled with a command and control MACT regulation that poses serious threats to Pennsylvania's coal and electrical workers and invites a flood of lower mercury western and eastern coals. As Mr. Ellis testified, Pennsylvania has more than 30 coal generating units smaller than 250 megawatts and more than 40 years of age, 4,100 megawatts of generating capacity in all. Thousands of jobs are on the line at these plants, the coal mines that supply them, and the communities that depend on them. Installing wet scrubbers and selected catalytic reduction technology at units burning bituminous coals can achieve mercury reductions of 85 percent or more. However, many of the older and smaller units simply are not cost-effective candidates for the retrofits of these controls. These older units need an emission allowance trading program to survive. DEP's proposed rule would eliminate all trading of emission allowances reflecting a policy judgment by DEP that the Clean Air Act prohibits trading of mercury emissions. The rule

would create a system of compliance, preferences, and presumptions for plants burning 100 percent bituminous coal and employing certain emission control technologies. We are concerned that the DEP rule could be challenged under the Commerce Clause of the United States Constitution. A successful constitutional challenge would remove the rule's beneficial provisions leaving a skeleton command and control regulation requiring plant-specific 90 percent reductions that would lead to the shutdown of many smaller and older units.

In the 1990s Midwestern laws enacted to help protect local coal production from fuel switching were struck down on Commerce Clause grounds. It is the place-in-line uncertainty created by the DEP rule that could inspire constitutional challenge. As the Seventh Circuit Court of Appeals stated in the case *Alliance for Clean Coal versus Miller* -- and I wrote the brief for the United Mine Workers defending this Indiana law -- the Court stated, the Illinois Coal Act cannot continue to exist merely because it does not facially compel the use of Illinois coal or forbid the use of out-of-state coal. As recognized in *West Lynn Creamery*, even ingenious discrimination is forbidden by the Commerce Clause. By encouraging the use of Illinois coal, the act discriminates against western coal by making it a less viable compliance option for Illinois generating plants.

Madame Chairman, this handwriting is on the wall of this Capitol. No one can argue credibly that this case law would not apply to this proposed DEP rule. Regarding DEP's claim that the Clean Air Act prohibits trading of mercury emissions, the committee should note that litigation pending before the U.S. Court of Appeals in Washington will determine the legality of EPA's emission trading program. It is not appropriate for DEP to prejudge the outcome of this litigation in which the Commonwealth itself is participating as a petitioner.

Let me speak briefly to health benefits. EPA's regulatory impact analysis supporting the Federal Mercury Program clearly establishes two facts. One, Pennsylvania stands to be the largest beneficiary of mercury deposition reductions as a result of the CAIR and CAMR rules quite consistent with the findings of the recent so called Steubenville study. And, number two, the mercury deposition reductions in Pennsylvania due to the CAIR rule alone are approximately equal to those that would result from the complete elimination of all mercury emissions from electric generating units throughout the United States. There's an exhibit in my pre-file testimony that displays these findings in color. No state rule can be more stringent than the complete elimination of mercury emission from all U.S. electric generating units. DEP has not even modeled the deposition impacts that might result from its rule or compared those to the results of the EPA rule. The IBW and UMWA strongly support the provisions of Senate Bill 1201 consistent with our support for implementation of EPA mercury trading rule in Pennsylvania. The key advantages that that rule would bring to Pennsylvania include, first, providing incentives for plants to over-control mercury emissions to help pay for investments in pollution control technologies such as scrubbers. Second, allowing for banking of emission reductions to provide an incentive for early reduction of emissions with no adverse impact on the environment. Third, creating a more workable compliance mechanism that avoids reliance on administrative judgments on the merits of competing requests for allowances. And, finally, assuring power generators the ability to demonstrate compliance with mercury emission control requirements with no uncertainty about their so-called place in line for emission allowances.

We greatly appreciate your invitation to appear here today, and I am happy to answer any of the committee's questions. Thank you.

SENATOR MARY JO WHITE: Senator Williams.

SENATOR WILLIAMS: I have none.

SENATOR MARY JO WHITE: Senator Musto said he had no questions. Mr. Trisko, this is excellent, and I thank you for sort of -- It was hard to follow when you were jumping around a bit, but you summarized it very nicely. I had a couple of questions, and now I've got to find -- First of all, on the interstate commerce argument, I raised that at the first hearing with the secretary. I questioned how a state law could protect Pennsylvania coal, and I was assured that there were no interstate commerce implications. And I assume that they are banking on what you indicated that because they don't say Pennsylvania coal it appears that it is not protective of one state's coal. But you indicated that that's not creative enough in your opinion and under some case laws. Is that true? Mr. Trisko: Yes, Madame Chair. The likely challenge to the Pennsylvania DEP rule would come from coal providers in the western United States. Several plants in the Commonwealth already have sought permits for blending western subbituminous coals with their existing coal supplies. Most of the litigation in the 1990s surrounding the acid rain control debate, most of the litigation was initiated by western subbituminous coal operators. They tend to be very aggressive about insuring that they have an equal opportunity to compete for coal markets nationally. And it is my judgment having litigated several of those cases for the mine workers in the 1990s that the Pennsylvania rule as drafted today would not survive a motion for summary judgment, that is it would not receive a full trial on the merits, that it is --

SENATOR MARY JO WHITE: So it will lose going out the gate. Mr. Trisko: It's per se unconstitutional under the case law that I cited. And I might suggest this morning, Madame Chair and members of the committee, that having pondered the constitutional ramifications of this regulation now for a number of weeks and having struggled through scenarios of what might result if the rule as currently proposed were eventually promulgated, subsequently stricken down at least in part by a court, looking at the provisions on preferences and presumptions in hundred percent bituminous coal that it occurs that it may be prudent and appropriate for this committee to seek the opinion of the Commonwealth's attorney general with respect to the constitutionality of this proposed rule because if the rule is as we suspect constitutionally deficient, then what point is there now in proceeding further through an EQB process, publication in the Pennsylvania Bulletin and the like only to find subsequently in a court of law that the rule was unconstitutional. It seems that it may be appropriate to have an answer, a determination of legal consequence to that question at this time.

SENATOR MARY JO WHITE: Thank you. That's good advice. You note that -- correctly that DEP continually refers to cap and trade as the illegal trading program. Despite the fact, to your knowledge, has anyone declared such a program to be illegal? I mean, it's under attack, but. Mr. Trisko: This is -- In my view, Madame Chair, this is more an article of faith, if you will, than of hard legal analysis. The Clinton Administration in its last days issued a regulatory determination that it was appropriate and necessary to regulate mercury from electric utilities as a hazardous air pollutant. Under the Section 112 requirements, MACT requirements of the Clean Air Act, EPA

could have decided that issue differently at that time. And indeed a petition for reconsideration of that decision was filed with the agency within a matter of weeks of the regulatory determination. The incoming administrator could at any time have changed that judgment and established a trading program either under Section 111 of the Clean Air Act or under Section 112. Many observers felt that a program implemented under Section 112 would have been more beneficial in that EPA could have established a national trading program and issued allowances very similar to the Title IV acid rain program without getting into the state-by-state determination of whether states wanted to opt into the program. But all of that being said, it is now up to the Court of Appeals for the District of Columbia circuit to make a determination as to the legality of EPA's actions under Section 111. That decision is best left in our judgment to the D.C. Circuit.

SENATOR MARY JO WHITE: You make a reference to hot spots and you sort of -- It appears that you have sort of the same sort of mental hangup on that that I do. And that is, you know, a hot spot you think of maybe a cloud hanging over the electric generating plant or going down into the ground where you've got, you know, highly contaminated soil right next to the plant. But that isn't what they're talking about. We're talking about aquatic organisms here taking up this material. So if there isn't a lake around your plant, how do you get a hot spot? Mr. Trisko: That was -- Madame Chair, that was the substance of the testimony offered before the House Committee by Dr. Terry Sullivan of Brookhaven National Laboratory, and he observed that in order for a hot spot to have health consequences you needed to have three things. You needed to have a nearby significant body of water, for example, a lake to receive mercury emitted from the power plant. Second, you needed fish in the lake to consume the mercury. And, third, you needed a population of human beings to consume the fish presumably in very large numbers.

SENATOR MARY JO WHITE: And probably you also need wind to blow it in the direction of the lake. Mr. Trisko: Dr. Sullivan's observation was that to his knowledge that combination of conditions did not exist anywhere in the Commonwealth.

SENATOR MARY JO WHITE: And just lastly, the secretary has stated here that a cap and trade program would not guarantee that Pennsylvania would see any mercury reductions whatsoever. And I really question that, and I take it perhaps from your testimony you're talking about the beneficial effects of installing scrubbers and other pollution control devices under the Clean Air Interstate Rule that we're bound to see reductions. Is that correct? Mr. Trisko: Precisely, Madame Chair. And I included in my full statement, the 22-page unexpurgated version a couple of color figures. Do you happen to have color copies of the --

SENATOR MARY JO WHITE: We do not. Mr. Trisko: May I approach the dais with color copies of these and exhibits --

SENATOR MARY JO WHITE: Certainly. Mr. Trisko: -- and explain them? Thanks. I believe these exhibits are contained on Page 11 of the pre-file testimony.

SENATOR MARY JO WHITE: Page 12, I believe. Mr. Trisko: Page 12, thank you.

SENATOR MARY JO WHITE: Oh, it certainly looks different in color. Mr. Trisko: It helps, doesn't it? In fact, we displayed these precise maps in the context of the DEP stakeholder process during our presentation. Let me explain what they are showing here. First of all, red is good. This is a measure of the benefit, the reduced mercury deposition that will result under two different scenarios modeled by U.S. EPA. In fact, the modeling runs -- the specific modeling episodes that are depicted here are the same as those provided last week in U.S. EPA's testimony. This is simply a different way of looking at the EPA data. But it comes from the EPA regulatory impact analysis. In the top map what you see is a simulation where EPA has eliminated, zeroed out all utility mercury emissions throughout the United States and has modeled the effects in terms of reduced deposition. The area of greatest benefit -- And this is what I referred to as results being consistent with the so-called Steubenville study. The area of greatest benefit occurs in this red area spreading roughly from southwestern Pennsylvania across over into southeastern Ohio. And those are areas that are receiving reductions, if you look at the scale on the left hand side, of 16 micrograms or more per cubic -- per square meter of territory.

Now, if you look at the map immediately below, this is EPA's simulation of mercury deposition reductions resulting from the CAIR rule, not from the mercury rule, but this is the CAIR rule for reducing SO<sub>2</sub> and NO<sub>x</sub>. This is the measure of the co-benefits from installing all of those scrubbers along the Ohio River Valley. And what we see is a virtually identical pattern where the largest benefits occur in southwestern Pennsylvania. There's some also in eastern Pennsylvania -- you can see that. It appears to be up around PP&L's service territory -- extending over into eastern Ohio. And in consideration of these maps and the virtually indistinguishable difference in the deposition benefits resulting between CAIR rule -- And I might note, and this is very, very critical to understand, this modeling simulation for the CAIR rule includes the effects of the interstate trading program. So all the power plants that are going to buy have bought. All the power plants that are going to sell have sold. So this is a net effect after the trading program. It's our view that given the virtually indistinguishable difference between these two scenarios that it is not possible to say that any state mercury rule more stringent than the EPA CAMR rule can produce measurable public health benefits. We just don't see it.

SENATOR MARY JO WHITE: Is it also safe to say then that even with a cap and trade program Pennsylvania stands to see significant mercury reductions in its air? Mr. Trisko: Absolutely, absolutely, even though the fact that many of those reductions -- Well, they're occurring in Pennsylvania because of the amount of plants that get retrofitted here. But many of the benefits that you will experience in Pennsylvania will result from scrubber retrofits in Ohio, Indiana, and Kentucky. That's the way the winds blow.

SENATOR MARY JO WHITE: That's the way the winds blow. Thank you very much. Other questions from the committee?

(No response)

SENATOR MARY JO WHITE: Thank you very much. Mr. Trisko: Thank you very much.

MR. HENDERSON: Our next witness is Gene Barr, Vice President for Political and Regulatory Affairs for the Pennsylvania Chamber of Business and Industry.

MR. BARR: Good morning, Madame Chair, Chairman Musto, Senator Williams. Thank you for the opportunity to speak here today about the mercury issue. As mentioned, my name is Gene Barr. I'm Vice President Political and Regulatory Affairs for the Pennsylvania Chamber of Business and Industry. The Chamber is the largest broad-based advocacy group in Pennsylvania. We represent thousands of members and about 1.4 million employees throughout the Commonwealth. Of course our members include many of the mining companies we've discussed here today, the power generating companies, as well as industrial and commercial users of the electricity that we're talking about here this morning as well. We're here today to state our support for Senate Bill 1201. We believe that the bill is a cost-effective way of dealing with the mercury issue largely due to the cap and trade that you heard discussed quite at length here. You have my testimony. I'm going to touch on some of the highlights. Much of what obviously we weighed in with has been brought up already here this morning, but just to touch on a few other things. You also heard about some of the issues relative to mercury, the high level associated from national sources and the very small bit that comes from mercury emissions from power plants themselves. For this reason and others, from our perspective and Chamber's perspective, this is an issue that is best dealt with at the national level. And, in fact, the U.S. has done that. It is the only country in the world to have set mercury emission standards for power plants.

Our problem with what DEP has proposed is as already been expressed here today, we do have a number of problems with that, not the least of which obviously is the elimination of what we believe to be one of the most cost-effective sides of the federal rule which is the cap and trade program. In addition to that, and we've already heard cited some of the Department of Energy and the EPA views relative to the technology, EPA said at the outset in the promulgation of their rule that technology to reliably control from all power plants is 5 to 10 years away which as we've heard is one of the reasons for why we've pushed our final controls out for a number of years. And you've already heard from others about the potential cost of the state program we're talking about here, potentially as high as a billion dollars with another almost 200 million dollars in annualized costs. Chamber's concern with this of course goes to the fact that from our perspective adopting a plan such as this has the real potential to increase costs to our members and of course to residents across Pennsylvania and also hurts jobs, jobs in both the power generating and the mining industry as well as manufacturing for an example I'll give you here. We have member companies many of whom have manufacturing facilities in certain cases where electric costs are 70 percent of their total operating costs. Obviously anything that is going to increase electric cost is going to have an immediate impact on those facilities and make those jobs unfortunately at those manufacturing facilities less competitive with other plants located across the U.S. and the world. The other -- In terms of some of the jobs as well as all of, you know, the power generation is now an open market here in Pennsylvania due to electric competition. Pennsylvania-produced power must compete with power produced in other states. To the extent that we make Pennsylvania power more expensive to produce, we again disadvantage and make uncompetitive power generation here in Pennsylvania again threatening jobs. And, again, those are some of the best jobs that we have here in the Commonwealth. Bottom line concern is from our perspective is that we look at with the DEP rule spending a lot

of money for what we believe to be no real benefit but very real threat to jobs and electric costs here in Pennsylvania.

The other thing that the committee has heard a little bit about is the, quote, stakeholder process. I'd like to make something clear up front. For the Chamber, I participated in the stakeholder process. We were one of the groups that was selected to serve on that. And it was a real good experience in terms of helping me and others to understand the mercury issue and assimilate a lot of information and hear differing viewpoints. But I think it's important to note that the going in process for the stakeholder process was not let's investigate whether we will have a state-specific rule. It was laid down to the stakeholders that there will be a state-specific rule, you can help design it if you want. And I think that's a critical differentiation here. There was not a discussion within the group about whether or not a state-specific plan was going to make sense for Pennsylvania. Given that and given the fact that when we finished that stakeholder process -- you already heard a number of the other speakers remark upon this and, Senator White, I believe you did as well -- the fact that the question that came up at the end of the stakeholder process is exactly what do we get with the state-specific plan. The key question here is, laying everything else aside, what benefit at what cost does the state-specific plan give us over what we are required to do federally. And we did not get as a further reference a adequate answer to that. There was no quantification in terms of what the benefit, the health benefits, to Pennsylvanians would be. From that perspective then, we believe that when you look at Executive Order 1 of 1996 which says that Pennsylvania law regulation shall be no more stringent than federal unless there is a compelling state reason, absent a compelling state reason which we do not believe was delivered in the stakeholder process or subsequent to that, we believe that the state-specific plan should not go forward.

You've also heard and has been remarked here there's been a lot of what I would call hype in terms of the real threats in terms of mercury, and I think Dr. Snyder addressed that much better than I can. However, just looking at it from a perspective of in terms of just a lay person, he talked about the Japanese. And, again, one would think that for a population that eats significantly more fish than we do, if indeed mercury is associated with that at the levels we're talking about, you would see those adverse effects there. In fact, one of the things that we found in terms of our research here is there have been at least one or two studies showing that IQ levels, whether that's a reflection of this or not, have actually been rising, that is 22 percent since the 1930s. The other thing that I think is critical in laying aside studies on each side, one of the things that I think carries a lot of weight from my perspective and other perspectives as well is the Centers for Disease Control. And I'd like to read, because I think it's important to get exactly right, what the Centers for Disease Control said because again there's been some misrepresentation in terms of what the CDC report said. This was in their view the most comprehensive research project in terms of measuring levels of different chemicals in Americans' blood, and this is directly quoted from their July 21st, 2005 telebriefing of CDC professionals, health professionals, and the media. Now, the 58 micrograms is in here. And of course you heard Dr. Snyder say in his view that is conservative as well. But still I'd like to read this because I think it's important. This is a direct quote. Mercury exposure is particularly important to women of child-bearing age because mercury levels above 58 micrograms are associated with neurodevelopmental effects in the fetus. Our exposure reports that no women in the survey had mercury levels that approached this concentration. But we do see that a small

percentage of women, about 5 percent of women, had levels within a factor of 10 of what has been defined as the health threshold effect. So we have no conclusive information of harmful effects associated with this. That is a direct quote from the Centers for Disease Control. And, again, we've seen this 5.7 percent extrapolated as Dr. Snyder has well pointed out.

In addition to that, I find a couple other interesting quotes. The retired surgeon general of the United States, Dr. Harold Koenig, quote, no U.S. women or children are being exposed to unsafe levels of mercury through fish consumption. Recently in February there was another announcement. Seychelles Islands there have been two studies over the years that proponents in here have often looked at. One is the Faroe Islands. One is the Seychelles. They've come up with some what I believe to be relatively finalized studies of the Seychelles Islands. And if you looked at news reports, there was one news report in the L.A. Times. And the chief researcher admitted to being dumbfounded and astounded when the results of the Seychelles came in. And this is again a quote. Either the mercury is too low to cause any real problem, or the positive effects of eating fish offset any risk, because they found absolutely zero adverse neurological development in children of the Seychelles Islands where of course those women eat significantly more than women here in the United -- eat more fish than women here in the United States, which brings up another important point that has been touched on briefly in some other forums as well about the significant health problems that are associated with not eating fish. When you look at the heart association, other health professionals, it advises fish be a part of a healthy diet. I think our concern is when you discourage people from eating fish and making that part of your diet, you actually potentially do much more damage in terms of heart disease and other illnesses than you do with any insignificant risk associated with mercury.

Two other quick things. And, again, you've talked about hot spots last week. We heard -- And, again, the 400-mile hot spot level was -- has been thrown around. But last week one of the proponents, as I recall, agreed that the entire state is a hot spot. Well, I'm not an expert, but I would say that if everything is a hot spot, then theoretically nothing is a hot spot. So I think it kind of reduces almost any kind of definition you might want to give to what a hot spot is and even whether it exists at all. One other thing that we've heard quite a bit in terms of this has been that this will be a great thing because we're going to create jobs with this putting in -- this environmental reg will create jobs. And I think that's an extremely slippery slope to start down. I think first we need to make sure that whatever this body does, whatever regulatory is -- And, again, let us state it is absolutely imperative and absolutely necessary and appropriate for this body to be involved in this debate. We need to make sure that whatever is proposed accomplishes some benefit for human health and the environment. And I think based on what we've heard, based on what we've seen, we can see very little evidence relative to that. But from a common sense perspective, I don't think we could ever say we can just legislate or regulate our way to full employment or better jobs. Whatever legislation, whatever regulation is there must have a benefit as we say to society, human health, and the environment. We can't simply suspend the rules of economics to pass certain items of a regulatory nature. And of course when you spend these dollars on things that don't accomplish any kind of positive effect, these are dollars that could be spent on other benefits, wages, or other positives in the community or in our society. From our perspective, again, the bottom line is what are we getting from the Chamber's perspective for our members and for Pennsylvanians in general in terms of the incremental benefit of state-specific rule versus what we know we'll be required to do at the federal level.

Thank you for your time, and I'll take any questions as you might have.

SENATOR MARY JO WHITE: Questions?

SENATOR WILLIAMS: You made me think of something, and I might have missed that testimony. You indicated someone testified that there would be jobs associated with I guess the -  
- putting the scrubbers, that kind of thing, in place.

MR. BARR: I've seen some things that have been printed that say this is great because we can create jobs with this.

SENATOR WILLIAMS: So that's not an industry. That's --

MR. BARR: That's not an industry.

SENATOR WILLIAMS: And also -- But that does -- Has the building trades weighed in on this conversation one way or the other?

MR. BARR: I'm not aware of that.

SENATOR WILLIAMS: It would be interesting to hear the perspective about the impact upon their industry in terms of the job issue.

MR. BARR: Of course I think it's also interesting to note, as previous witnesses have testified to, in fact, that when required companies may opt not to retrofit those plants, may simply choose to close those plants to of course not only do the trades not get to work, neither do the full-time employees employed at those plants as that power production goes elsewhere.

And the same with manufacturing, if it becomes too expensive to manufacture here in Pennsylvania because electric rates have become too high for this or other reasons, then those manufacturing jobs go elsewhere as well.

SENATOR WILLIAMS: That's clear. I guess my observation is it would be interesting -- Because the trades say the job growth would be negative rather than positive, frankly that would just be another pin in the argument that this was an industry of viability.

MR. BARR: Right. I think it's important you've heard the UMW here but also the International Brotherhood of Electrical Workers opposes the state rule as well. Hopefully that helps you a little.

SENATOR WILLIAMS: Yes.

SENATOR MARY JO WHITE: Mr. Barr, have you heard from your high energy user members as to what the impact might be on the cost of their goods and services and their ability to remain competitive and stay in business?

MR. BARR: I've not heard any hard dollars, Senator. But, again, when we look at someone whose energy costs are such a high percent of the total operating --

SENATOR MARY JO WHITE: What types of businesses are those?

MR. BARR: Those would be certain types of energy manufacturers as well who utilize energy to produce other types of energy or certain gases.

SENATOR MARY JO WHITE: Foundries, steel mills, those kind of --

MR. BARR: I haven't talked to them directly, but I've talked to some others. And there are various kinds. Again, 70 is the upper bounds probably based on what I've been able to find so far. And of course that number would slide back. But, again, given the pressures with energy prices now across the board, be it hydrocarbon or whatever else and the upward pressure on natural gas, anything that's going to provide further upward pressure on that is going to be of huge concern. No one has been able to put exact dollars to it, some of that of course because we're still investigating what would be required under a state-specific rule if that were to come into play. So no one's been able to give hard dollars at this point, but it's something clearly they're all looking at and very much concerned about.

SENATOR MARY JO WHITE: Any other questions?

(No response)

SENATOR MARY JO WHITE: Thank you very much.

MR. BARR: Thank you.

MR. HENDERSON: Our next witness is Myron Arnowitt, Western Pennsylvania Director, Clean Water Action.

SENATOR MARY JO WHITE: Good morning.

MR. ARNOWITT: Thank you and good morning. On behalf of Clean Water Action's 80,000 members across Pennsylvania, I would like to thank Senator White and the committee for the opportunity to address you this morning concerning the pressing issue of reducing the mercury emissions from coal-burning power plants in Pennsylvania. Clean Water Action has urged Pennsylvania to take action on the issue of mercury contamination in our waterways for well over a decade, and we are pleased to see the highest levels of our state government taking up this issue.

Before I begin, I would like to note that in my capacity as Western Pennsylvania Director of Clean Water Action, I've had more than 10 years of experience working on air pollution regulation including serving on the Allegheny County Health Department's Regulation Subcommittee which reviews and makes recommendations on all proposed local air pollution

regulations. I've helped author new air pollution regulations for Allegheny County, and together with both U.S. Steel and the United Steel Workers have engaged in the successful consensus process to develop local air pollution regulations that meet environmental labor and business concerns. The fundamental question that the recently introduced legislation, SB 1201, has raised is whether Pennsylvania should only use the federal mercury regulations or should we allow the state DEP to continue an already begun regulatory process to establish state-specific mercury regulations. Clean Water Action opposes the use of federal mercury rules for a number of reasons.

Our first major concern is that the federal rule gives us no guarantee that Pennsylvania power plants will, in fact, reduce mercury emissions. SB 1201 states there will be an 86 percent reduction. However, this is highly misleading. The federal rule does not require an 86 percent reduction in Pennsylvania, and any statement to that effect is incorrect. Plants in Pennsylvania will have the choice of either reducing emissions or buying emission credits from any other plant in the U.S. that has them available. As a result, while there will be emission reductions, some may happen in Pennsylvania, some may happen in Texas, some may happen in New Hampshire. Under the federal rule, we simply have no control over where mercury emission reductions will occur or how much, if any, reductions will occur in our state. If power companies would agree to an 86 percent reduction at Pennsylvania power plants, we would certainly support such an effort. However, today power companies have refused to make any such commitment. The chief reason for utilities to prefer the federal trading system is to avoid making some reductions in Pennsylvania. We need a state-specific rule with no trading to ensure that we get mercury reductions in Pennsylvania.

To give another example of why trading emission credits for a highly toxic pollutant like mercury is poor public health policy, consider this hypothetical situation. What if the federal government decided to allow oil refineries to trade emission credits for benzene? Benzene is a known human carcinogen that is emitted in large quantities from oil refineries, and a number of Clean Air Act rules have required emission reductions of this hazardous chemical. Instead of reducing their emissions, what if the Sunoco refinery in Philadelphia could buy emission credits from a refinery in Texas that had overcomplied with the benzene rule? While there may have been a national reduction in emissions, the residents of south Philadelphia would still be exposed to high levels of benzene from the Sunoco refinery. The benefits of the rule would not be felt there. In fact, they would see continued cases of leukemia in their community as a result of this hypothetical trading scenario. As this example illustrates, trading emission credits could result in dangerous hot spots of mercury exposure. You may have heard industry state that reducing Pennsylvania emissions would have no effect because only 1 percent of global mercury comes from U.S. power plants. However, this is not relevant for Pennsylvania as most of the mercury deposited on Pennsylvania is locally, not globally, produced. Leonard Levin, Ph.D., for the Electric Power Institute presented information to the DEP Mercury Workgroup October 14, 2005 indicating that on average less than 20 percent of the mercury deposited on Pennsylvania comes from global sources, in other words, other countries.

EPRI, and this is a power industry sponsored organization -- research organization, their modeling indicates that in some parts of Pennsylvania global contribution is less than 10 percent. Clearly we must address local sources and stop discussing what comes from China as it's simply

not a factor here. And I've attached his slide for your review. Dr. Mark Cohen from NOAA also presented data to the Mercury Workgroup November 18th, 2005. And his work found that 50 percent of ionic mercury deposits within 300 miles of a mercury source. Dr. Levin also cited Dr. Cohen's data in his presentation. Ionic mercury is the form of mercury that unfortunately is highly water soluble, and it's easily converted into the toxic methylmercury that contaminates fish. Given that Pennsylvania power plants are now number two in the U.S. for mercury emissions, clearly a significant amount of mercury emitted by Pennsylvania plants is deposited in the state. Models aside, several recent studies have found clear evidence that hot spots can and do occur. Data released from the ongoing EPA study of rainwater in Steubenville, Ohio found 67 percent of the mercury generated by local or regional sources within 400 miles. In addition, a recent study of mercury levels in fish in Massachusetts found fish tissue contamination decreased 32 percent after emission reductions were enacted for a cluster of nearby incinerators that were the major local source of mercury. Clearly Pennsylvania could reduce levels of mercury in our fish if we instituted state-specific regulations. And I have attached copies of the actual study. I would urge the committee to review them. Dr. Snyder at the beginning asked some questions about that he's seen no evidence of certain things, and I believe the study will answer some of those questions. They have taken historical data --

SENATOR MARY JO WHITE: You're talking about the incinerators now?

MR. ARNOWITT: The study in Massachusetts where they looked at a fish tissue sample over time. They've also done historic analysis of mercury content in sediments and lakes in Massachusetts showing a rise in sediment over the last hundred years.

SENATOR MARY JO WHITE: These were incinerators, though. They were not coal-fired power plants.

MR. ARNOWITT: The -- Massachusetts has a variety of coal sources as part of the study. And the part -- the statistic I'm citing here does relate to nearby incinerators because that's where they achieve the highest level of mercury reduction.

SENATOR MARY JO WHITE: I mean, the incinerators do have lower stacks they don't get the dispersion that you would get from a coal-fired power plant. They may or may not have the same controls. They're certainly not burning the same fuel.

MR. ARNOWITT: I believe that if you review the study -- And I would strongly encourage you to invite the researchers who did that study of the Massachusetts DEP to come here and testify so you can ask them every detailed question you want. Another problem with relying on the federal mercury rule is that time lines for emission reductions is far longer than under DEP's proposal. While DEP gives utilities eight years, until 2015, to make reductions, the federal rule lacks clear deadlines for reductions given the use of emissions trading. The nonpartisan Congressional Research Service used EPA's data to determine that the federal mercury rule would only provide a 50 percent reduction by 2020 and would not reach the 70 percent reduction goal until 2030. The federal rule would thus allow a full generation of Pennsylvania children to be at risk from ongoing mercury exposure. Further, even if the federal 70 percent reduction is eventually reached, it still allows three times as much mercury as the DEP proposal. Finally, there are legal

uncertainties with relying on the federal mercury rule. SB 1201, if passed, would prohibit any state regulation of mercury emissions.

However, if Pennsylvania and other states if they are successful in their legal challenge to the federal rule, we would be left with no regulation at any level of government. While the state could later go back and address this issue, it would mean many years lost through the delay in the process. Prohibiting the state from being able to regulate mercury is a dangerous step to take. While many environmental, public health, and state pollution agencies have objected to the federal mercury rule, has DEP, in fact, constructed a state rule that ignores industry's concerns about the difficulty in reducing mercury emissions? Our analysis finds that DEP has, in fact, created a mercury rule for Pennsylvania that balances health and economic concerns providing greater flexibility to industry compared to other pollution regulations. First, DEP gives industry eight years to reach a 90 percent reduction in mercury emissions. Typically, federal rules on sources of hazardous air pollutants such as mercury give industries only three years to reach a 90 percent or greater reduction. This is the MACT, or Maximum Achievable Control Technology, standard that's been previously mentioned. There are already industries in this country that have complied -- that are sources of mercury that have already complied with federal MACT standards. These industries included municipal waste incinerators, medical waste incinerators, sewage sludge incinerators, chlorine producers, coke plants, and steel plants. We have yet to see any analysis on why the power industry is incapable of meeting a three-year deadline like other industries. However, DEP has chosen to give them an eight-year time line, a significant extension. Second, DEP is allowing companies to meet the 90 percent reduction standard through installation of certain pollution control equipment, not through actual measurement of emissions. This approach presumes compliance if the equipment is installed as opposed to companies having to demonstrate that emission reductions have actually been achieved. Industry will not need to worry about whether control technology works as advertised because DEP will grant them compliance simply for installation.

In addition, since some companies are being required to install this equipment to comply with other air pollution rules, DEP is allowing companies to comply with two rules for the price of one. Note there's no additional burden on these companies to comply with DEP's mercury rule. Overall, the presumed compliance approach by DEP provides great flexibility for industry. Finally, some companies, most likely the smaller ones, will receive extra allowances from DEP to excuse their lack of compliance with the 90 percent rule. While the extent of this extra allowance program is not fully known, DEP is clearly looking for ways to help every power plant in Pennsylvania meet the requirements of the state rule without an undue burden on industry.

In summary, we find DEP's proposed mercury rule is oriented to provide public health benefits but in a flexible approach that provides many benefits to the power industry that other industries in our state have not been granted. Several concerns have been raised about DEP's proposed mercury rule especially the potential for the rule to impact jobs in Pennsylvania. The UMWA has raised the issue that power companies might switch to using western coal as a result of the state mercury rule. Interestingly, several power companies at DEP's Mercury Workgroup reported that they have already started switching their coal supplies to western coal. In fact, Mr. Trisko just testified to that. It is important to note that this coal switching has started before any

federal or state mercury rule has come into effect. Clean Water Action is greatly concerned that the Pennsylvania mercury rule is being used as a scapegoat for an economic trend that power companies are already engaged in. If a state mercury rule is prohibited, there is no evidence that coal switching won't occur anyways. And what would the result be? There will be fewer coal mining jobs in Pennsylvania in addition to having a polluted environment. In fact, only the DEP mercury rule provides any kind of incentive to burn Pennsylvania coal. The presumed compliance option in the rule requires using 100 percent bituminous. You may have heard that Pennsylvania coal is high in mercury content and requiring mercury emission reductions will hurt coal mining -- local coal mining. However, just the opposite is true. Requiring pollution controls on mercury levels the playing field with lower mercury coal.

I've attached an article from February 11th in the Wheeling News-Register concerning the temporary shutdown of a CONSOL mine. CONSOL spokesman, Tom Hoffman, states in the article that he, quote, expected that as other power plants bring scrubbers online in the next few years, demand for Shoemaker's high sulfur, bituminous coal will rise. Even the coal industry understands that requiring pollution controls is beneficial when you're mining high pollutant coal. While this example pertains to sulfur control and sulfur scrubbers, we see no reason why the same would not be true of mercury controls. In other words, if it's standard to take most of the mercury out of the coal in your process, then it's not a disadvantage to have high mercury content coal or coal that's relatively a little bit higher than other coal.

Finally, we encourage the committee to analyze the very real economic benefits to Pennsylvania requiring mercury pollution controls. I've also attached an April 20th article from the Post Gazette which details the expansion of a 500 job Siemens plant in Washington County that makes air pollution control equipment. Environmental regulation is driving the growth in this job sector, and Pennsylvania is well positioned to take advantage. Requiring pollution mercury controls means both manufacturing jobs as well as operating jobs for the equipment once installed.

In conclusion, we encourage the committee to examine the questions thoroughly before moving forward with the proposed legislation SB 1201. I would also encourage you to actually interview health researchers who have been researching this issue. I've noted that you have not invited any of them, and I would -- I think that would be critical. DR. Snyder while his credentials as a clinician does not appear to have done any research on the health effects of mercury, and I would encourage you to talk to researchers who are actually researching in this field.

If the committee has ideas for how to improve state mercury regulations, we look forward to hearing your ideas. Clean Water Action strongly supports DEP's proposed state mercury rule for health, environmental, and economic benefits. Families all across Pennsylvania are at risk for mercury contamination every time they eat fish caught in our state. The reality is that people with lower incomes are the residents in our state who are most likely to be eating locally caught fish. It's only fair that we protect every resident and ensure that we can one day not worry about the hazards of fish contamination. Thank you.

SENATOR MARY JO WHITE: I'm sorry, but I just have to ask you, families all across Pennsylvania are at risk for mercury contamination every time they eat fish caught in our state, I

mean, that absolutely flies in the face of everything we have heard from every witness here. Can you tell me one person in Pennsylvania who has had their health impaired in any way from eating Pennsylvania fish? Do you know of a single case?

MR. ARNOWITT: I think it is true that people in Pennsylvania have mercury in their bodies.

SENATOR MARY JO WHITE: We all have mercury in our bodies.

MR. ARNOWITT: It's true that some of this mercury has come from --

SENATOR MARY JO WHITE: It comes from the ground. It's an element.

MR. ARNOWITT: If you'd like to talk, you can talk, but if you'd like me to talk -- What I'm saying is that people -- residents of Pennsylvania have mercury contamination in their bodies as a result of eating fish in Pennsylvania that is contaminated with mercury. There is obviously a lot of debate about what the health effect that happens next.

SENATOR MARY JO WHITE: There certainly is.

MR. ARNOWITT: I think there is considerable credible evidence, and I would urge you to instead of asking non-health experts questions about health to ask health experts questions about health to determine --

SENATOR MARY JO WHITE: Are you a health expert?

MR. ARNOWITT: No, I'm not. And you've asked every other person here who's not a health expert the same question. So I would ask you to invite health -- people who are researching the health effects of --

SENATOR MARY JO WHITE: Well, see, I knew Dr. Snyder as a health expert.

MR. ARNOWITT: Dr. Snyder when asked if he has done research on this did not really answer that question, and we look forward to hearing what comes from his center. But I think you should really be talking to researchers who are researching the health effects of mercury on women and children and adults in Pennsylvania -- I'm sorry, not in Pennsylvania, but in general.

SENATOR MARY JO WHITE: We will do that. Senator Williams.

SENATOR WILLIAMS: I have several. I guess at the center of this is my concerns from those who are opposed to this legislation. They tend to follow a pattern, and frankly it's a bit confusing and sometimes troubling. You all don't necessarily stick to facts. You use a lot of theory, supposition, and suggestions. Even your comments when it comes to those who have researched this area -- I've researched this area, and frankly there is no common ground. There will be a researcher we can bring in here who will say mercury has this kind of impact and mercury has this kind of impact, and I'm sure you're well aware of that. But let's go with what you've said

today. I'll make five observations using your own testimony. Paragraph 2, second page and you talk about benzene, a highly -- a carcinogen. Are you comparing benzene to mercury?

MR. ARNOWITT: I'm only using it as an example of another hazardous air pollutant where trading is not allowed and --

SENATOR WILLIAMS: I'm asking you a direct question.

MR. ARNOWITT: I'm not comparing --

SENATOR WILLIAMS: You used a very -- And this is -- When somebody like me comes before you who doesn't represent the industry, who doesn't have -- who represents those poor people you talk about at the end -- And frankly sometimes I resent the fact that people use them as verbal cannon fire in these arguments.

MR. ARNOWITT: Some of --

SENATOR WILLIAMS: As you suggested to the chairperson, we can't talk at the same time.

MR. ARNOWITT: Very well.

SENATOR WILLIAMS: Thank you. And so you used it in your own testimony, and I drew great umbrage to that because when you used your testimony to say benzene -- And by the way, I represent the district that has the Sunoco plant that I've actually picketed outside from. And you use this as an analogy, as an alarmist in this testimony to compare mercury to benzene. I have a big problem with that because when I'm trying to listen to your conversation -- I opened up, you know, Clean Water Action, and they're probably a fair group, and they have an opinion. I have a big problem with that. So I'm trying to figure out how you get benzene, a carcinogen, and compare it to mercury. And studies have represented -- factual studies -- We can get, you know, researchers in here, and they'll tell you pointblank -- There won't be one who says it's not a carcinogen. There will not be a researcher who will not come here and say it's not a bad thing. But you can't do that with mercury. So I'm trying to figure out why you would choose to use this as a hypothetical example in this type of testimony.

MR. ARNOWITT: Well, first of all, I've never compared benzene to mercury. They are both classified as hazardous air pollutants until recently. I also never called mercury a carcinogen.

SENATOR WILLIAMS: I'm clear about what you didn't say.

MR. ARNOWITT: I think --

SENATOR WILLIAMS: I want to be very clear. I'm clear about what you said. I'm clear about how you couched it. I want to be clear about why you chose to do that, because let me be very clear, when you use benzene in the context of this, you lose credibility. And when you use exaggerated terms, you lose credibility from those of us who frankly are sitting in the middle of

this conversation. And you did use it, and frankly I'm clear about the fact that you didn't use it as a carcinogen, et cetera, et cetera. Let's be clear about what you posed it as.

MR. ARNOWITT: I did not pose benzene and mercury as being identical. I will say they are both very serious toxic pollutants that are a problem for residents of Pennsylvania. They both are -- You can disagree with me on that.

SENATOR WILLIAMS: I'm not disagreeing. I asked you a direct question of which you didn't give me a direct answer. I asked you --

MR. ARNOWITT: That's why I compared --

SENATOR WILLIAMS: -- why you used this 100 example in this conversation, and you have chosen to suggest to me, well, I didn't say it was a carcinogen. I'm clear with all the lawyers will say you won't get sued. But I'm not clear why you would use a real hypothetical as opposed to this which doesn't relate to the argument at all.

MR. ARNOWITT: No. What I'm attempting to say, if you would let me speak now --

SENATOR WILLIAMS: Absolutely.

MR. ARNOWITT: Okay. What I am saying is that they are both dangerous chemicals that Pennsylvania residents are exposed to. I think the example around benzene is important because it shows the dangers of trading and why we have not allowed trading with every other hazardous chemical but yet we are allowing it with mercury.

SENATOR WILLIAMS: Are you suggesting that mercury reaches the level of hazardous element as does benzene?

MR. ARNOWITT: Do you think that a learning disability or cancer --

SENATOR WILLIAMS: I'm asking the question. The answer is either yes or no.

MR. ARNOWITT: They are different health effects. They are different -- I'm not going to tell someone --

SENATOR WILLIAMS: We'll move on. We'll move on because clearly you -- And that's the problem. When people come with clean hands, they give an answer. One and one equals two. It doesn't equal maybe three and a half. And you can either say yes or no. If you choose not to, that's your choice. I mean, I'm not going to play the game of bogeyman is in the closet. I'm not a child. This is an adult conversation to protect the future generation, and either you want to participate seriously about it or you want to exaggerate it. And I'm trying to be clear about what you --

MR. ARNOWITT: I don't believe I am exaggerating.

SENATOR WILLIAMS: You used something -- That is an exaggeration to suggest that mercury and benzene are comparable. They're not.

MR. ARNOWITT: And I'm saying --

SENATOR WILLIAMS: And, again, you choose to over-talk me when I make my points when you feel uncomfortable with my comments or the 102 Chair's comments, but you want to tell us that we shouldn't be. That's my point. You can't have it both ways. I'll move on to the second point because I'm never going to get to the answer on the first point. The second point is, you talked about Dr. Mark Cohen, and I guess I'll use the whole testimony. Dr. Mark Cohen from the National Oceanic and Atmospheric Administration also presented data to the DEP Mercury Workgroup on November 18th, 2005. His work found that 50 percent of ionic mercury deposits within 300 miles of a mercury source, slide whatever it is. DR. Levin also cited Dr. Cohen's data in his presentation. Ionic mercury is the form of mercury that unfortunately is highly water soluble, which I guess you're making the point that in Pennsylvania the mercury that we're generating can get through water, and is easily converted to toxic methylmercury that contaminates fish. Given that -- Pennsylvania I guess is at the forefront of this. Given that Pennsylvania power plants -- Now, we've jumped from this soluble contaminant and Pennsylvania 103 has it. Given that Pennsylvania's power plants are now number two in the U.S. for mercury emissions, clearly a significant amount of the mercury emitted by Pennsylvania plants is deposited in the state. I have not found in this paragraph any scientific basis of a transmission process. That's sort of missed in this paragraph. And you take a leap of faith or assumptions to make that argument. So I'm trying to figure -- And you've made the observation that we're taking a leap of faith trusting that Dr. Snyder has done research. So I'd like to know where you -- Where's the fact that -- Where's the connection?

MR. ARNOWITT: Every Pennsylvania power plant emits ionic mercury. No one in this room would deny that. So what else do you need to know? You need to know how the mercury gets from the plant into the waterway?

SENATOR WILLIAMS: You suggested that because these power plants emit this we're contaminated -- that they are, in fact, contaminating the fish. That would be the conclusion I would make. Maybe I'm misreading the paragraph.

MR. ARNOWITT: Yes, that's correct. The 104 power plants --

SENATOR WILLIAMS: So, therefore, how do you make that determination? Where scientifically in this paragraph does it say A is connected to B?

MR. ARNOWITT: The power plants emit ionic mercury. Ionic mercury deposits. Half of it deposits within the 300 miles. Therefore, that mercury is being deposited -- Say there's a plant near where I live in Pittsburgh, which there is, that will deposit their mercury, this ionic mercury, on Pennsylvania. That's what the importance of Dr. Cohen's modeling.

SENATOR WILLIAMS: But Dr. Cohen's model does not say that, in fact, we can assume that that contaminates the fish. That doesn't say that. And it doesn't say that in this paragraph

because the report doesn't say that. So you're saying that, or you're implying that. And I'm trying to figure out why you would do that without scientific basis from the report that you extract information from and then sort of wordsmith it to imply that because number two and then the fish and then we're contaminating fish.

MR. ARNOWITT: Have you talked to Dr. Cohen because I'm sure he believes that the ionic mercury does get converted to methylmercury?

SENATOR WILLIAMS: I haven't talked to Dr. Cohen.

MR. ARNOWITT: Well, you should read his presentation and you should --

SENATOR WILLIAMS: I'm going to read his presentation.

MR. ARNOWITT: Because that's what he -- is his research and many, many, many other researchers. The debate is not over --

SENATOR WILLIAMS: Does Dr. Cohen -- I apologize. Go ahead. I'm sorry.

MR. ARNOWITT: The debate is not over whether or not the mercury that gets into the fish is coming from power plants. The debate is over the health effects. You can --

SENATOR WILLIAMS: Well, the fish sort of relates to how you become affected by --

MR. ARNOWITT: But all the researchers just think that it does, in fact, get into the fish. It doesn't happen naturally.

SENATOR WILLIAMS: And the third observation is the paragraph right below it. It 106 talks a lot about the process, if you clean up the water, how much we will reduce the emission to the fish. It doesn't talk about how much mercury is in the fish because to go to the prior paragraph all the conversation about the contaminant in the fish, there's a lot of conversation about that. I don't see any stats that say, you know, that 32 percent reduction. What's it reduced from?

MR. ARNOWITT: Well, if you read the report, they have the levels of the -- the mercury levels in the fish prior to reducing mercury emissions from the plants in Massachusetts. And then they tested the fish after the reductions had gone into effect, and that's the reduction was before emission control and after emission control.

SENATOR WILLIAMS: And so does it have a concentration level?

MR. ARNOWITT: Yes. It's all in the study.

SENATOR WILLIAMS: And does it say that the fish are contaminated prior to the reductions?

MR. ARNOWITT: Yes.

SENATOR WILLIAMS: And it says that those fish are not edible?

MR. ARNOWITT: Yes. They do have a fish --

SENATOR WILLIAMS: So the study, in fact, covers and studies fish that are not edible.

MR. ARNOWITT: They're not edible because of mercury contamination.

SENATOR WILLIAMS: Right. So those are contaminated fish.

MR. ARNOWITT: Yes.

SENATOR WILLIAMS: We're not talking about contaminated fish. We're talking about fish that may have mercury in them in Pennsylvania.

MR. ARNOWITT: We have a mercury --

SENATOR WILLIAMS: So is there a study that talks about fish that are edible and the reductions that would occur within them?

MR. ARNOWITT: Just like Massachusetts, Pennsylvania has fish advisories because of mercury contamination, and I believe you're calling that not edible. We have the same problem.

SENATOR WILLIAMS: Do we have -- Do you have a study that talks about the reduction from edible fish and the reductions that would occur in that area?

MR. ARNOWITT: Why do edible fish need 108 reductions?

SENATOR WILLIAMS: Because edible fish have mercury in them.

MR. ARNOWITT: Okay. Do you mean by edible like fish people would actually eat?

SENATOR WILLIAMS: Absolutely. I mean, edible is for edible.

MR. ARNOWITT: The fish that were studied in the Massachusetts study are yellow perch and large mouth bass.

SENATOR WILLIAMS: Okay. I'm not talking about the type of fish. I'm talking about --

MR. ARNOWITT: I mean, they're fish people would fish for and eat.

SENATOR WILLIAMS: Okay. So are you allowed to eat them?

MR. ARNOWITT: They're edible fish.

SENATOR WILLIAMS: Are you allowed to eat them? That's what I'm talking about.

MR. ARNOWITT: No one goes out and puts you under arrest for eating a fish if there's a fish advisory. You're allowed to eat them.

SENATOR WILLIAMS: We're confusing each other, so we'll move on to the fourth part. I think everybody else understands what I'm 109 saying, and you're pretty smart. I think you understand --

MR. ARNOWITT: If anybody else would like to explain it to me --

SENATOR WILLIAMS: They will after the hearing I'm sure. The fourth part of the -- The fourth observation is Page 5. Even the coal industry understands that requiring pollution controls is beneficial to mining high pollutant coal. While this example pertains to sulfur content and sulfur scrubbers, we see no reason why the same would not be true for mercury controls. So if the industry understands it and you want to use the industry as a standard, why aren't we trusting that the industry is not already going to make the necessary changes?

MR. ARNOWITT: Well, I'm talking about the coal industry.

SENATOR WILLIAMS: I'm asking the question. If the industry understands that there's going to be a economic benefit, why would we not trust that they understand it in this legislation how it's currently constructed?

MR. ARNOWITT: Well, I would suggest you invite Tom Hoffman from CONSOL to come and 110 explain his statement because I think his statement's pretty clear, and I don't see any problem with accepting it.

SENATOR WILLIAMS: And in the last part to the people that I represent, the reality is that people with lower incomes are the residents in our state that most likely will be eating locally caught fish. First of all, I represent a high concentration of people who are considered low income. I'd love them to eat fish. They are most impacted by cancer. They are most impacted by those plants that you're talking about. They're most impacted by a variety of other issues. Eating this type of fish is not one of those areas. So do you have any study that would suggest that low-income people that I represent are being adversely affected by this contaminated level of fish? I mean, like they are by high blood pressure, like they are by heart attacks, like they are by cancer, do you have anything that suggests or any study that would show me that they are being adversely affected by this area that you all think is a terrible, terrible 111 thing?

MR. ARNOWITT: I don't have a study about your district or about Philadelphia.

SENATOR WILLIAMS: Not my district. Everybody keeps running here with low-income people. Pick any. I don't care where they are in Pennsylvania. Do you have any study that shows low-income people have been adversely affected by mercury contamination in fish?

MR. ARNOWITT: I don't have information here with me about it.

SENATOR WILLIAMS: Do we have any anyplace that you know of?

MR. ARNOWITT: I will say that I know the Pittsburgh area better, and I've talked to lots of people about subsistence fishing that's going on in Pittsburgh. Some of them live nearby my neighborhood. And I certainly have observed it. I know plenty of other researchers who observed it. And --

SENATOR WILLIAMS: Do they have a study, the researchers?

MR. ARNOWITT: I will work to find you the information.

SENATOR WILLIAMS: So the answer 112 regrettably today --

MR. ARNOWITT: I don't have it with me.

SENATOR WILLIAMS: -- is no. Is that right?

MR. ARNOWITT: I think that --

SENATOR WILLIAMS: You have a hard time saying that word, don't you? Sometimes we just don't have the answers. Do you have a study, yes or no, today?

MR. ARNOWITT: I do not have a study with me.

SENATOR WILLIAMS: That means no. It's okay.

MR. ARNOWITT: I will ask some of the researchers.

SENATOR WILLIAMS: Nobody's going to arrest you today because you don't have the answer. It's all right. Thank you.

SENATOR MARY JO WHITE: I just have one last question. You talk about that only 1 percent of global mercury -- you use the global mercury only 1 percent, and you say this is not a relevant statistic for Pennsylvania as most of the mercury deposited on Pennsylvania is locally, not globally, produced. Now, when you say locally, what do you 113 mean, because I'm looking at the map that Mr. Trisko gave us modeled by the EPA that shows the red hot spots, if you will. I hate to use that word. But the concentrations of mercury in Pennsylvania are in western Pennsylvania. Now, does locally mean 300 miles away?

MR. ARNOWITT: Yeah, locally can mean within -- because I'm looking at Pennsylvania as a whole.

SENATOR MARY JO WHITE: Well, locally --

MR. ARNOWITT: Yes.

SENATOR WILLIAMS: If you're looking at western Pennsylvania which has the highest levels according to the EPA of mercury concentrations, are you talking 300 miles west of western Pennsylvania as being locally?

MR. ARNOWITT: I think that western Pennsylvania is impacted by local, local emissions as well as some emissions to the west as well, yes.

SENATOR MARY JO WHITE: Some emissions to the west. So, in other words --

MR. ARNOWITT: It's a combination.

SENATOR MARY JO WHITE: -- it could very well and probably is Ohio power plants along the 114 river?

MR. ARNOWITT: There are a lot of power plants in western Pennsylvania where I live, Senator White. They are part of the problem. Some of the Ohio plants are part of the problem.

SENATOR MARY JO WHITE: Well, we know they're part of the problem because Pittsburgh's having serious air issues, not necessarily mercury issues, related to the movement west to east of pollutants from Ohio, are they not?

MR. ARNOWITT: Yes, that is part of the problem in Pittsburgh. It is not the complete problem.

SENATOR MARY JO WHITE: And will a state rule do anything to help that? I mean, again, we're not putting a dome over our state, so local emissions include Ohio emissions that will remain unregulated. Is that correct?

MR. ARNOWITT: No. They'll be regulated in other ways, ways we don't think are very good.

SENATOR MARY JO WHITE: They will be able to cap and trade?

MR. ARNOWITT: Well, I don't know what Ohio is going to do. Most of the states in the region are considering mercury regulations. However --

SENATOR MARY JO WHITE: Most? Most?

MR. ARNOWITT: In the eastern half of the United States?

SENATOR MARY JO WHITE: Ohio is cap and trade.

MR. ARNOWITT: There are many proposals in the midwest.

SENATOR MARY JO WHITE: Oh, yes, I know. There is one in Illinois and one in Michigan. Michigan is changing its mind because of the impact on -- potential impact on electric prices.

MR. ARNOWITT: Maybe this week, but we'll see what they end up doing finally.

SENATOR MARY JO WHITE: Well, we'll see what we end up doing finally, too. But I do appreciate you being here today. If you have any follow-up information you would like to provide Senator Williams, if you would send it to me as the chair, I will see that all committee members see it.

MR. ARNOWITT: Sure.

SENATOR MARY JO WHITE: And we will perhaps take you up on your suggestion that when we hear 116 from the secretary again perhaps we'll hear from some additional public health personnel.

MR. ARNOWITT: Thank you.

(The hearing concluded at 11:14 a.m.)