COMMONWEALTH OF PENNSYLVANIA

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF AIR QUALITY

VERBATIM MINUTES

MERCURY RULE WORKGROUP MEETING

TIME 9:30 A.M.

Rachel Carson State Office Building
400 Market Street, Room 105
Harrisburg, Pennsylvania 17105

NOVEMBER 30, 2005

REPORTED BY:

Esteban L. Diaz
Diaz Data Services

AGENDA TOPICS

October 28, 2005

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MR. FIDLER:

I'd like to welcome everyone to our workgroup meeting this morning. I hope everyone had a restful and relaxing holiday, and basically roll up their sleeves and discuss options today, because that's what a large part of the meeting is, is going to, is going to be about. We'd like to hear from you as to options or ideas or thoughts or concepts, you may have been formulating, as a result of many of the presentations that have been made over the course of the last three meetings. There has been a lot of information shared, there's been a lot of good discussion. There's been some really helpful questions asked by all of you. And with the answers that have been provided, hopefully we have established a good basis to, to move forward with the next phase, which is discussing options that, in fact, we may be considering as we move forward with the state's specific rule. By way of the agenda today, we do have an additional speaker on health effects that was requested at one of our very early meetings, it might have

been at the end of the very first meeting. And as I mentioned at our last meeting, as a lead in to our discussion of options, we have been successful in getting Bill Becker and Dick Ayres, who were very deeply involved in developing the STAPPA/ALAPCO state model, to come and be with us today at 11:00 o'clock a.m. to discuss the many different considerations and options that were reviewed prior to STAPPA coming up with the model that they've released, which basically contains two options for consideration by states interested in moving forward and independently with a state specific rule. So as has been the tradition, why don't we start by going around the table and introducing ourselves so that we're all on the same page and we're helping our recorder understand who's situation where. I'm Tom Fidler, Deputy Secretary for the Office of Waste, Air, and Radiation Management.

MS. EPPS:

Joyce Epps, Air Director of Pennsylvania's Department of Environmental Protection.

MR. WESTMAN:

Roger Westman, Allegheny County.

MR. BECKER:

And Tom -- STAPPA/ALAPCO model rule.

MR. FIDLER:

What did I say?

MR. BECKER:

Just STAPPA.

MR. CANNON:

David Cannon with Allegheny Energy.

MR. CLEMMER:

Reid Clemmer with PPL.

MR. VALENTINE:

Jeremy Valentine, Federal of Sportsmen’s Clubs.

MR. BURKE:

Frank Burke, Consol Energy.

MR. TRISKO:

Gene Trisko for United Mineworkers of America.

MR. WELSH:

Mike Welsh, International Brotherhood of Electrical Workers.

MR. BIDDEN:

Doug Bidden, Electric Power Generation Association.

MR. McPHEDRAN:

Charlie McPhedran, I’m an attorney with Penn Future.

MS. PARKS:

Nancy Parks, the Sierra Clubs Clear Air Chair.

MR. WILCOX:

Nate Wilcox, Penn Environment.

MS. FLORA:

Toni Flora, Clean Air Council.

MR. ARNOWITT:

Myron Arnowitt, Clean Water Action.

MS. RAMSEY:

Billie Ramsey, ARIPPA.

MR. DAVIS:

Don Davis, Penn State.

MR. BRISINI:

Vince Brisini, Reliant Energy.

MR. TETKOSKIE:

Bruce Tetkoskie, Citizens Advisory Council, and apparently the Clean Air Council too.

MS. WEST MARMAGAS:

Susan West Marmagas, Collaborative on Health and the Environment.

MS. SEPPI:

Susan Seppi, Group Against Smog and Pollution.

MS. STADLER:

Felice Stadler, National Wildlife Federation.

MR. ORD:

Chuck Ord, Energy Consumers of Pennsylvania.

MR. CHALMERS:

Ray Chalmers, EPA Region 3.

MR. BARR:

Gene Barr, Pennsylvania Chamber.

MS. WITMER:

Pam Witmer, Pennsylvania Chemical Industry Council.

MR. FIDLER:

Okay. Thank you everybody. As has been the case as we, as we raise a comment or involve ourselves in discussion, please identify yourself so the stenographer can accurately indicate your responsibility for the comments and that we can track the progress that’s been made in the discussion. Because there’s been a lot of information shared over the last three sessions together, we at least thought it would be very helpful to provide a bit of a recap as, as the basis for moving forward with a discussion of options today. And to recap a bit, the objectives of the exercise recap a bit some of the information that has been shared through the speakers that have come to meet with us and make presentations to us, and just to focus the effort once again, as, as prefaced to a lot of the

discussions that will go on today, and Joyce has agreed to provide this recap for us.

MS. EPPS:

Good morning Tom. The recap that I will provide this morning will focus primarily on the objectives of the workgroup. Within the past six weeks there have been a number of inquiries about whether we would be moving forward with the development of a Pennsylvania specific rule making. And so I think it's important to clarify that we will be developing a Pennsylvania specific rule making, that was the directive of the Environmental Quality Board on August 16th, 2005. As you know, during the past six weeks we've brought in a number of top-notch presenters, and the focus has been on background information. We also discussed the health benefits; there was a request that we discuss co-benefits of the federal rule. And we've had a number of presenters focus on deposition, atmospheric deposition of mercury. And clearly there will always be a need for additional information and we, if you feel that there are other presenters that should provide additional information, we're willing to seek them out. I

will say the support that we have received has been unprecedented and the credentials of the presenters are just outstanding. So clearly we have brought some of the best advice in the country to you. Clearly we, as I anticipated, will not reach a consensus on these issues. The primary objection of the public involvement process was to discuss key information relevant to the development of a Pennsylvania specific mercury rule. I feel that we're at a point this afternoon as we move into the afternoon session, to focus on the control options, and that will set the stage for us to move into the second phase of the work process, and that's to obtain your recommendations on the technical aspects of a proposed rule making. What we will need from you is really some sense as to what you believe the control levels should be, the type of testing, monitoring, and record keeping and reporting that should be required, and clearly what will be critical, especially in light of the co-benefits from the multi-pollutant approach. A compliance schedule that will give us the best results. So those are the critical elements. If you take a look at the timeline that we posted,

which I will say is a very aggressive schedule, and I must admit within the past six weeks, this particular workgroup initiative has consumed a lot of time, but it was really in the public's interest that we do this. I have also come to realize that there might be a need to slow this process just a little so that I can get my feet firmly planted on the ground. And so at this time I will remind you of the fact that what we wanted to do in November and December was to hold a series of workgroup meetings. What I had committed to doing was to have for you a draft regulation for a December meeting. In light of the fact that we're intending to hold the next meeting on December the 16th, it's unlikely that we will develop a draft regulation. We will have discussions internally and focus on coming to you with some concepts for discussion at that meeting, but we will not have a draft regulation for your consideration by December 16th. What we will also attempt to do in December, there is a meeting of the Air Quality Technical Advisory Committee on December the 15th. And the Citizens Advisory Council has agreed to join us for the AQTAC meeting on December the 16th. We will,

before we move forward with the development of a regulation for consideration by the advisory committees, both the AQTAC and the Citizens Advisory Committee, come to you with a proposal for your consideration. So I'm thinking that we may not seek each of the approval until April. Tom you're hearing that here first, but clearly there's a need to slow the process a bit. That does not negate our obligation to move forward with developing a state plan for submittal to EPA by November, 2006. So with that said, I think what we will do is we will move into a discussion of the, the next speaker, if there are no questions.

MR. FIDLER:

Does anybody have anything to add to the recap? Any, any observations or comments? Yes.

MS. GOODMAN:

Does the Air Quality Advisory Group Meeting, is that - - -

MS. EPPS:

It's the Air Quality Technical Advisory Committee.

MS. GOODMAN:

And are we invited to that or is that - - -

MS. EPPS:
They're all public meetings and you're more than welcome to attend.
MS. GOODMAN:
When is, when is that, what time and place?
MS. EPPS:
December the 15th. Those meetings generally start roughly 9:00 o'clock a.m.
MS. GOODMAN:
Is this room or:
MS. EPPS:
Usually we're here. If there's any change in location we'll get that to you. But the meetings are generally held in this room at 9:00 o'clock.
MS. GOODMAN:
Thank you.
MS. EPPS:
Yes Felice.
MS. STADLER:
Do you anticipate sharing the concepts with the stakeholders before the 16th meeting so we have a chance to moll it over before the meeting, or are you planning to bring it to the meeting?
MS. EPPS:
What I intend to do is to submit the concepts

for, to the executive staff for consideration. And if the, if review is completed and approval for release is provided, then, of course, we will get that information to you. There's a possibility that every concept that will be considered in the rule may not be finalized for discussion, but we will be able to give you some sense as to, as to where we're headed with the development of a proposed rule.

MR. FIDLER:

Other questions, comments? Just, just to recap also the report that the Department submitted to the petitioners back in May of this year, the recommendations incorporated within that report called for a state specific rule to control mercury emissions in the state from all major sources, not just power generating stations, but other major sources as well. It called for a focus on deposition issues that we felt were very prominent within Pennsylvania because of the number of fish advisories that we have within 70 some odd waterways in the state. That was coal neutral, so to speak. Did not treat in an unfair way the Commonwealth's bituminous coal reserves as we felt federal rule has treated those coal

reserves, and that maintained the reliability and capacity of our generating infrastructure within, within the Commonwealth. So with, with that as a baseline and the information that's been shared over the, over the three meetings, if we could offer options or suggestions for options in the context of those recommendations, it would be, be very much appreciated. Now if there's no other comments, questions, yes.

MR. BIDEN:

Doug Biden, Generation Association. Do we have a list of all the organizations that are actually on the State Coalers Working Group? I noticed that the last two meetings there were a number of organizations that had attended that did not attend the first two meetings.

MS. EPPS:

Well we have a listing of workgroup meetings that's posted on our website.

MR. BIDEN:

Oh is that where it is?

MS. EPPS:

Yes. It is posted, and I might add that there were a number of individuals who agreed to serve on the workgroup that may have missed the first

meeting or had an alternate present for the second meeting. And so that's why you may be seeing different faces.

MR. BIDEN:

Okay, thank you.

MR. FIDLER:

Other questions before we get started? Okay, I would like to move on then to our first speaker. Our first speaker is Susan Marmagas. Susan is the Director of Health Programs for the Collaborative on Health and Environment, and directs the central office in Washington, D.C. She has over ten years of experience in the environmental health field, and most notably in children's environment health. And she recently joined the collaborative after serving as the director of Environmental and Health Programs at Physicians for Social Responsibility. I'm very pleased to have Susan with us this morning. Thank you very much.

MS. MARMAGAS:

Great. I'm going to stand. Can everyone hear me? Can you hear me in the back? First of all, thank you for inviting me to come speak today. Thank you for inviting me to come speak today and

it's my pleasure to be here. Let me try over here. Does that work? Everybody can see? Okay. I was asked to come and speak, excuse me, about the health effects related to mercury, specifically with regards to children's health. I am actually going to cover a couple of things today, but primarily my focus is going to be on reviewing the science. And I understand that you've already had presentations on some of the health aspects, so much of this will be familiar, but it's important for the set, the, the dates from which I am starting. Okay. So I'm going to do three things today. First I'm going to briefly provide an overview about the public health implications of mercury for children's health. Then I'm going to talk about the findings of EPA's Children's Health Protection Advisory Committee. This is a committee on which I sit, and I'm talking about their findings over the course of the last 18 months, and I'll get to that in a minute. And then I'm just going to finalize, finish my presentation about what are some of the themes out of that advisory committee that are relevant for state specific decisions about regulating mercury from power plants. So

as we know, mercury is an invisible threat. This is a picture taken in the Great Lakes. We know an area that is highly contaminated with mercury, and that it really is an invisible threat. It impacts our children in ways that we can't see until they start trying to learn and we see what happens as they begin to grow up. We know there are five major unfortunate properties of mercury, and I'm sure many of these are familiar to you, but I just want to review them briefly. Biomethylation, we know that when mercury enters the waterways it is converted into methylmercury, which is a much more toxic form of mercury. We know that it bio-accumulates up the food chain, and therefore accumulates in, in fish, most notably, and that the larger predatory fish are the fish of most concern. And this is how it's entered into, into us as, as people. We know that there is global transport of mercury, and we also know that there is significant local deposition of mercury. It sounds like that's a very important issue that's being discussed by the stakeholder panel. We also know that it's highly toxic. We know that it's highly toxic at an accurate level, but we also know that it's toxic

even at low levels. I think this is familiar to many of you, if you're familiar to the field of public health. We've looked, we look a lot at this triangle. We have a toxic agent, in this case, mercury. We have an environmental exposure, and we have susceptible populations. I'm going to talk a lot today about susceptible populations of children and women of childbearing age. Very familiar to many of you, how does mercury get into fish. We know that mercury comes into our environment in numerous ways. It is transported through the air and through waterways. It enters our water bodies. As I mentioned before, it's converted into methylmercury and it is taken up in our fish and it is consumed, as we know, through fishing by humans. So what happens when it enters the human body? Well we know that it degrades slowly in the human body. We know, science shows us that it crosses the placenta, it crosses the blood, blood brain barrier, it's secreted in breast milk. And we know through the science that we have that it actually disrupts the biological processes at critical windows of vulnerability for normal brain development. We know that children have

these windows of vulnerability. The science is very strong to show that at certain development stages, if kids have an exposure to a toxic like methylmercury it can significantly impact brain development, and that affects them for the rest of their life. So as I mentioned before, what are some of our main vulnerable populations. We know women of childbearing age who pass the mercury contamination on to their newborns. We know that fishing communities and hunters and fishers, we know that people who fish in local waterways are the most at risk. And, of course, what I'm going to focus on today are kids, both in fetus and infants and young children. Now my focus today is really on the developmental neurotoxicity of methylmercury. Numerous studies have demonstrated adverse effects. Those studies are, in general, consistent. There's a good correlation between animal and human studies. And as I mentioned before, the impact is irreversible. So what kind of effect are we talking about in young children? Well in this country we're talking about low level effects. Many of you are familiar with the data out of Minamata Bay, Japan, that talked about high toxic

mercury levels. What we're really talking about here are low levels. What we're really talking about here are low levels. And the science has shown that low level exposures to methylmercury have effects like the following: delaying developmental milestones, attention disorders, fine motor function, visual spatial abilities, and memory. This means that are children are growing up, if they are impacted in this way, they don't learn as well as they should be able to learn. And isn't this vitally important to our society that our kids are learning as much as they can. I know all of you are familiar with the major studies on the effects of methylmercury exposure. Early studies that looked at predatory birds, as I mentioned the Minamata Bay study out of the 1960's that looked at high toxicity levels, the Iraq mercury exposures in the '70's, and then the three more recent studies, the three that we always talk about, the New Zealand study for the 1980's, the Seychelle studies for the 1990's, and the Faroe Island studies of the 1990's. These three studies, as you know, were taken up by the National Academy of Sciences. And I wanted, I'll get to that in a minute,

What's really the basis of the NAS decision and recommendation on methylmercury. We also knows that these studies have been rigorously reviewed. EPA's report to Congress in 1997 documented these studies. The ATSDR tox profiles for mercury in the late '90's, and very important data that came out of the federal government about these mercury exposures and the toxicity. And then as I mentioned, the NAS report in 2000, which looked at all the studies and concluded that it was vitally important that we address the significant issue to children's health from methylmercury. This now serves as the landmark report on which government agencies have developed standards around methylmercury. Now we also know through the use of bio-monitoring, which is a tool to measure levels of chemicals in the human body, that methylmercury is in our, it's in our bodies, it's in our kids' bodies. So not only do we know that it enters our environment, but we know that it is actually taken up in our kids and women. I think the most significant thing here is that the two studies, both in 2003 and in 2005, demonstrated that six to eight percent of U.S. women of childbearing age, between the age of 14

and, excuse me, 16 and 49, have levels that are above the safe level. Now this is critical. This translates into a 3.5 million women of childbearing age every year are at risk. And the work by Kate Mahaffey in the USEPA just in 2004 actually looked at this data and determined that the mercury, the methylmercury that is in cord blood, so therefore the blood of a newborn, is actually a more significant issue to look at. Because if we look at that number we see that 630,000 newborns every year are at risk of methylmercury exposure. This is a significant segment of our population that we need to be protecting. So we know that EPA earlier in this process actually was set to have a much stronger regulation on mercury from power plant emission. The Clean Air Act amendments, the earlier work, looking at 90 percent by 2008, all of you are going to talk about options, that's not my job. I'm a health professional, I'm here to talk about health. But this is just to review where we are, the 2003 mercury proposals out of EPA, and then the final rule in March of 2005. So now I want to turn to the Children's Health Protection Advisory Committee. This is a committee on which

I sit. I am here to talk about the findings of this committee. It's FACA, so it was under the Federal Advisory Committee Act to advise the agency on children's environmental health issues across the agency. It's a body of researches, academicians, health professionals, public interests, children's advocates. A whole range of stakeholders. And unfortunately the list, the whole list with everybody's affiliation didn't get printed out for today. If you want a copy of that, I can work with Gene to have those copies made available. It's, it's a body, an austere body of children's health experts from across a variety of sectors. And, and they meet on every three, it's a quarterly basis that the committee meets, and in the end of 2003 the committee took up the issue of EPA's proposed rule on mercury through power plants. And I'm going to spend the remainder of my time talking about what that committee concluded. Once again, this is a body of experts from across the country from a mix of stakeholders that came out with these conclusions. I also want to reference the fact that there are three letters available that are up here from this committee. The committee

actually wrote four letters, but three are printed for you to see. So we know the proposal, I won't spend my time on this, but we know the proposed EPA rules in 2004. And so in January of 2004 the Advisory Committee submitted its first letter to the administrator of the EPA, at that Mike Leavitt. I have a lot of detail in these slides, but that's intentional, because I want to actually provide the specific language from the Advisory Committee so that you can see the quotes from the letters that were there. So the first findings and recommendations in the first letter, the number one thing was that the Advisory Committee brought in experts, and additional experts to the committee and concluded that the proposal does not sufficiently protect our nation's children, that it could do better. That EPA needed to elevate the children's health concerns when developing this rule. That EPA should build upon the success in medical waste incinerators, municipal waste incinerators if, you know, the committee felt if, if they could meet the 90 percent standard then coal-fired power plants should as well. That EPA should move expeditiously to do this because kids are at

risk today, and if we wait, that's another generation of kids that are at risk. That the issue of hotspots is significant. And the CHPAC at that time requested integrated analysis looking at the impact on children from the agency. This is in January of 2004. So the committee got a response from EPA that, and EPA in their letter stated they thought this was the most cost effective and environmentally beneficial. That cap and trade programs in other arenas didn't create local hotspots, so they were going to ensure that they wouldn't in this case. That it was important to regulate all of the contaminants together, but they didn't comment on, on the request of the committee for more analysis. So in June of 2004 the committee looked at this issue again and decided to reiterate its concerns to the agency, afraid that the agency had not taken the concerns from January into account. And they reiterated this in a very brief letter asking the agency to do the evaluation of health benefits for women of childbearing age, to do an integrated analysis of impacts, technologies, costs and economic benefits, to further look at this issue of

hotspots, and also, at that time, to release EPA's mercury action plan. An action plan that EPA supposedly was working on and hadn't yet released. So the response that the committee got then from EPA said that they were going to consider doing additional analysis, but they were waiting until the public comments period ended. That they would look, they would develop whatever analysis needed to be developed in order to protect kids and women of childbearing age, and once again reiterated the fact that hotspots were not created from the acid rain program. So the CHPAC then met with a set of external stakeholders, experts on this issue, to better understand a lot of the issues, and what we sought were presentations on available technology, cost benefit analysis, and this issue of local deposition of mercury. We wanted to understand this more and this question of hotspots. So many of these people I'm sure are familiar to many of you in this room. We met with staff in the EPA OAR office on available technology, we met with the following three individuals on local deposition, we met with Dr. Atkison who is with the Florida Department of

Environmental Protection, and on economic feasibility with the Clear Air Task Force. We then submitted our fourth letter, and that letter you don't have, but we submitted that in the fall of 2004. And once again we concluded, based on all these additional conversations that are, that controls are available to reduce mercury emissions by up to 90 percent in a much shorter timeframe, that a more stringent standard can really address this question of hotspots, and that it was really important to do this because it was cost effective, in fact, in the work that we looked at. So and as many of you may remember, in December of 2004, the agency came out with a notice of data availability. And Steve Johnson, who was then the, the deputy administrator in the agency, came to our Advisory Committee and said would you comment on the NODA, we'd like comment from the Advisory Committee on this NODA. So we wrote a fourth letter in January of 2005 to, actually, it was to Johnson, but it was just, I mean excuse me, it was to Leavitt, but just as Leavitt was going over to the Department of Health and Human Services. So it was before Johnson actually became the

administrator. And we really focused on the public health aspects of the NODA. And once again I've got quotes in here because I, I'd like the detail to be provided to all of you. What the CHPAC concluded is that the documented scientific evidence that already existed on transport, chemistry, deposition, bioaccumulation, consumption patterns, dose-response and local impacts makes a compelling case for EPA to develop a comprehensive health benefits analysis using existing health conservative input parameters. In other words, they didn't need to do a whole bunch more analysis. That they had already was enough to compel them to have a stronger rule. On the issue of hotspots, the Advisory Committee concluded that EPA's own models show that in the states with the highest mercury concentrations, more than 50 percent of the mercury deposited comes from local sources. As demonstrated in the Florida Everglades, reductions of ionic mercury emissions will show benefits of a local and regional scale within a relatively short period of time. We also looked as this issue of U.S. versus global mercury, because many people wanted

to ensure that we were addressing this important issue. And the conclusion of the Advisory Committee was while the global contribution of mercury in the U.S. environment is important, it is vital to recognize and address the significant contribution of the largest U.S. source of mercury or emissions, mainly coal-fired power plants, to mercury contamination at the local and regional scale in the U.S. And second of all we should show leadership in applying stringent mercury controls to our own coal-fired power plants and involve the U.S. in technology transfer to improve emissions in other parts of the world. So the committee felt that it was important for the U.S. to take leadership and to bring that leadership into the global arena. And then we commented on this concept of American competitiveness, because the, the, Administrator Leavitt, one of his message is we didn't, we don't want to hurt American competitiveness by developing this rule. And so what we wrote is based on, it's important to raise children so that they can be the most productive members of society. So what we wrote was, we urge you to recognize that protecting our children from

neuro-developmental damage is a cornerstone of maintaining American competitiveness and request that this be reflected in the issuance of a final mercury standard. By implementing a more stringent and public health protective standard at home, the U.S. can lead the international community as a model and work to stimulate the necessary global mercury reductions from other industrialized nations. So what happened as a result of all this input, well I'm actually sorry to say that EPA had a benefits analysis in the final rule, but it didn't include many of the recommendations that the CHPAC asked for, and, and recommended. It actually wasn't any stronger than the original proposal. But I think, and the reason I'm standing here today is that many of the recommendations of this advisory committee are relevant to states as you consider the options before you. So as I conclude, I have a few themes from all of these letters and all of this text that I hope will help your process here today, and that is, and all of you I, I know have been talking about this, mercury is a significant health threat of infants, to infants and children. Children's health experts, like the

Advisory Committee, are calling for more stringent standards. More stringent standards are achievable on an earlier timetable. We have to address the issue of hotspots and children's health is a part of American competitiveness. And with that, this is how you can find me if I can be of assistance the rest of today or, or beyond. So I thank you again. I'm happy to take questions.

MR. FIDLER:

Thank you very much Susan.

MS. MARMAGAS:

Shall I sit here and then I can - - -

MR. FIDLER:

Sure, that's fine. That way you can use the microphone. That's great.

MS. MARMAGAS:

Great.

MR. FIDLER:

Okay. Questions, comments for Susan? Yes, Vince.

MR. BRISINI:

Vince Brisini, Reliant Energy. Is the group quantified or qualified the incremental health benefits between the federal program that specifies the 86 percent reduction in

Pennsylvania, and that's from baseline emissions, which is approximately 95 percent in coal from mercury, and, versus any other specific proposal you've considered?

MS. MARMAGAS:

Thank you for that question. The, the committee, the committee actually was created to advise the administrator of the USEPA on a number of children's health issues. So our charge is to look at proposals that the EPA comes up with. And, therefore, we haven't looked at other proposals that are on the table, state specific proposals, nor have we have done any new analysis. We have, we have based our recommendations on the analyses that we have consulted, that we consulted during the process of advising the administrator on that.

MR. BRISINI:

So basically you've made the proposals, but you haven't looked at what the difference between the programs provides.

MS. MARMAGAS:

Well we have looked specifically at, we haven't looked at the implications of the federal rule on the states. That, in our view, wasn't our

charge, because our charge was just to comment on the administrator on the, on the federal rule. No we didn't break it down and look at specific rules.

MR. FIDLER:

Yes.

MR. WELSH:

Mike Welsh, the IBEW. I'm just curious, what other type of a, this a mercury's on children's health effect, what other things have you looked at, your group, have you looked at other things?

MS. MARMAGAS:

No, that's a very good question. Thank you. We work quite significantly on pesticides. For example we just, about a month ago, weighed in on EPA's proposal on human testing of pesticides. We have worked on smart growth issues. We've worked on, instead of emerging chemicals, PFOA, PFOD, PBDE's, prochlorate, although we haven't actually written a letter yet to the administrator on those issues. We work on drinking water. The committee's been around since about 1997, and it's been a broad sloth of issues both that the, that the administrator asked us to comment on, or the committee members raised as important

children’s health issues.

MR. WELSH:

Thank you.

MR. FIDLER:

Yes.

MS. PARKS:

Yes, this is more of a comment Susan, but it looks from your letter of January 4th, 2005, that your committee has looked specifically at both existing hotspots and their significance, and also evaluated whether or not there would be additional hotspots in the future without control.

MS. MARMAGAS:

Yes.

MS. PARKS:

Okay. So you’re, you’re convinced that you’re seeing both existing problems right now and future problems.

MS. MARMAGAS:

Yes. That was actually the concern of the committee that it wasn’t just to look at future, it was to look - - - so that’s correct.

MR. BRISINI:

Vince Brisini, Reliant Energy. Could you define

what you're calling a hotspot by virtue of saying existing?

MS. MARMAGAS:

You know I think what the committee looked at was what is the impact on local communities that lived near a coal-fired power plant and what are the potential health implications in communities that may have higher levels of exposure because they are near an existing power plant.

MR. BRISINI:

So when you're saying potential, but you don't have, they didn't have a measurement or a definition of what a hotspot is. They're saying there's potentially a hotspot because there's a power plant.

MS. MARMAGAS:

Or, or another source of mercury.

MR. BRISINI:

Okay.

MS. MARMAGAS:

Which is what we saw in Florida.

MR. FIDLER:

Yes.

MR. ARNOWITT:

Myron Arnowitt, Clean Water Action. Just, just

to follow up on that. What you're looking at is if there's these health risks if you are, you know, if you're exposed to mercury emissions from a nearby power plant. I'm just trying to follow up on this issue of hotspot definition. I mean you're looking at if from a health perspective.

MS. MARMAGAS:

We were looking at it from a health perspective.

MR. ARNOWITT:

You weren't saying that there's a certain level in the rain water or soil or - - -

MS. MARMAGAS:

No.

MR. ARNOWITT:

No. You were looking from a health - - -

MS. MARMAGAS:

Our concern was if there was increased exposure then there would be an increased health risk to kids.

MR. FIDLER:

Susan. You mentioned a number of letters that the committee had written to the agency as part of your role in advising the agency. I just have a question, if, if on some of the key points you could relate to us the response that you received

from the agency.

MR. FIDLER:

Thank you. The, and in my slides I have the responses from the first two letters that we wrote, but to summarize basically the points, I think the first point was the agency felt that what they had proposed was the most cost effective way of reducing mercury to protect kids. That they didn't believe that the hotspot issue was a concern because they hadn't seen it in the acid rain program. And that they, they felt that what they had, their analysis was based on looking at children. So they, they were, they were arguing that they had taken the science into consideration when they actually made the proposal. But those were kind of the three main points, and we got those comments in the two letters, and I didn't bring those comment letters, but I'd be happy to get you those full copies, that were in response to the first two letters we wrote. We actually didn't get response to the second two letters. So I can't answer your question on those two.

MR. FIDLER:

Thank you. Is there another question? Bruce?

MR. TESTOSKIE:

Bruce Testoskie, Citizens Advisory Council. On your slide relative to the major studies on methylmercury exposure, the study on the Seychelle Islands show no effect. Could you explain why there was no effect as there was on the other two studies?

MS. MARMAGAS:

Yeah, well that, I mean that issue is one that was taken up quite significantly by the National Academy of Sciences. And so the issue there is a question of, I think it’s one of those questions in science that we have about why some show an effect and some don’t. Part of that is (inaudible). But what the NAS concluded was based on the data from both New Zealand and Faroes there was significant data to demonstrate that we needed to do something about methylmercury.

MS. EPPS:

Yes, Felice.

MS. STADLER:

If, were there dissenting opinions on the committee, or is this consensus? Do these letters reflect consensus?

MS. MARMAGAS:

Thank you. And in fact I forget to say that. All decisions made by this Advisory Committee are based on consensus. So there were no dissenting opinions, these were consensus letters.

MR. FIDLER:

Gene.

MR. TRISKO:

Thank you Tom. Gene Trisko for the United Mine Workers. My question is not directly related to your presentation as such, but given your background and expertise in this field, I was wondering if you were aware of any organizations, international organizations that have done cross cultural or multi-national studies of comparing mercury concentrations in different populations. Are there any United Nations groups or WHO types who have done that?

MS. MARMAGAS:

Well there, there is an effort. I mean the United Nations Environment Program has been working on a global mercury initiative, and they are really the entity of that UN that has pulled together experts and individuals, NGO's, researchers around the world to look at global mercury issues. And actually in, it was in the early part

of this year there was a meeting in Nairobi to develop a global mercury plan and action to move forward. So that's what I am most familiar with that has looked at this. But the three major studies that I referenced are really the major studies that we have that, that we have based a lot of the recommendations on.

MR. TRISKO:

Right. But those were, those were single community studies.

MS. MARMAGAS:

That's right, yes.

MR. TRISKO:

Right. Not cross, not cross culture.

MS. MARMAGAS:

And there may be others around the table who have followed the global mercury work even more who may have answers to sort of where is that UN, where's the UN process. Just my understanding was that, that's really where the global work on mercury is occurring.

MR. FIDLER:

Are there other questions? Yes, Doug.

MR. BIDEN:

Doug Biden, Generation Association. The Agency

for I think it's called Toxic Substances and Disease Registry and the World Health Organization and the Food and Drug Administration all have recommended mercury dosage levels two to three times that of EPA's. And I think if we, if we compared those to what the EPA level is, we would probably find that we had no women of childbearing age in the United States above those recommended dosage levels. So, so it's difficult for me to understand how you can so blithely say that more 600,000 women are at risk of, or children are at risk of health effects, particularly given the fact that over 86 percent of the Japanese population in a larger sample than the Center for Disease Control used, or above the EPA reference dose, and we have, you know, we haven't found any material increase in birth defects in their population, at least not that I'm aware of, perhaps you're aware of that. And their consuming fish and our population is consuming fish, most of which come from the sea, and the decrease in mercury emissions that we're going to achieve, whether via the federal rule or state rule, will have no impact on the fish that most of our population is going to consume. So,

you know, I'm, I'm somewhat troubled by saying, by people who are saying that 600,000 children are at risk of birth defects, and then leading people to think that we're going to solve it with reductions in power plant mercury emissions. Even EPA is not saying that. And even EPA is saying that, you know, the fish, you know, the, the warnings that we pass out are not going to go away, even with full implementation of CAIR and CAMR. So - - -

MS. MARMAGAS:

Yeah, if, if I can respond to the, what I hear as sort of a multi-part question.

MR. BIDEN:

Yeah, there might have been two or three in there.

MS. MARMAGAS:

The first issue is this question of the EPA level. That EPA standard is based on the conclusions of the National Academy of Sciences in 2000, which serves as the basis of scientific agreement on where we should set that level. So that's where that comes from. And I think there is strong agreement in the scientific community that that NAS recommendation stands. So that is

where the EPA standard comes from, and therefore as we set policy or think about policy we want to ensure that children, you know, women of childbearing age, and infants who are over that level are actually at risk. Now the issue - - -

MR. BIDEN:

Can I just ask a clarifying question right there. Isn't the reference dose set at one-tenth that level where we expect to see health effects?

MS. MARMAGAS:

No, but actually, what the National Academy of Sciences said is over 5.8 we, we see health effects. That's what, that's what they said. So that is the level of concern. It's not 58, it's 5.8, and that is, there's agreement in the scientific community that that is the level that it should be set at.

MR. BIDEN:

But what's the relevance of the 58?

MS. MARMAGAS:

Well that's what the National Academy said was that the 5.8 was the level at which we could see, we would, we would see the decrements. That's the issue. Now the 630,000 number is important to understand because the 5.8 related to maternal

blood. The 630,000 relates to cord blood. And what we know is that the cord blood concentration of methylmercury is a much more, it's higher. It's much more significant of an issue. That's where the 630,000 comes from. In peer review literature it's available. I'm happy to get that study to the stakeholder community if you want that. So that's that issue. The question of, you know, consumption of fish, we know local deposition is a significant issue. We know that U.S. power plants are the last largest unregulated source of mercury into this environment, and so when this body of children's health experts looked at this issue we said here's an opportunity to address the last largest unregulated source. It was effective with other, it was effective in incineration, let's do it now in power plants. Let's do it to protect a body of kids who are going to be at risk. Other questions?

MR. McPHEDRAN:

Yeah, just to follow up on that. This is Charlie McPhedran with Penn Future, which is the Mahaffey study that was, appeared in environmental health perspectives, and her presentation at the fish

forum in San Diego in 2004 were both attachments to our petition. So they're available at pennfuture.org. If you scroll down the first page, you get to mercury stuff, and you can look through the links to the petition and the reasons for requesting action, and they are links on there. And I'm happy to give, let you look at it today if you'd like to. So it's available online. That's the study that talks about the 5.8 number. I think that's the one you're referring to.

MS. MARMAGAS:

Yes, yes it is.

MR. McPHEDRAN:

And then the presentation explains where the 600,000 comes from.

MR. FIDLER:

If those attach, I'm not sure if those attachments have been posted on, on the Department's website in association with our report that if, in fact, they have not been we'll be sure to make sure they're posted for, for everyone's access, that you have full access to all of the information that's been discussed or shared as part of this process. Question down

here. Gene do you have a question?

MR. TRISKO:

Yes, thank you Tom. Gene Trisko with the United Mine Workers. A couple of quick follow ups to Doug's questions. In this national environmental exposure study showing that six to eight percent of the U.S women of childbearing age were above the recommended safety level, do you know whether any analysis was undertaken of the sources of the methylmercury in the sample population? Whether it came from eating tuna fish or eating fish that they, you know, caught off a bridge, that sort of thing?

MS. MARMAGAS:

In the CDC exposure report, no, they, they looked at, they didn't look at the source of where that methylmercury came from. So in that particular source they didn't.

MR. TRISKO:

So we don't know.

MS. MARMAGAS:

We don't know.

MR. TRISKO:

Okay. And, and finally, has the Collaborative on Health and the Environment issued any guidelines

with respect to the consumption of fish by women of childbearing age?

MS. MARMAGAS:

We have not in, in this organization. In my previous organization, Physicians for Social Responsibility, we did actually release recommendations for fish consumption. And we've also been very involved in the EPA, FDA joint advisory on methylmercury.

MR. TRISKO:

Okay. But your focus here has basically been on the emissions side rather than the consumption side.

MS. MARMAGAS:

That's correct. The Children's Health Protection Advisory Committee, and I think it goes back to a gentleman's question about what else have we addressed as a committee, that committee looked both at mercury from power plants and also at the issue of fish consumption. It was a separate set of discussions. But that committee has also looked at the fish consumption issue as well.

MR. TRISKO:

Okay. Thank you.

MS. MARMAGAS:

Yeah, you're welcome.

MR. FIDLER:

Reid.

MR. CLEMMER:

Reid Clemmer, Reid Clemmer with PPL Services. I had a question simply one of your slides in November of 2004 you sent you a letter to EPA that controls are available today to reduce mercury emissions up to 90 percent in a shorter time period. How do you reach that conclusion, and what do you base that conclusion on? I mean DOE issued a report saying control technologies are evolving and not there yet.

MS. MARMAGAS:

Thank you. That, that was actually based on a set of interviews and conversations that we had with a variety of experts in the field, and I've listed the individuals we spoke to. So it was based on bringing experts in to talk to the Advisory Committee about that.

MR. CLEMMER:

Just a follow up then, briefly.

MS. MARMAGAS:

Sure.

MR. CLEMMER:

So you don’t talk to any plant operators or anybody else like that that might actually be operating these controls and know whether they’re available and not bringing them out without any problems?

MS. MARMAGAS:

Well what we did was we talked to a set of experts who had access to and worked with a number of utility companies.

MR. BRISINI:

Yeah, I have a follow up. It was a really bit of, I, I got confused when I asked about hotspots and defining them and how do you define them and so on. And as we talked about it we talked about the exposure is really through the ingestion of fish and primarily oceanic. But at the end you made a very firm statement that says, we know local deposition is a significant issue. And everything up to this, up to prior to that statement was basically a hotspot was identified as an area of poor, a potential local deposition issue as opposed to a quantification. So I, I just, so what I’m saying is I found that very confusing for you to be able to go from a potential to we know it is.

MS. MARMAGAS:

Okay. No, thank you, that’s a very clarifying question. Actually we looked at the work that was done in the Florida Everglades, and based on our conclusions from that study, concluded that there actually was exposure levels that came down when the source of that mercury in the environment in Florida was reduced.

MR. BRISINI:

Which wasn’t a power plant though, correct?

MS. MARMAGAS:

It was not a power plant, but it was a source of industrial air ---

MR. BRISINI:

Have you, but have you researched the work by Dr. Sullivan?

MS. MARMAGAS:

We didn’t look at that in this committee, but our committee felt, and just to clarify my, because it sounds to me that you’re confused about my point, the point is that the committee felt strongly that local exposure was there and that whatever was done in the rule that EPA put forward, they needed to effectively address that local exposure.

MR. BRISINI:

So basically the leap that was made by the committee then was this particular industry in Florida represented what's happening everywhere, even though there is research done that don't necessarily support the same occurrences that you were seeing in Florida?

MS. MARMAGAS:

Well it, it was, it was the Florida study, but it was also the breath of experts that we consulted and the expertise that's out there more broadly on the issue of mercury hotspots.

MR. FIDLER:

Felice.

MS. STADLER:

Felice Stadler, National Wildlife Federation. Just to follow up on Gene's question about fish consumption and surveys. I'm aware that there's been, you know, small studies, I don't know if they're true studies that have been done, there's been work in San Francisco, there was some surveys done in, in a fishing community in Mobile, Alabama and I think something has been done in New Jersey. Has any, do you know of any ongoing research on local fish consumption

patterns, and then if there's any exposure monitoring going on of those communities? Because obviously we're, we're very much concerned about communities that fish, whether it's for sustenance purposes or for recreation purposes.

MS. MARMAGAS:

I'm not aware of the specific ones, but it's my understanding that a number of states, a number of state departments have held, are setting up local monitoring programs to be able to see what specifically local subsistence communities are impacted by. For example, Connecticut is one that has been doing quite a bit on this whole issue.

MS. FIDLER:

Pam.

MS. WITMER:

Pam Witmer, Pennsylvania Chemical Industry Council. The folks with whom you spoke regarding the control technology? Were they part of organizations made up of companies who had products to sell?

MS. MARMAGAS:

Well actually the list of who we spoke to, they're in my slides.

MS. WITMER:
Right.
MS. MARMAGAS:
And so - - -
MS. WITMER:
But it doesn’t give you any information about what they do.
MS. MARMAGAS:
Okay.
MS. WITMER:
Well that - - -
MS. MARMAGAS:
It’s on page 12.
MS. WITMER:
Yeah, believe me, I’m all for the free market, but you know.
MS. MARMAGAS:
It’s on page 12 and 13. So those were the ones we consulted with in, in our process.
MS. WITMER:
So we, we don’t know whether or not they had products to sell. Well Mike, Mike sells products, we know, right, Mike Durham. Okay.
MS. EPPS:
I might also add that during our last workgroup

meeting they were part of the panel.

MS. WITMER:

All people who had product to sell.

MS. EPPS:

And we have their bios, and they’re posted both Dave Foerter and Mike Durham were here.

MS. WITMER:

Thank you.

MR. FIDLER:

Dave Foerter is actually the executive director of the Association of - - - vendors that manufacture or make available, institute, yeah, institute clean air companies. Thank you. And Mike Durham, I believe, is committee chair as part of that institute, but also as a vendor of technology. Any other questions, comments on Susan’s presentation? Gene?

MR. BARR:

A quick question. Gene Barr, Pennsylvania Chamber. Have you looked at, I guess this is, I’m trying to formulate this, kind of a difficult question because we’ve heard a lot of this in previous testimony about the benefits of eating fish. Did your organization look at the benefits associated with eating fish even though it may be

higher than what you'd want to see in mercury, and then balancing that with what the federal rule gets you versus what a state rule will get you and, again, looking at that versus the health benefits of encouraging people to eat fish? I guess what it comes down to is at what point does eating fish, those benefits outweigh what risks may, in your view, may be associated with the mercury levels within that fish?

MS. MARMAGAS:

No, thank you, that's a very good question. And I think the first point to make is that the Advisory Committee looked at these issues separately, so we didn't compare, when we looked at the power plant rule we didn't then look at fish consumption at all the state levels. We looked at the power plant rule as the amount of mercury coming into our environment, potential impact on children. What we do know and, in fact, just as background, there is a National Academy of Science panel that is going on right now that is looking at the balance between nutritional benefits and toxic contamination in fish. That's happening as we speak. I think their conclusions will be done sometime in 2006.

When the committee weighed in on the fish consumption issue, and that's a different letter, and I'm happy to get that to you, the committee was concerned that we make sure that that balance is there. But what we find in the science is that the affect of mercury in fish actually discounts those nutritional benefits. And so while there are nutritional benefits, they're discounted if, in fact, kids are being exposed to mercury. And we felt that the mercury exposure was a very significant issue and one that we needed to remove from fish. I think the second point here is that the committee didn't, I mean fish consumption is important, but we need to get the mercury out of fish to begin with. So we're really trying to go upstream and back to the source.

MR. TRISKO:

Just to - - - Gene Trisko, United Mine Workers. Just to follow up on your last comment to the effect that the, some of the benefits of eating finish may be offset by the presence of mercury. You would need to take into consideration in making such a statement the relative mercury content of the fish in question, would you not?

That is, not all fish have the same level of mercury. Tuna fish, swordfish, and the like have high levels of mercury, whereas other types of fish have very low levels of mercury, and you would need to make a discrimination among different types of fish for making a statement of that nature wouldn't you?

MS. MARMAGAS:

Well, but I think the issue here is we're talking about the fish that high levels of mercury. Part of the, you know, the recommendation out of EPA and FDA, which, you know, is widely supported, is that people can eat lower on the food chain. You can chose to eat fish that's lower in mercury. I think here we're talking about the fish that people consume a lot of, people consume a lot of tuna and kids consume a lot of canned tuna, and we know that the levels of mercury in tuna are, are significantly high.

MR. TRISKO:

Right.

MS. MARMAGAS:

So the issue isn't the low level mercury fish, the issue is the high level mercury fish that are highly consumed.

MR. TRISKO:

Right, and I think that’s an important qualification to add to your statement.

MS. MARMAGAS:

Okay. Thank you. I appreciate your follow up clarification.

MR. TRISKO:

Thank you.

MR. FIDLER:

Vince.

MR. BRISINI:

Vince Brisini, Reliant Energy. And then that leads me to then a follow up question as we talk about tuna and swordfish and so on. Has there been any quantification what effect the incremental difference between the federal rule and some other state specific rule might be relative to the effect on the levels of mercury in those fishes which you’ve identified as the pathway for exposure to children?

MS. MARMAGAS:

Well I’m not familiar with that, but states may have done it individually. So that’s sort of out of bailiwick related to the health issues.

MR. BRISINI:

I don’t believe there’s very much information like that available.

MS. MARMAGAS:

Yeah, I was going to say, yeah.

MR. FIDLER:

Other questions? If not, let’s take about a ten minute break and start the next presentation just a bit earlier. Thank you.

[BREAK]

MR. FIDLER:

Okay, everyone please take their seats. Can everyone take their seats please. All right. I’d like to introduce our next speaker. I’m very pleased that we’ve been able to get Bill Becker and Dick Ayres to join us today in our meeting to, to discuss the work that has been going on within STAPPA/ALAPCO. Bill is going to lead off the discussion of the development of a model state rule as part of the functions of STAPPA/ALAPCO, and then Dick is going to get into the developmental process and some of the analysis that occurred as part of the development of the model rule. I’d like to start by introducing Bill. Bill’s a director, an executive director of the State and Territorial Air

Pollution Program Administrators, and the Association of Local Air Pollution Control Offices, STAPPA/ALAPCO, and has been with STAPPA with for, STAPPA/ALAPCO for a number of years. Before that Bill was involved in congressional research work, a research service and an environmental policy specialist. And Bill it's great to have you with us today.

MR. BECKER:

Well thanks very much Tom. A little about the associations, these are two national associations representing almost every state air pollution agency in the country, and over 165 local air pollution control agencies throughout the country. This is a consensus organization. We develop a lot of positions, a lot of policies, publish a lot of reports. What I and Dick Ayres will be talking to you about this morning is a model mercury rule that we've recently published. This is a, this is a tool for states and localities to use. It's a model, it's a menu. We're not expecting that any or every state is going to adopt it in *toto*, but it's being meant to be used to help facilitate discussions to kind of bind the policy analyses that will be

proceeding, and help states like Pennsylvania do its job. I'm going to spend ten minutes going over the reasons why our associations developed this model rule, and then immediately turn it over to Dick Ayres, whom we hired to help us develop this model, and then we can open it up for questions for the both, for the two of us. You had a bit of discussion this morning, and I'm happy to also entertain questions after Dick speaks, about some of this. The only thing I will say here is that mercury is a problem. And it's a problem even in small quantities when it gets into lakes. And it's harmful to children, it's harmful to women of childbearing ages, and whether the percentages are six percent or 15 percent or three percent, is there anyone in this room that thinks that we shouldn't reduce mercury and do the best we can to levels that we think are technologically feasible. More recent data is showing that there's a correlation between heart attacks in men and mercury exposure. And that is something else that just reinforces the need to take action. You all know this, mercury is a pervasive problem east and west. Coal-fired power plants are the largest source. And there

are now 46 states with fish advisories that are suggesting that the fish not be eaten in those lakes because of, among other things, mercury poisoning. Here is a map that you have all seen, probably in your previous discussion, showing most of the states with fish advisories. This should be updated shortly. Our associations have tracked EPA's rule making for quite sometime. We've monitored almost every study and regulatory action EPA has taken over the past decade. We've transmitted comments to EPA. We and others had stakeholders meetings with EPA in March, 2001, five years ago. We not only participated in the utility MACT workgroup, the workgroup designed to help EPA define the technology requirements that were required under the Clean Air Act under Section 112, but one of our members from Dayton, Ohio, was the cochair of that effort, and I'll get into that in a second. Our association has developed some multi-pollutant principles that would provide industry with some certainty and some phasing in to address not just mercury, but other pollutants. And we have debated and discussed these issues on a regular basis over the past several years. As far back as five

years ago when we met with EPA in March of 2001, our associations made some recommendations to EPA that seemed to be pretty timely right now. We wanted minimum subcharacterization of the industry, we thought industry should do as much as they possibly can and no more, but they shouldn't do less than the possibly can, and we'll get into that in a second. We suggested, among other things, a multi-pollutant approach to help industry plan for not just mercury, but for other pollutants. We wanted an ability of states to implement the standards as best they can using flexibilities that were provided for them. We suggested perhaps providing industry with incentives to meet the standards. And as far back as 2001 we said interstate trading of a neurotoxin is not prudent policy. Interstate trading of a neurotoxin is not good policy. You all know this, and I'm not going to spend much time except to say in, in late 2000 we were on track to have a requirement to regulate mercury from utilities, mercury and other hazardous air-pollutants from utilities under Section 112 of the Clean Air Act. EPA had already concluded it was "necessary and appropriate," the two words

that were necessary to trigger action under 112. EPA met with those various stakeholders in 2001, not just us, but industry, and industry gave them a similar set of recommendations. And EPA convened a workgroup in August, 2001, that was intended to provide the agency with recommendations. This workgroup was formed for a period of one year initially. They met 13 times over 18 months. Several of the people at this table who have been asking questions about next steps were the most active of this workgroup and were a part of the, of the group that made recommendations on behalf of their constituencies. This workgroup was really a very good workgroup. It identified issues, documented positions, and all of the recommendations are on this website, and I really urge you to take a look at the minutes of these, of this site of the meetings, because on those, in those minutes it will show you the kinds of recommendations that the utility industry and others were making with regard to their confidence about meeting certain technology standards under Section 112 of the Clean Air Act. We had six state, six governmental agencies, eight environmental

organizations, 14 industry and others, including western representation. I'd like to make three observations about the, the workgroup and then, and then ask others during a question and answer period, if you so desire, to, to challenge these observations. The first was the discussion centered entirely on Section 112 of the Clean Air Act, regulating mercury under Section 111 was never ever discussed, never ever brought up. The second was emissions training was brought up for about five minutes, or maybe 15 minutes by one of the utility spokesmen, and for several reasons, including at least two, it was discarded. One was there was little support outside of the industry for interstate trading of a neurotoxin. And second was, I think everyone recognized, or almost everyone recognized that Section 112 didn't allow it. Third was, this isn't an observation, it's a fact, the EPA abruptly halted the FACA working group, the Federal Advisory Committee working group without allowing it to finish its work, without allowing it to develop a sound science upon which we all wish regulations were based, including some modeling runs and some further analyses of the recommendations that were

offered. You kind of all know this story, the one thing I would mention here, and I just need to come back and reinforce this, and I don't mean to be, beating a dead horse too much, the industry recommendations, as part of the utility workgroup, were comparable to a 26 to 31 ton cap, not the five ton cap that the environmental community was advocating, not the seven and a half ton cap that the state and local agencies were advocating, but a 26 to 31 ton cap. And when you juxtapose that to what now is in EPA's rule making, which is a possible 15 ton cap that may not be achieved until 2025 and nothing until then because there's no mercury specific controls other than collateral benefits in the interim, there seems to be an incongruity between what was advocated during the utility MACT process and now. EPA's rule, as you've heard, has been met with widespread opposition, not just from state and local governmental agencies, but from environmental secretaries, from the Children's Health Protection Advisory Committee, from many, many groups. And we had several concerns with the EPA rule. I won't spend too much time on this. It was, I do want to make one comment. The

discussion this morning was very useful, the pushback at Susan about, you know, whether it's five percent or 15 percent of childbearing age and whether fish are too, too contaminated right now to eat. We should all remind ourselves that under Section 112 of the Clean Air Act the requirement to regulate utilities is not based upon mercury in the fish, it's not based upon anything but technology availability. If the technology exists to do it, then that's reason to regulate. Not whether or not children's health is going to get better or worse, not whether there are hotspots or not, it's whether there is technology available to meet these standards. And the debate seems to have focused away from a technology debate to this other focus, which I think begs the question in large part. We were very concerned about allowing interstate trading. There are hotspots. There are 46 states now with hotspots. We're worried that either they're not going to get any better or they could worsen because of trading, and we're concerned about the introduction of new hotspots as a result of inadequate regulation of mercury. The, we're worried that by reverting to 111 as opposed to

112 it excludes the provision to address other non-mercury HAPS. There are 60 some hazardous air pollutants beyond mercury that come from utilities. We're not saying all should be regulated, but all should be looked at. Even EPA in an earlier federal register notice said many of these are potential carcinogens. And where in the world did Section 111 come from. There is no legislative history to use it. It's never been done before. Every other major source of pollution, including chemical plants, including paper companies, including every other source is regulated not under 111, but under 112, and it's regulated under a technology based approach, and the compliance deadline is three years, not 15. This is just a summary of what states have already done and what Dick will tell you in a second is there's no coincidence between the recommendations that we are making and what we have found states have done, not just in the northeast, but throughout the country, and they're, they're not identical, but there's a consistency here in terms of timing, in terms of relative reductions. And they did this with the same data that EPA possess. And they did this

knowing that there was no federal rule and there was a lot of pressure to pull back because many wanted the states to wait until the federal government came out, and yet they were successful. And I, I just commend you all to take a look at what they've done if you haven't already. So our members, with all this information, with all this background decided they can keep complaining about what was done, or they can do something about it. And they asked our associations to help out and to come up with something that was an alternative. Perhaps not as tight as the environmental health community has been pushing, but not as lax as what the EPA's clean air mercury rule was allowing. And we hired a consultant, Dick Ayres. We appointed a model workgroup, and those are the states from the northeast, from the midwest, from the southeast, from the west. We briefed our membership last month. We asked the members what they thought with the numbers, with the flexibilities, and there was strong support for it. I'm not going to sit here and say that everyone is going to adopt it *in toto* because I know there's going to be a fight, led by many of

you perhaps, but I will say that these were, this was a document that many thought would help bridge the gap between where the environmental community wanted and where EPA was. And we published it, it's on our web, www.forcleanair.org, earlier this month. And one final point to our, we're very pleased that the Institute of Clean Air Companies, the vendors of the manufacturers, have supported us. They've said our rule is better for industry than a MACT approach, and it's better for industry than the EPA rule. It provides the flexibility, but it also pushes the technology, and it's something they felt very, very strongly about. This was not only their association, but some of their vendors, including Mike Durham, the guru of activated carbon. And very recently the chairman of the National Caucus of Environmental Legislators, this is sort of the, the converse to ALEC, the more conservative state legislators, has come out and applauded us for this rule and has sent out rule out to all of his membership saying state legislators across the country should be mindful of this, you know, moderate, middle of the road approach. So with that, I know

you're dying to hear specifics, and maybe this is the time to turn it over to Dick Ayres and he can tell you a little about it, and then we'll answer your questions afterwards.

MR. FIDLER:

Dick, if I could, I'd like to provide a few introductory statements about your background. Richard Ayres is principal of Ayres Law Group, Washington. He has shaped the Clean Air Act and its implementation since its inception and has been involved in many of the most significant law and policy issues surrounding the Act. And notably in 1970 he cofounded the National Resources Defense Council, one of the nation's most influential environmental organizations. Dick, thank you for being here.

MR. AYRES:

Thank you very much for that introduction. And, excuse me, thank you all for having Bill and me here this morning to talk about the STAPPA/ALAPCO model rule. My role in this has been, as much as anything else, kind of facilitator and scribe. As Bill mentioned, STAPPA/ALAPCO put together a committee of its members to come up with an alternative to the EPA rule. There were about,

anywhere from seven to ten people on the phone usually when we talked. And we started early last summer and probably had about ten phone calls, conference calls, and god knows how many drafts that went around and around on this document before we reached closure. So as with anything like that, there were lots of ideas, many of them discarded. And yet we came to a consensus on a proposal that really, I think, most everybody in that group agreed with very strongly. It includes the kinds of principles that STAPPA and ALAPCO and its members have been urging for some time on the mercury issue. And so I will, I will walk through very quickly the specifics of it. I wanted to talk first about the, the policy objectives. Really I think there were four. The initial idea was, of course, to protect public health and welfare. STAPPA had stated in previous places that it wished to reach a seven tons, or less than ten tons per year total from this industry. And then flexibility was an important element in the thinking about this. And finally, of course, there was a desire to come up with a proposal that would spur rapid development of technology to control mercury.

So, and then finally I guess we'll, these are further on the same goals, obviously approval on the EPA proposal, but the idea was to treat mercury as a hazardous air pollutant, maybe not in exactly the same way that 112 would have mandated, but in a way which was more effective than the way which EPA had proposed. So, and there was a general feeling, as there had been, I think it's with STAPPA and ALAPCO all along on this issue, and on hazardous pollutants generally, that emission trading was not an appropriate policy. So the, the idea that we all started, sort of started from was there would be no emission trading, there would substantial reductions, and there would be a very expeditious application of the best technology. There was also a decision made not to try to deal with all of the pollutants from all of the potential hazardous air pollutants from coal-fired utilities. The notion was mercury seems to be, by all accounts, the one of most importance. Let's address that and we'll, we'll leave to later the other things. So what the committee came up with was two options. This is probably not surprising to you that it was a committee of a bunch of

states. One option looks more like some states, the other option looks more like other states. And you may recognize the states. The two options include one common element, which is that all new units must install, or must achieve a 90 to 95 percent capture of mercury emissions, or meet this alternative outlet standard, which is intended to be more or less equivalent to the 90 to 95 percent reduction. So all new units built after this model is adopted, if it's adopted in a given state, would be subject to mercury control. Then the question is what to do about the existing units. And there are two options, as I said. Option one says, is in two phases, both of them have two phases. Both have a phase one that requires compliance in 2008, and a phase two that requires compliance in 2012. In the first option, phase one would require 80 percent capture, or meeting that outlet standard. The emissions averaging would be allowed among units of a single owner within a given state. This is, we distinguished this averaging from EPA's trading in several ways. First of all, no, there would be no banking. This is averaging contemporaneously, not banking. Secondly, as you

can see, the averaging is limited considerably more than it is in the EPA proposal in terms of geographical extent. And third, and I think probably most important, the averaging is limited to the four year period between the beginning of phase one and the beginning of phase two. So this is a flexibility device. The state committee felt that this provided enough flexibility to allow companies to deal with the, with the new requirements quite well. They did not want to have the degree of flexibility provided in the EPA proposal, and so the averaging is much more narrow. Phase two of option one, again, the compliance date is the end of the year 2012. That would require on every unit, or every, at every site an average of 90 to 95 percent capture, or meeting the outlet standard there. Compliance would be on a plant basis, that is if there are multiple units at one location, they would be able to average, but there would be no averaging between different sites. Why is that, it's because of the concern that the agencies had about hotspots and the idea was to provide as much flexibility as possible without violating that concern. The notion is basically at any one

site you have to have this kind of control. You can't trade to get allowances or something will allow you to emit at a higher level, but you can average among the units at that site because the, the exposures will be essentially the same, whether it's averaged or whether every unit does the same thing. Now let me move on to the second option, this is an alternative, and I think the thinking among the committee members was that both options would go into the regulation and they would, the companies being regulated would then choose one option or the other as their pathway forward, and they could choose either one. This one is designed to give flexibility in the first phase in return for an agreement to comply with multi-pollutant standards in the second phase. And this is a response to a lot of concerns that states have heard that mercury emission control shouldn't be out of sink with the emission controls that are being done in order to meet CAIR and other programs. So this says basically half the units, half the capacity within your system has to be controlled by 2008 to these levels, 90, 95. The other half may be postponed if there is an agreement that's

enforceable to meet multi-pollutant standards in 2012. And those standards are as follows: There would e sulfur, NOx, PM and mercury standards. In many cases I suspect these reductions would be what companies are already planning for on a number of units. So there might not be very much additional impact here. But there, the idea is to allow for that kind of flexibility, to allow people to, to take plants that they're going to do a major pollution control upgrade on, do it, do it by 2012 and include all the pollutants. I did want to mention a couple of things too while this is up on the screen. One of the issues I heard being talked about a lot in the earlier session as we were, as were listening was technology and costs. And these obviously are technology standards. So they, they represent a conclusion within the committee about what technologies can do in the years 2008 and 2012. There's a chapter in our, in our document which reflects the thinking of the committee based on the expertise of all the members of it, and on outreach that they did, and I want to talk about that for a minute because I think it's quite surprising. As you all know there are two kinds

of controls systems for mercury, if you want to put it that way, one is co-benefits, where you capture mercury by using technologies that are designed to capture other pollutants and you make whatever adjustments are needed in order to make that happen. The second is mercury specific control technology. And the most commonly discussed, the most I think clearly advanced of those technologies is ACI. I don't think that many people are aware of the degree of advancement in that technology over the last year. Just, you know, we, we concluded, and we have this in our document, that based on recent tests done by the National Energy Technology Laboratory and EPRI and others, and the cost of mercury control technology, of ACI, probably are going to be down in the range of .2 to .8 mills per kilowatt hour. That would translate into about 15 to 60 cents per month on the average consumers electric bill. Now just to make the point about what rapid change that reflects, only a year ago EPA was estimating 1.12 to 3.10 mills per kilowatt hour. There has been tremendous change in this technology over the year, and I think it's very important in your, in your

process that you make sure that you have the, the newest data, because I was surprised, I think our members were even surprised when they began to, to dig into this and realized where the technology stood. There are, of course, a couple of other multi-pollutant technologies out there under development as well. They're clearly not as far developed yet, we talk about them some in the document. One is called K-fuel, and it's a way of cleaning the coal before it comes to the, to the power plant. Another is called Powerspan Eco. I know a little bit about them. It's, it's a system that, again, can control multiple pollutants the same way. Both of these are under development. I think our feeling is that if there's a strong incentive for them to develop. We're going to see them become commercial much more rapidly. So I think what you can say is these, these proposals, these standards reflect the STAPPA/ALAPCO members' feeling that this technology is advancing very rapidly, that it's now really commercial. It's actually, there are I think a dozen contracts for ACI units in the country now. And that what is needed to fully commercialize that and the other technologies is

to put in place emission controls, regulations that will, that will assure there's a market for technologies like that. And I wanted to, to finish with a couple of slides. One question that a lot of people ask in state government is well how can a state adopt this model rule, don't we have to adopt the EPA rule, isn't that, isn't that a binding rule. Well the answer to that is that the EPA rule is a model rule itself. The only binding aspect of it, really, is in terms of control technologies, is that if a state decides not to do a trading program, then the, the emissions budget becomes a cap for that state. So the state would have to demonstrate to EPA through a, what they describe as a SIP-like process, there's a term most people in the world wouldn't have any idea what you're talking about. SIP is bad enough, but SIP-like. And anyway, you would make that demonstration, and I think the, the fundamental demonstration you'd have to make would be our program, whatever, whatever the state adopts, will assure that the emissions in our state are below the cap. If, if the state can show that, then EPA really is, is in no position, and its own regulations say this, to

reject that kind of regulatory program. And finally, of course, you know it's pretty obvious, the model rule requirements would far exceed the emission reductions that are in the EPA proposal. Oh, I'm sorry, let's go to the last one. Never mind. The, the last slide. I just wanted to reiterate the policy objectives of the, of the proposal, and those are to protect public health and welfare, reduce emissions to a very low level, and provide the flexibility to reduce cost, but the regulatory spur to assure rapid progress in terms of emission control. So I think the committee did, did a tremendous job. I was frankly amazed that in a matter of about three months, four months, the, a committee of that size in that many different places could reach agreement on anything. And I think what, what brought the committee together was the increasing feeling of, that there was consensus on the health effects and on the availability and workability of technology. And, therefore, the group, as a whole, wanted to go forward with a program like this one. So Bill and I would be happy to answer any questions you have. I appreciate, again, your having us up here to, to

outline this for you.

MR. FIDLER:

Thank you very much, both Bill and Dick, for your presentations. Very useful information, very helpful for us to understand some of the background and basis for the recommendation. Comments and questions. Vince?

MR. BRISINI:

Vince Brisini, Reliant Energy. Actually I'm going to, first think I'm going to do is answer Bill Becker's question where he asked is there anybody here that doesn't believe that we should implement the maximum technology feasible. And the answer to that is maybe, maybe not. Now if you had asked the question, do you think anybody here is opposed to mercury control, I don't think you'll find anybody opposed to that. But what we're really talking about is we're talking about whether or not we should control in a program that's different, potentially more stringent than the federal program, and quite simply, my answer is the maximum, unless I can see some quantifiable benefit to that incremental difference, I don't support that incremental difference, because what we're doing is we're

reaching the point where we're getting to the most expensive controls. And this is one of the things that I haven't been able to get answered very well relating to ACI and other control technology. As I look at the co-benefits control of a SMCR, or rather an SCR and a, the NOx control technology, the oxidizing technology, and the flue gas scrubber, I'm pretty convinced that I can get an 80 percent removal. But if I put that activated carbon, I may get ten percent more. The problem I'm seeing is that I only, I'm basically throwing away 80 percent of my free stuff to spend money for 90 percent. And I haven't been, I have not seen anything that gives me a quantifiable benefit relative to that incremental difference. And that's what we're talking about here, because we're talking about a state specific rule that must meet the CAMR budget. And I went through, as Bill went through is, there's generalizations that this absolutely, as little as one-seventieth of a teaspoon can contaminate all the fish in a 25 acre lake. Well is that based upon an assumption that all one-seventieth of that teaspoon becomes ethylated mercury, all of that is dependent upon specific

chemistries, it all depends on specific bacterial activities, you know. And the generalizations just absolutely are, are staggering as I, as we go through here. And mercury concentrations and deposition levels are similar in the east and west. That's not what we say in the EPRI or the Brookhaven National Lab or even the work that's been done by Lynch and others in the deposition network. He talks about observation on the utility MACT working group. Well they didn't talk about 111 because that wasn't on the table at that point in time. It was 112, it was a 112 MACT regulation, so nobody even though 111 was an opportunity.

MR. BECKER:

Exactly.

MR. BRISINI:

Yeah, so it is an opportunity now. Now if it gets challenged in court and is overturned in court, fine. But what we're talking about is Pennsylvania specific rule as it relates to Pennsylvania. Because the important aspect of the Pennsylvania rule is that if we decide that we want to just meet the Pennsylvania budget, the reduction requirement for Pennsylvania is far

beyond what any other state is required to achieve. So if you cannot give me a demonstrated benefit for something other than CAMR than we need to talk about that. Because to, to just get up and speak in terms of generalizations, that's become very problematic, especially when you are in a state that is a, is a bunch of electric wholesale generators and not regulated utilities with rate payers. And I find interesting the state and local agency response as I go through here, they're either states with no coal economy, states which are actually going to force some of their coal-fired generation to retire by implementation of their mercury rule, and places that are implementing very stringent controls because they're going to receive accelerated rate recovery in exchange for implementation. So we have a lot of apples and oranges. And as I read through the STAPPA/ALAPCO proposal, everything thanking everybody was to these particular states, which seem to be very different beasts than Pennsylvania.

MR. BECKER:

If I were Larry King I'd say, well does the gentleman have a question. Let me, let me just -

- -

MR. BRISINI:

Well you asked a question, I gave your answer.

MR. BECKER:

I know. I appreciate it. And Vince is a good friend, so I do appreciate and I take very seriously with deep respect your comments. The issue here in Pennsylvania is whether to take EPA's rule or do better. And the, the first phase of EPA's rule is a 38-ton cap that EPA says will be achieved through co-benefits. A year ago, EPA and others said the caps should be 34. And a year before that, the industry said a co-benefits cap would be 32. And now they're predicting that notwithstanding what CAIR requires in its first phase, it looks like co-benefits will get the cap down to 31 tons. So let's just assume that co-benefits in the first phase are around 30 to 32 tons. EPA's cap is 38 tons, which means that until 2018, not only is there not one ounce of mercury that is going to be mandated to be controlled under EPA's proposal, but actually because of the banking provision, the gap between 38 and EPA's rule, and whatever the industry is going to achieve

collaterally between 2010 and 2018 gets put in the bank and postpones mercury specific controls beyond even 2018, perhaps to 2025. And so this is, this, whether you call it general or simplistic, this is sort of the bottom line concern about EPA's rule. It doesn't require utilities to do anything else beyond what would normally be required. What we have offered here is an alternative. It's not as tough as, as the National Wildlife Federation and the Sierra Club and PRC would want, it allows averaging where some people don't like averaging, it allows phasing where some people don't like phasing. The Clean Air - - - it requires more time than the MACT program that every other industry in this country has to comply with, three years of implementation. And what we're saying is Pennsylvania and other states and what they are saying is we can do better than EPA's rule. And whether you end up at 95 or 90 or at 2012 or 2013 or 2010, it's far better than what EPA's rule is doing. And, you know, you can quibble with the teaspoon of mercury in the lake, and you can quibble with so many other generalities, but the bottom line is EPA's rule doesn't do anything for

15 years, and we're offering something modest.

MR. FIDLER:

Pam.

MS. WITMER:

Pam Witmer, Pennsylvania Chemical Industry Council. Mr. Ayres you had mentioned that with the ACI technology that folks had suggested there would only be a 50 or 60 cent per month increase for electric rates. Was that residential or utility, or, or industrial rather?

MR. AYRES:

Well the, the figure that's, that's suggested by those studies is .2 to .8 mills per kilowatt hour. I'm assuming that residential. I don't know whether that's residential or industrial. And, you know, 15 cents to 60 cents calculation is simply taking that figure and applying it to a typical 750 kilowatt hour residential monthly bill. So I can probably get the answer.

MS. WITMER:

Because that's apples and oranges, residential versus industrial.

MR. AYRES:

Pardon me?

MS. WITMER:

Residential and industrial are apples and oranges.

MR. AYRES:

Quite different. Yes, it's quite different. And we can, I can get that answer for you, but I don't have it.

MS. WITMER:

I was just wondering.

MR. AYRES:

We'll check.

MR. FIDLER:

Gene.

MR. TRISKO:

Thank you Tom. Gene Trisko, with the United Mine Workers. Gentlemen, welcome. I have a generic question, and I'll focus first on your choice of deadlines because you mentioned, Dick, I believe in your remarks, that there is consideration within the committee process to being in sync with CAIR rules. And I'm struck that the choice of 2008 and 2012 are entirely out of step with the requirements of CAIR rule and inappropriate for purposes of setting a, an alternative mercury control limit. And I say that because as we know, the deadlines in the CAIR rule are 2010,

actually 2009 initially, for extensive of the SIP call NOx program. But 2010 for SO2, followed by 2015. And utilities around the, are affected by the CAIR rule in 28 steps will be making investments in order to achieve the required SO2 and NOx control targets by those 2010 and 2015 dates, and they may, as a consequence of those SO2 and NOx control technology installation, also reduce a substantial amount of mercury through co-benefits. And yet your mercury approach comes two years in advance of the required reductions of SO2 and NOx. What is, what's your rationale for that?

MR. AYRES:

Well I think you didn't quite hear correctly what I said, but, but it doesn't really matter. I said CAIR was one consideration and other requirements. But let's just look at CAIR for the moment. You're right about the deadlines, of course. I think the thinking was that utilities are going to be making investments to comply with CAIR over this period between now and 2018. A number of them have already made investments in scrubbers and are making investments in SCR units and probably will be. They're not going to all

wait until 2018 and then do all of them at once. And so the thinking was, for example, in option two, you could, a utility would have the option of saying we'll do multi-pollutant controls on half our capacity, the half that we were already going to probably be putting controls on, or had already put controls on, you know, between now and 2012. The other half would be required to make mercury reductions in 2008 and, of course, that would not be in sync with let's say 2018 date. But the point was not to make it all consistent with CAIR. CAIR obviously was thought to be too late by most of these states. But it was to allow for some flexibility that allowed planning to be done by utilities, at least to some degree in sync with their planning for CAIR compliance and other compliance requirements in their home states. You know I think you'll, you'll agree that in most states utilities will be, will be installing equipment, they already have, but they're continuing to install and they'll be installing more equipment over time, scrubbers take three years to build the last time I checked, and SCR units are probably half that. But in any case, it's a long process and the hope

here is that this lays out a set of rules which people are able to, at least to some substantial degree, synchronize with their other plans rather than just saying, for example, in 2010 everyone has to meet 90 percent control for al their units, which, you know, which would be, I mean if you took MACT, the MACT program literally and you said the state adopted a MACT standard in 2006, then there would be a 2009 compliance date for every unit. So this is much more flexible and much more, I think much more easy to make, to make part of the planning process for CAIR and other things.

MR. BECKER:

And Gene just to, just to reinforce the comment, we have, we have gone on record repeatedly saying that the deadlines in CAIR are too protracted. So it’s not surprising that our deadlines do not coincide with CAIR’s. But the point that we’re making is there is a recognition that we should do everything we can to try to make coincidental the requirements of our plan or other plans of reducing not just mercury, but SOx, NOx, particular, etcetera.

MR. TRISKO:

Just to follow up, if I might, since Dick brought in the, the multi-P option, which was not part of my question initially. I note a rather strong family resemblance in the specific numbers for SO3 and NOx in this proposal to those contained in the LADCO EGU White Paper, including the deadlines for compliance of 2008 and 2012. Do you recognize that familiarity?

MR. BECKER:

Well yes, but let me, let me tell you that, that these decisions are not coincidental and I'll, I'll trace back the history of how we came up with our numbers. We, I showed up there a slide, I think, that talked about how we came up with multi-pollutant principles a few years back, and we then, I think at Joyce Epps' request at one meeting saying I need more analysis, I need more analysis, what does this mean. And this triggered analysis from a number of our members to try to translate BACT into what we think is achievable. And we came up with a range. And our range of, of limits for, this is non-mercury, for Sox and for NOx primarily, was at the low end as stringent as the Jefferts Bill, which was pretty darn stringent and scared me to death. But at

the high range was something that was kind of the weakest of the, of the assumptions. That number totally coincidentally became similar to the number in the Ozone Transport Commission's principles. The upper range of the STAPPA/ALAPCO approach became the range near the OTC approach, and as you all know, there have been some discussions between the northeast and the midwest about doing something better than CAIR and it would be surprising for the state regulators to be looking at their own associations' analyses to see what could be done applying the best available control technologies. So it's in that range, our high end, the less, the less stringent end, and the OTC's end, and, and now the midwest is saying, some of them are saying we need to do more if we're going to take these deadlines seriously.

MR. TRISKO:

Let me just end with one comment. First with the reference, because your numbers are identical to those proposed in the LADCO EGU White Paper, for those here in Pennsylvania who are not familiar with those proposals in the midwest and that affects the five midwestern states of Ohio,

Indiana, Illinois, Michigan and Wisconsin, go to www.ladco, L-A-D-C-O, .org, go to the regional air quality page and look at the economic analyses that have been provided to LADCO on the potential costs of meeting these emission limits in those five states, which collectively represent 25 percent of U.S. coal consumption. But here in Pennsylvania, and I'd like to make this point, in particular, the SO2 emission rate that you have proposed, based upon an analysis of the SO2 content of Pennsylvania coal, more than 50 percent of Pennsylvania coal could not meet an emission limit of .15, the upper end of your range, assuming the application of a 95 percent efficient FGD scrubber. At your, at the lower end of your range, .10, I'd have to look at the histogram, but it would be well in excess of two-thirds of the coal produced in Pennsylvania could not meet those emissions. And those are the kind of practical factors that we stakeholders need to keep in mind in evaluating options such as you presented.

MR. AYRES:

Are you mixing NOx and SO2?

MR. TRISKO:

No. No. Your SO2 number is 95 percent reduction or .10 or .15.

MR. AYRES:

Right.

MR. TRISKO:

And you see, in Pennsylvania we produce mainly a medium to high sulfur coal, and even with a 95 percent efficient scrubber, half the coal in Pennsylvania cannot meet an emission limit of .15. If I had my chart with me I could refer to the .10. My guess is, from the shape of that curve, two-thirds of the coal in this state couldn't meet the limit with a 95 percent scrubber.

MR. BECKER:

Well let me, let me respond with three points. The first is I have read your economic analysis and I've talked to the states in the midwest who have also looked at the economic analysis, and what they tell me, and what I observed is you looked at the costs but you didn't do an adequate job of looking at the benefits of control. So that wasn't factored into your analysis. And when you do the same kind of analysis as Pennsylvania, then at least look at the benefits,

and that might make the costs look a lot more tolerable. Second, with regard to our multi-pollutant approach, this is one of two options. This isn't the only option that Pennsylvania has to seek. And as I said at the beginning, if you even go for this option, you may decide to change the option and make it tougher, or you may decide to make it a little weaker. It's a, it's a menu, it's a model, you don't have to blindly pursue it. But I would, I would, I would respectfully request that when you do receive analyses from the industry to weaken it, if you choose to do so, make sure they look at the whole picture, not just the cost. And finally, I don't believe, and I could be wrong here, I don't believe that the LADCO alternatives contain the kinds of flexibilities that we had, especially for mercury, in meeting a multi-pollutant approach. We, we purposely, I think at the criticism of some of the environmental health groups, put in, as we've mentioned a couple times, some flexibilities that some of our state and local people quite frankly felt uncomfortable with. Some people in our committee did not want any averaging, did not want any averaging because of

the slippery slope. And what some of the others said for the very reasons you're citing is let's provide flexibility to try to bring down the costs, to make it easier for industry, to make it more palatable, and I think that when you examine more critically the flexibilities we have, then you'll see that it doesn't have the kind of impacts that you're suggesting.

MR. AYRES:

Yeah, I just want to emphasize one thing that Bill said, and that is there are two options here. Each utility would get to choose its option, and the first option doesn't have a multi-pollutant element in it. So any utility burning coal which would have problem meeting those limits in the multi-pollutant proposal could, instead, choose to do the 80 percent by 2008, 90 to 95 percent by 2012, option one, which focuses only on mercury. It's exactly for those reasons that this thing was crafted the way it was. So - - -

MR. FIDLER:

Reid.

MR. CLEMMER:

Thank you. Reid Clemmer with PPL. Bill I wish I

shared your optimism for the co-benefits number that you're quoting at 31 tons versus EPA's 38. We're installing, in the process of installing four scrubbers at five of our largest coal-fired units. I don't know that we'll be able to meet the EPA's phase one CAMR requirement, which is Pennsylvania is about a 70 percent reduction from the 1999 ICR data. It's not 20 percent, it's not 40 percent, it's about 70 percent. So that being said, when we go to phase two, we're talking about, in Pennsylvania, an 86 percent reduction, but it's really from the 1999 data, which is equivalent to about a 90 percent or 90 percent plus. And I guess a question that was raised earlier I'll come back to is I don't know what I see as an incremental value over STAPPA/ALAPCO type rule versus the CAMR rule for Pennsylvania specifically. And what incremental value analysis has been done to show that there would be that, a benefit to Pennsylvania to the environment and to its citizens for doing that incremental step recognizing that the CAMR rule in Pennsylvania is not the nationwide average. And if you take what Pennsylvania's requirements are, specifically, and against what you're suggesting here, I don't

know what the benefit is. The other thing is - - - so that is one question. Another follow up question is you made an opening statement to say that your rule won't create any new hotspots. And I question how does the CAMR rule create new hotspots?

MR. BECKER:

Well let me start answering a couple of your questions. These are very good questions. Thank you for asking. The optimistic figures that I'm quoting are not Bill Becker's analysis, it's EPA's, it's the administration's, it's the utilities' analyses, and I'm happy to provide the committee with the estimates, in fact, I should have brought those slides. There was a great slide, it showed the chronological history over the past three years of the hearing at which an administration or utility spokesperson claimed the estimate of co-benefits was made. And so it went from initially, at the, at the, at the MACT discussions, utility MACT discussions, 30, 26, and then 32 and then 34 and then 38. These are not mine, these are, these are the administration's, these are industry's, these are not mine. The second is that you asked about

hotspots. Trading allows some utilities to increase their emissions. A new plant that comes in, a new plant that comes in, I think, doesn't have to have a whole lot of control, certainly trading doesn't preclude a utility from increasing hotspots, increasing their emissions. And if, and if you disagree then allow us together to go to EPA and ask them to cap emissions at today's levels in meeting the CAMR rule for those states that are implementing it. If you're willing to do that, that might address some of the concerns of those states that are implementing the CAMR rule are having. But I have not been told that industry would allow for a cap.

MR. CLEMMER:

The question with respect to hotspots, EPRI and even EPA's own modeling studies show that hotspots will not be created by implementation of the rule. That's a fundamental, you know - - -

MR. AYRES:

Well the problem is that, I think, that you're confusing predictions with requirements. You're right, there have been predictions made like that based on modeling. They don't, they don't govern

though. And any company who wants to, under a trading regime, is free to comply by using credits. And if that occurs, then hotspots either could be created, or certainly will be continued from where they are now. So, you know, what, what this proposal does is suggest a regulatory limit that eliminates, gives citizens an assurance that the hotspots will be eliminated. Our criticism of the EPA version is that it doesn't give that assurance.

MR. CLEMMER:

Okay. A follow then. Maybe that actually gets to a more rude question, how do you define a hotspot?

MR. AYRES:

Well hotspots are what's out there now, for starters.

MR. BECKER:

I would claim, I would claim that 46 states right now - - -

MR. CLEMMER:

That's a rather, excuse me, but that's a rather broad statement in terms of how do you define a hotspot?

MR. AYRES:

Well if you're, if you're, if you're trying, if you're in the context of a regulation that's supposed to reduce emissions because you want to reduce exposures and you want to reduce total emissions, then continuing the current level of emissions means you're exposing the people close to that source to much higher emissions than those people are being exposed to in areas where controls have been put in place. I think the notion of hotspots is simply where people get a much larger exposure by virtue of the fact that there's no regulation that requires controls to be put on the unit in question, or the plant in question.

MR. FIDLER:

Myron and then Billie.

MR. ARNOWITT:

I had a comment and a question. I note there had been a question before about incremental benefit, and I think one of the clear incremental benefits relates to timeline and just you're talking about whether kids are going to have the maximum health protection for a generation earlier than the would have otherwise, and I think that's something that's just worth pointing out. I have

a quick question about, I know you said at the beginning that you really decided to only look at mercury as opposed to other HAP's that are being emitted from power plants. But I was curious if anyone has ever analyzed whether ACI or other control technologies have benefits in controlling other HAP's, especially some of the other metals.

MR. BECKER:

That's a very good question, and I don't know the answer to that. I know that there are things that can be done to address kind of surrogate measures that can be done to address a bunch, but not all of the 60 odd non-mercury HAP's, but I don't know what they are. I know that there's some things that can be done. Maybe Chad can answer that.

MR. FIDLER:

Billie.

MS. RAMSEY:

Thank you.

MR. FIDLER:

And then Felice.

MS. RAMSEY:

Billie Ramsey with ARIPPA. Waste coal-fired power plants in Pennsylvania, the CFB boilers. I just wanted to compliment you on the model rule.

It was easy to read. A normal person could read it in less than one day. And just a humorous aside, I mean that - - -

MR. AYRES:

Obviously it's not ready for primetime.

MS. RAMSEY:

But, just a horror story that, horror story of some of the EPA regulations you have to read. The preamble to the CAIR FIP, if you think about that, that's the preamble to the rule to implement the rule, was several hundred pages long. So I was very happy to see the model rule. But at any rate, two questions. Mr. Ayres you, I believe, said that the estimated, current estimated cost to control is .2 to .8 mills per kilowatt hour. Did I hear you currently?

MR. AYRES:

Yes.

MS. RAMSEY:

Okay. My question is where did that data come from, do you know? And the subpart question, the data on the cost to control, was any of it based on studies of CFB boilers, specifically, as opposed to PC boilers?

MR. AYRES:

Well I can tell you where the, where it comes from, and that's, at least primarily, studies done by the National Energy Technology Lab and by EPRI, among others. But if you, if you look in the document you'll see that number and a cite, and a citation for it. I don't think anybody in the, in the committee addressed the question of waste coal or - - -

MS. RAMSEY:

CFB boilers.

MR. AYRES:

Or CFB boilers, yeah.

MS. RAMSEY:

That's my understanding too, but I thought maybe you might be aware of something.

MR. AYRES:

No. I think I can tell you no one did.

MR. BECKER:

But if you have information, we'd like to have it.

MR. AYRES:

Yeah.

MS. RAMSEY:

We don't have, I'm not aware of any information on additional control beyond the basic set up the

CFB boiler with the fabric filter. And the second question, if I may. The model rule, I believe, talks about standards based on percentage removal across the control device. I, and I apologize, I don't think that control device is defined in the rule. I don't have it in front of me, but I don't recall that. My question is, is the rule flexible enough to, to recognize that the CFB boiler with the limestone injection directly into the boiler is, in itself, the control device for that technology?

MR. AYRES:

Well the great thing about writing a model rule is that you're always able to say well as you work that out in the particular instance you really should address that question. I'm sorry.

MS. RAMSEY:

That's okay.

MR. AYRES:

But we didn't, you know, we didn't, we didn't get that detailed.

MS. RAMSEY:

Thank you.

MR. FIDLER:

Felice.

MS. STADLER:

Yeah, I wanted just to follow up on Myron's question with the other HAP's. I know in the utility MACT workgroup we looked at that issue. So if you go to the final report that was submitted to EPA there is a section on, in that report, and I think, if my memory serves me, there was some discussion that maybe a pm 2.5 standard could address some of the other metals of concern, and that an SO2 standard could address some of the acid gases, but what those levels are and the details, I would just, I would look in that report. And I just want to clarify a comment that you made Gene when you were talking about the, the SO2 levels and how that might play out in Pennsylvania. Would the, the fact that there is this percent reduction versus emission rate address, in part, your concern so that if a, like a plant does put on a scrubber and it's meeting that 95 percent reduction portion, that it's maybe not as critical whether the rate is being met. In other words, is having a percent reduction versus a rate base standard, does that ease compliance for companies?

MR. TRISKO:

Generally speaking yes, and the mercury MACT working group, I believe, in one of their rare moments of unanimity, agreed that a percent or emission rate limit was a desirable attribute of a, of a MACT requirement. But that being said, the difficulty with the 95 percent control limit in Pennsylvania again is you're dealing with medium to high sulfur coals. And if your option is to meet a 95 percent limit and you want to ensure that your, your technology is actually going to get you the 95 percent, it will be in your interest to minimize the amount of sulfur that is processed by the scrubber in order to hit the percent reduction. So that encourages switching to, to lower sulfur coals. But from the standpoint of the, just the geology here, as I commented earlier, you know, Pennsylvania's dinosaurs had a rather high mercury diet of, for, for reasons unknown to us.

MR. BECKER:

And look where they are.

MR. TRISKO:

Yeah. And now they're providing fuel at, we know, $1.25 per million BTU. Thank goodness. In all seriousness, the alternative, the emission rate

limits of .1 and .15 from a geological standpoint, half of the coal in Pennsylvania couldn't meet that .15 limit with a 95 percent scrubber. You'd have to, you'd have to do better than, better than that. But those limits encourage fuel switching to lower sulfur coals.

MR. AYRES:

Maybe I should clarify a little bit. I said earlier, of course, the company could choose option one as opposed to option two.

MR. TRISKO:

Right.

MR. AYRES:

The other thing that maybe I didn't say clearly enough in here is that the two kinds of rules, the percent reduction versus the emission limit, are intended as alternatives which the state could either adopt one and not the other, or the state could offer the utility, the option of complying with one rather than the other. So there would be that flexibility that's intended in this rule. The other thing is to make a technical comment which I know that neither of us are qualified to make, but I always thought that the more sulfur you had on the way in the easier

it was to take a percentage out of it.

MR. TRISKO:

Oh no.

MR. AYRES:

Because there was so much more there to grab.

MR. TRISKO:

You can take out a lot of tons.

MR. AYRES:

That may be a little out of date, but I, that was always my understanding.

MR. TRISKO:

If you objective is to remove a lot of tons then you will want to use a high sulfur product. That will produce a lot of tonnage removed, but in terms of achieving a very high level percent reduction, tons get in the way.

MS. STADLER:

Can I just then clarify. You're saying if you're burning a medium to high sulfur coal in a boiler in Pennsylvania and you put on a scrubber, you're not going to get 95 percent reduction?

MR. TRISKO:

You, you may or you may not.

MS. STADLER:

You may.

MR. TRISKO:
You may or you may not. I'm just saying that it will be, it will be cheaper - - -
MS. STADLER:
You don't have enough of a margin of error.
MR. TRISKO:
No, it will be cheaper and cheaper is everything in, in this context. It will be cheaper to achieve a 95 percent SO2 removal if you are dealing with a relatively lower sulfur content coal. The more sulfur there is in the coal the more reagent that you have to use in, in the scrubber system, the larger the unit has to be, duplicate number of trains, etcetera, etcetera. But could I ask a policy question?
MR. FIDLER:
Quickly, I've got two other questions.
MR. TRISKO:
Okay. Okay.
MR. FIDLER:
Go ahead.
MR. TRISKO:
My policy question was that Dick you noted, and Bill you, you made statements to the effect also that it was, that it was bad policy to trade in

neurotoxins, or words to that effect, it was bad policy. Could, could you make a distinction, because I'm a little confused here. I've heard that statement, or words to that effect several times in this process, no trading in neurotoxins. Could you make a policy distinction that would support that position in light of the fact that the Clean Air Act explicitly provides for trading of criteria pollutants, including precursors of ozone and PM 2.5, that according to EPA studies are responsible for significant premature mortality in this country. Why should the Clean Air Act encourage trading in, in criteria pollutants and not trading in a substance that is associated as best we can tell with some relatively mild developmental disorders?

MR. BECKER:

Well I have a couple responses to that. The, the most successful trading program in the Clean Air Act, I think most people would acknowledge, was the acid rain program. That was designed to be a welfare related program, not a health protection program at the time. That's point one. The second is I, I'd be happy to limit trading if you agreed with us it was bad policy to limit trading

to within the state, because I agree that if you allow trading and don't have any minimum controls, it's going to lead to exacerbation of existing hotspots, existing health problems. What we have advocated as an association, and we've supported trading, is to make sure that everybody does something good. Everybody does something good, but eventually you get to very good. EPA's CAMR proposal does not have any minimum control on existing sources, and that's where I draw the line, personally. I could, I met with Governor Leavitt the weekend before he left to become secretary of HHS, and they were about to make a decision. And I said we don't like interstate trading of mercury. We don't like interstate trading of mercury. But if you did it, at least require what your staff suggested several years ago, which is a 70 percent minimum, and then allow trading on that. The CAMR rule does not have any minimum requirement, and actually allows, based upon the discussion with a gentleman over there, actually allows sources to do worse than today's levels, and that's wrong, especially dealing with a neurotoxin. The PM 2.5 trading has minimums, and sources are going to

have to be required to be controlled, at least at the state level.

MR. FIDLER:

Nathan.

MR. WILCOX:

Nathan Wilcox with Penn Environment. Bill you mentioned in describing the options that in many ways this policy is a compromise between the utility and the environmental groups and there are things that the environmental groups don't like about it, and we're one of those environmental groups that have some qualms with the proposal. And I just wanted to ask about one of those, that being the emissions averaging between the plants. Our obvious concern here is that if you have a company that has a huge plant and a smaller plant and they average the two mercury emissions, you could have for, at least in that phase one period, still, still pretty substantial pollution levels from that larger plant. I'm just curious as to the time period, was there any sort of determination that that wouldn't be any sort of threat within that period time, or was it more - - - I'm just trying to figure out how that determination was made that

it was good policy to allow for the emissions averaging.

MR. AYRES:

Well there’s a technical point here that, it may be that the document doesn’t really explain, but I think it was assumed that take a big plant and a small plant, I don’t think it was assumed that a big plant emitting say ten times as much mercury could be balanced off against a small plant on a one for one basis. I, the assumption that I think that everybody had was that there would be a ton balance. So the small plant wouldn’t, if it were the one that over controlled, it would be able to contribute very much to the bigger plant. But it’s not stated anywhere in the, in the document that you’ve got. So I can understand your confusion on that point. Anyway that’s, that was I’m sure what was intended.

MR. BECKER:

And, and I’ll just add to this. You know, this was a compromise. As I said some, some states didn’t want anything to do with averaging. We ended up with averaging, and here is the rationale, here is the justification I feel

comfortable with, and that is flexibilities should be used to meet the best, not to meet mediocrity. Flexibility should be used to help industry go beyond what is typical. And we have a limit that is very good, not excellent as your group or other groups would want, but it's very good, and we thought how can we distinguish ourselves between what you want and what EPA is doing. Let's try to provide some relief, some phasing to make it easier to meet this very good end requirement. And that's why we allow it early on but we stop in 2012. I just want to make one, you know, comment to my friends in industry. If we had come up and suggested 95 percent in three years, no trading, no flexibility, no phasing, no nothing, I wonder if any of the questions that have been asked of us would have been different. You would have probably asked the same kinds of questions of us, yet here we are providing something that we thought was very moderate, not as good as you wanted, certainly better than EPA's rule, but far more flexible to industry, phasing, averaging, choices. And I'm getting, and I'm, you know, I'm a big boy, but I'm getting the same kinds of responses on that that I expect

that you would give the environmental community when they come up here this afternoon about their proposals. So I just, that's kind of a rhetorical question, but I'm a little surprised.

MR. TRISKO:

A philosophical question.

MR. BECKER:

Whatever.

MR. FIDLER:

Roger.

MR. WESTMAN:

Roger, Roger Westman, Allegheny County, member of ALAPCO. For Dick, you have ranges in here, let's focus on the outlet standards, I guess the bottom line is everyone comes down .0025 or .006 at some point in time. Could you explain the basis of that, of that range?

MR. BECKER:

There were some states who felt that if we had to meet a 95 percent capture efficiency everywhere that might present a problem somewhere, one of our utilities, they might have a problem. And we, we can't support 95 percent across the board. And many of the others said it's seven years from now, yes we can. But there are a couple on our

committee that said 95 across the board is going to be a daunting challenge, and so we did what many do and we decided we will compromise and suggest a range. And everyone on our committee felt very comfortable with a range somewhere between 90 and 95. And so if Pennsylvania were considering using this model, which we hope they do, you know, they select anywhere within that range that they feel comfortable with in order to respond to some of the concerns that the regulated community have expressed. But it's simply a compromise between those, those that felt could be reached and some felt they're going to stick to their guns and only adopt 90.

MR. WESTMAN:

Is that translation then into the - - -

MR. BECKER:

Yes.

MR. WESTMAN:

.006 and - - -

MR. BECKER:

Yes.

MR. AYRES:

I think it was different states' predictions of what the, or what the technologies will be able

to do by 2008 and 2012. Some are more optimistic than others but I think all of the states agreed, all of the states on the committee agreed that 90 percent seemed like a reasonable rule that could, you know, they would bet at a very high probability of being able to be obtained by them.

MR. FIDLER:

Bill and Dick, does your schedule permit you to stay with us for a bit?

MR. BECKER:

I think at least through Friday.

MR. FIDLER:

Because we've already encroached on the lunch hour, if, if we could, let's, let's take a break now for about 30 minutes to try to stay on schedule. And then I saw Vince and Doug, a few others may have had your hands up. If you have a chance to chat over this 30 minute period great, if not, let's start with those questions at 12:45 p.m.

[BREAK]

MR. FIDLER:

Staying as close to our schedule as possible, if we could - - - in the essence of time if we could reconvene and both Bill and Dick agreed to answer

any outstanding questions that the group still may have. Doug I know that you had your hand raised. Vince you were, I think, interested in asking a follow up question or having a comment, and anyone else if, if we could, why don't we get started. Doug do you want to - - -

MR. BIDEN:

Excuse me, so I can get rid of this cookie. In, in your discussions in STAPPA and ALAPCO, when you're talking about these multi-pollutant proposals that, you know, go beyond the federal program on a more accelerated timeframe and mercury proposals that are on a more accelerated timeframe, and, and employing more of a piecemeal approach as opposed to the holistic approach of the, of the federal program and with the co-benefits approach, do you ever discuss the effect that that has on the power sectors' use of natural gas? Because, and the reason I ask that is, you know, we really have a very, very serious natural gas crises in this country right now, and we are getting questions in the power sector from legislators very serious and poignant questions about why we built those 200,000 plus megawatts of gas-fired generating capacity in this country,

and I'm, I'm more than a little concerned that the sum total of accelerating more emission controls on the power sector is going to do exactly that, it's going to accelerate the economically destructive use of that very scarce fuel.

MR. BECKER:

A few reactions. First, our proposal, as you know, as we try to be clear, is fuel neutral. And we're not taking sides with high sulfur coal, low sulfur coal, natural gas or any other fuel. It's fuel neutral. Second, we, we were sensitive to efficiencies, not so much specifically on natural gas, but trying to do things at the same time as we've mentioned. We just think the timing should be earlier rather than later and more consistent with OTC and, and what the other states are, are asking for. And third, I keep coming back to health. Every year getting, since we're brining multi-pollutant in here. Every year there is a delay in reducing fine particulate, sulfur, other criteria pollutants from power plants. EPA, not Bill Becker, estimates it results in 20,000 or more deaths each year, each year of delay. Governor Whitman,

when she was administrator, testified that each year 20,000 plus people die from emissions. And I don't want to put the burden, this is not a direct criticism of any utility in this room, but on a national basis, we're talking about, yes we're talking about rises in fuel costs and we're talking about increases in utility bills and electricity bills, but we're also talking about health protection and the billions of dollars of, of health care cost and, and lost worker productivity. So all of those issues kind of came together to suggest we can do better than waiting until the end dates and either the CAMR rule or the CAIR rule. Number one we thought the technology was going to be feasible, and number two we didn't think we had the, the ability to delay beyond that because of the health and welfare effects. I don't know if that answered your question sufficiently.

MR. BIDEN:

Well my main question is do you discuss those kinds of issues, because unfortunately Pam Witmer's not here, but we do have a representative from, you know, the Industrial Energy Consumers of Pennsylvania.

MR. FIDLER:

Pam’s, Pam’s here.

MR. BIDEN:

Oh, sorry. Pam’s here. And, and, you know, we’ve just, in the last year, 70 chemical plants have closed their doors in this country and they’ve announced another 40. We’ve lost another 185, 186,000 manufacturing jobs, just in this state, at least in part due to higher energy costs, mostly higher natural gas costs. And our, the power sectors’ demand for that fuel is what’s driving the demand, the aggregate demand for that fuel. And we are crowding our price sensitive demands for that fuel in the industrial sector at large. All of the gas utilities in our state and other states are coming in for very high double digit price increases, and it’s our sector’s demand for that fuel that’s driving part of the problem, at least the demand side of that problem. And the reason for it is the cumulative effect of the layer after layer of environmental controls that are put on our state. Now we see, in the federal controls, finally, and enlightened approach to this, a more holistic approach over a, a timeframe that enables us to meet the air

quality standards, but over a timeframe that doesn't force or at least doesn't accelerate the economically destructive use of that fuel. And we see in proposals such as yours a return back to that piecemeal approach that's going to force more of the same. And we're quite concerned about that, and so are legislators. So I think you're going to hear some push back based on those grounds. It's not just what you do to us and it's not just the .2 to .8 mills, because we hear that all the time, it's the sum total and the cumulative effect of all of the environmental controls that we, and the uncertainty that it, that it causes in the minds of our investors who have to put up the monies for these controls. That's what I'm, that's the message I'm trying to get to you.

MR. BECKER:

I hear you, and I appreciate your comment. Just a couple more points. I, I think we made very clear that if you and/or the state chooses to use the model, there's an option here that doesn't make it piecemeal, it makes it holistic, it makes it integrate. It provides certainty to you and your rate holders. That's, that's point number

one. Secondly, we purposely, and actually I, I'm the one that suggested this and the members said we're not interested Bill, but we purposely shied away from merely coming out with a, a MACT approach that every other of your competitors, non-utility competitors has to meet. Every other, I think you all know this, but every other source of pollution in this country that emits any one of 189 hazardous air pollutants, including mercury, is required to comply with MACT, and the requirements are retrofits within three years. Every single other major source of pollution except for utilities. And, you know, we won't get into the history of why EPA didn't pursue the 112 approach, and the courts are going to settle that, but, but we did as an association, as two associations is rather than try to reaffirm that requirement that the others have to meet, we said let's provide some flexibility to the industry because of the legitimate concerns you're raising about high costs, about, you know, all the other requirements that utilities and others have to address. And this was our attempt at drawing a moderate, we think, middle ground between what we

think the law required and what EPA's proposal didn't do. Now we didn't, you know, natural gas has been dirt cheap in the past, and now the prices are spiking up. But what we've done, when we've talked with states who have done analyses of these kinds of programs and when we've read the literature, we see that the cost increase, at least to your consumers, is not a lot of money, and as we've learned throughout history, the cost will only come down as the experts in the fields do a better job over the course of the next few years, of perfecting the technology.

MR. FIDLER:

Reid did you have a question?

MR. CLEMMER:

Reid Clemmer with PPL. Just for the benefit of the rest of the group, Bill, you and I had a moment, chance to take a moment just at lunch break and the question I was asking relative to the option two standard in terms of an emission rate based on pound per gigawatt hour. I simply asked, and if you could provide, you know, the coal ranges that you guys were looking at to come up with that number, it would be very helpful to understand that, because mercury content in coal

does vary significantly, and I was just wondering what that was based on.

MR. BECKER:

Well I, I'm not sure how to answer it other than to say that that this was our best guess nationally of what BACT, best available control technology, would yield. And we are totally fuel neutral. We didn't assign different levels to gas, coal, high, low. We are fuel neutral.

MR. AYRES:

One, one thing that could be added to that discussion I think is this. A lot of the gas that's out there, gas-fired power plants that are out there, were built when gas was very cheap. Now gas is a lot more expensive, and I think it's probably pretty easy to show that the cost of the coal-fired plant, even with the pollution control requirements that exist now and that are on the books, including this one, would still be substantially advantageous as compared to a new gas plant. So, you know, I think gas is a, is a problem, I agree, and a lot of it has to do with the crowding out effect. I, I find it a little harder to understand how that could affect this kind of mercury decision given the differential

in price that exists now between gas and coal.

MR. BIDEN:

Are you asking me a question?

MR. AYRES:

Maybe we should have an off, offline conversation about that, because I'd like to understand what you said.

MR. BIDEN:

I'd be happy to.

MR. AYRES:

Okay.

MR. FIDLER:

Vince.

MR. BRISINI:

Vince Brisini, Reliant Energy. Number one, I, I just love all this, it's a compromise, it's a compromise. Nathan, they didn't compromise between you and me, they compromised among themselves. And so - - -

MR. BECKER:

I said, excuse me Vince.

MR. BRISINI:

Pardon me?

MR. BECKER:

I don't mean to, I don't mean to interrupt you,

but what I said, it was a compromise between what EPA had offered, which was a 2018 and beyond deadline, and what the environmental health groups and the, and those that believe the Clean Air Act is clear on this, what have required, which is a 90 to 95 percent requirement in three years. That was the compromise between 2008 and 2018.

MR. BRISINI:

Well you call it a compromise, I call it an alternate proposal.

MR. BECKER:

Okay.

MR. BRISINI:

Because you keep rolling out and you keep saying and comparing it to MACT. I'm not comparing it to MACT because I don't have a MACT standard at this point. You keep saying what's happening in the other industries affected under Section 112. This isn't, at this point in time, affected under Section 112. So it is what it is, and you keep rolling out saying, you know, here's the boogie man, well that's fine. But the reality is is that the 86 percent removal that's identified for Pennsylvania is already is at that 90, 95 percent

removal requirement. And really all you're offering differentiation from a traditional MACT is a timeline difference. And I, I hear people talking about the urgency and the time and one would conclude from those observations that we're in a crises situation, and I, in fact, don't believe we're in a crises situation. I believe we are in a situation where we can implement appropriate controls and gee, you know, acid rain apparently wasn't enough that we now are looking at substantially lower emissions' budgets, and people are moving forward, and gee banking, as awful as it may, may seem, is actually how the early reductions were achieved because you have to have somebody control beyond the budget to have a bank. So I, I look at those concerns, and I don't see them as concerns, I see them as preferences. I don't see urgency. I don't see - - - nobody has made the compelling case for those differences between the programs, and that's important. We have not made the case for the incremental difference. Now as you move forward, and what I find very interesting relative to the mentality of, of the option two, is the continuation of the no good deeds goes

unpunished. So we're going to commit to build a scrubber, by a particular time in advance, and for that privilege, you can be penalized relative to an emission rate that leaves you struggling relative to, to fuel selection, in particular to, and the point brought up relative to Pennsylvania fuel selection, relative to whether or not you can be economic in how you decide to operate these control technologies, which is one of the advantages and one of the reasons the cost controls were able to be minimal cost, or minimal compared to what people thought they would be. And the PM limit has nothing to do with whether or not a scrubber can remove mercury. So if you're going to commit to why do you need, it doesn't matter what the SO2 emission rate is from a scrubber relative to the mercury removal capability. It's a really a gas to liquid contact. And so it's, again, it's just this mentality that you're going to do this, we're going to give you this extra time to install this, but we're going to punish you ultimately. As far as the multiple benefits, one of the things that you get to, and one of the ways they control it is that the activated carbon is done

with a polishing bag house, much, much smaller. And if you go out after multiple benefits in a bag house, all of the sudden now you're building a bag house that's huge. And if you're trying to add additional sorbents or different, additional control measures, all of the sudden all of the costs that you've heard really go out the window. And, and as I look at the, you know, the statement that we're going to have plants that don't control at all, if I'm looking at plants and I'm looking at a Pennsylvania budget, even in the first phase, that is in approximately the 70 percent removal, I really am going to have a problem getting enough allowances to operate a plant not only at it's former rate, but to exceed that particular emission rate as well. They're just not going to be there, there's not that many going to be available. So from a practical standpoint everybody's going to be controlling some, and you're going to figure out how to control in the most cost effective fashion. You know the issue relative to gas, I don't need to build new plants to burn a whole lot more gas, all I need to do is start operating the plants that we've already built that don't operate very

much. New Jersey has a lot of them. We have a number of them in Pennsylvania because the price of gas is just too high, and those issues that Doug brought up are very problematic. So, you know, overall I don't see much here that's a compromise, all I see is a MACT program on a different timeline than three years.

MR. BECKER:

Well I'm not sure what else I can say, except one point. The, the reason that we have option two, and we provide four more years for utilities to meet mercury was for the utility industry. We knew, first of all, our deadlines, as you know, are consistent with the Ozone Transport Commission, with whom you're dealing now anyway. So there's a framework there that provides a kind of certainty that we've seen the northeast and mid-Atlantic states be moving toward. I imagine if we had a different framework, timeframe than that, you'd be up here criticizing us for not being consistent with the OTC. But, but the reason we provided four more years to try to integrate mercury decisions with the other pollutants is to make it easier for you not to have to come back four years later or three years

later and do PM or Sox and NOx controls separately from mercury. We wanted to do it in the most efficient way possible. And so we're offering, we thought, more time than a MACT would allow, but we're offering an alternative to make this more efficient, more expedient, and consistent with the direction that a lot of the northeast and mid-Atlantic states seem to be taking.

MR. BRISINI:

Well all I, I mean my observation is you keep referencing the Ozone Transport Commission and from the standpoint of NOx I think what we have what's being done for the Ozone and VOC, I think you have a group of states that have just conveniently extended, but I'm not sure, you know, where they, where Ozone Transport Commission stands relative to regional mercury or regional SO2 or whether you want to call it regional particulate matter by virtue of this or not. So I mean they're a commission, they're a group of states that are getting together and they're talking. But I don't see any regulatory authority relative to these other pollutants.

MR. FIDLER:

Let’s, let’s refocus the discussion. We’re straying a bit from, from the objective of the meeting today. Any other comments or questions for Bill or for Dick before we move on to our discussion of options? Okay. Thank you very much. Charlie, are you ready to present?

MR. McPHEDRAN:

Yep.

MR. FIDLER:

Please.

MR. BECKER:

Isn’t there an interval where they give a rounding applause for the speakers or anything like that?

MR. FIDLER:

Okay. Go ahead Charlie.

MS. EPPS:

Do you have a bio for Charlie?

MR. FIDLER:

Do I? I do. Our first speaker is Charlie McPhedran. Charlie’s going to present an option on behalf of Penn Future and the, the other petitioners that offered a, well established the process that we’re, we’re engaged in right now to review a rule and develop a rule specific to

Pennsylvania. Charlie is senior attorney in Penn Future's Philadelphia office. His practice includes air, utility and water matters. Charlie prepared the petition for rule making regarding mercury. And prior to joining Penn Future, he practiced at the USEPA for nine years in Philadelphia and Washington. Thanks Charlie.

MR. McPHEDRAN:

Thank you. I'm here today on behalf of Penn Future and the other petitioners which now number over 60 groups around Pennsylvania and several national organizations, including the National Wildlife Federation, which is represented here today. Our proposed language is based on the New Jersey mercury rule. We were required by the Pennsylvania Code to submit draft language with our petition for rule making. We looked at several other states at the time. There were four states that we included in our petition that had mercury rules at the state level regarding air emissions. We chose the New Jersey rule because it offered a good combination of a substantively strong standard, which is also true in Connecticut and Massachusetts, but it offered more, it offered a good deal of flexibility to

our eye, and we thought that was a virtue. Our suggestion, our language is based on the proposed rule by New Jersey from January of 2004. Their rule went final in December of that year. There were some changes in the rule, but none that impact the language I'm going to talk about today and the language which we submitted, which I believe is posted on the DEP mercury rule website. It is. It's all at pennfuture.org, if you'd like to review the whole thing. It's only about eight pages. So I do commend it to your attention. Why mercury? Well it turns out we've covered some of these issues today. Let me just mention three of them, which is each year in this country 600,000 babies are born to mothers whose blood levels of mercury put their babies at danger of neurological development. We think this is the defining health statistic for this debate, and it does appear in attachments two and three of our petition, which are, I believe, also posted on the DEP website. Take a look at the study. I think when you read it you'll, you'll see the basis for it and perhaps be convinced that we need to move forward on this issue. I have a fish there because we have a fish-wide, I

have a trout there because we have a statewide fish consumption advisory against eating more than one meal per week of fish caught in Pennsylvania waters. Our sporting life is very important to us in Pennsylvania. We have a million people who get fishing licenses every year. We want those people to be able to fish, we want them to be able to eat their catch, and taking mercury out of our environment is a necessary step towards lifting that fish consumption advisory. And finally, economic development. Fishing is an $800 million a year industry here in Pennsylvania according to a report by DCNR. We'd like fishermen to be able to eat their catch, whether they come from Pennsylvania or they come from another state to enjoy our fishing heritage and our fishing opportunities. Familiar stuff, probably. This is in our petition. Where does mercury pollution come from? It comes from the coal industry overwhelmingly, 41 percent of our, of our national emissions, according to NESCAUM, come from the coal industry. You'll see oil and gas are right next to it and they are less than one percent each. Pennsylvania, it's a similar

story, this is based on DEP data. The utility industry is over 80 percent of our mercury emissions to the air, and again it's overwhelmingly coal. So New Jersey, what are the substantive requirements. It applies to coal-fired boilers over 25 megawatts. In Pennsylvania I think that's about 34 plants, including multiple units at some plants. It requires that emissions not exceed three milligrams per megawatt hour. That's an output standard. Or that the reduction efficiency of air pollution controls be at least 90 percent. And we saw in the STAPPA rule how some of their standards are also phrased in the alternative. The advantage of an output standard is that it rewards efficiency. So if a company can do better in terms of production megawatt hours, the denominator of that standard increases and it's easier to meet the three milligram standard. The other thing is I mentioned that we liked about New Jersey was there is a lot of flexibility in the New Jersey rule. Two compliance options. Averaging the stack test, you can average three test runs per quarter for four consecutive quarters to determine compliance. So if you have a spike or

maybe even two spikes, it can be absorbed over the four quarters that you're looking at. Averaging of boilers at the same facility. We touched on this before, this is not the interstate trading that people in the environmental community are critical of, but, rather, averaging at the same plant between two boilers. We don't believe that creates additional environmental risk. It creates opportunities for efficiency and for cost control for companies. And the New Jersey rule, limit does not apply to a plant that will close by 2012. I don't, I don't think we see a point in applying a limit for a year, for a year or two if the plant's about to close. And finally this is an option that we've talked about already quite a bit, the multi-pollutant option. This is the way it's phrased in New Jersey. Standards are extended for five years for up to half of your megawatt capacity if you agree by 2007 to meet specific limits for NOx, SO2 and PM by 2012. And these are, this is similar to the STAPPA proposal. We, this, this rule, this New Jersey standard is written only in terms of output, in terms of input, sorry, in terms of percentage reduction. I think we would

want to look at an output option for Pennsylvania too. It's not included in our proposal, but I think we'd want that included as well. And that is it. I'm happy to take your questions and refer you to the text of the rule online.

MR. FIDLER:

Questions or comments for Charlie? Doug?

MR. BIDEN:

Doug Biden, Generation Association. A point of clarification, the 90 percent, is that a removal efficiency from the coal, from the mercury content in the coal?

MR. McPHEDRAN:

I had copied the rule exactly, because I knew this was an important point. Let me read you the section. This is Section 2, 2(a)(ii) of the text. The reduction efficiency for controlling mercury emissions in the air pollution control apparatus or control of mercury of any coal-fired boilers shall be at least 90 percent. So the phrase they use is reduction efficiency.

MR. BIDEN:

Reduction efficiency. So I, I can safely assume that that's removal from the mercury content in the coal, that has nothing to do with - - - I'm

wrong?

MR. TRISKO:

It’s after the boiler, isn’t it Vince?

MR. BRISINI:

If it, if it were to be as, as, if it were to be, it would have to be apparati because you would be looking at the removal across the boiler through the SCR, through the precipitator, say through a scrubber. You would have multiple benefits if you were going to - - - by, by providing a singular device, apparatus, one would think that you would have to test upstream of, of a single piece of equipment as opposed to measuring the fuel in and mercury out.

MR. McPHEDRAN:

I think it’s designed, air pollution control sounds to me like it’s a post-combustion measure at the beginning of the controls to the end of the controls. It is plural. It’s not just mercury control.

MR. BRISINI:

What I’m saying is the controls, the controls can actually be and how you, how you achieve control is influenced by how you adjust your boiler relative to what comes out of the boiler. Whether

it’s how you stage your burners, whether you have deep stage burners with low NOx burner technology, drive up your loss of ignition, collect a considerable amount in a precipitator. It’s a lot of things that - - - if you mean removal from fuel in, it was very clear in the STAPPA/ALAPCO that it was from fuel. This I don’t believe, the way you just read it, says that same thing.

MR. McPHEDRAN:

Well the term isn’t defined in New Jersey. So maybe we need to write a definition for that.

MR. FIDLER:

Reid.

MR. CLEMMER:

Reid Clemmer, PPL. Vince was starting to get to the point where I was in terms of testing at the outlet, you know, for compliance demonstration, you know, assumes you have to measure something on the inlet as well. And defining that inlet in a coal-combustion process is extremely difficult because, as Vince is saying, depending on how you stage your combustion, depending on whether you’re putting pixie dust on the coal to sprinkle it to remove it, like some of the sorbent

technology people would have you say is, you know, readily available right now and we can do 95 percent control a hundred percent of the time, that you'd be measuring at some point, and unless you're measuring at the coal over the exit, I don't know how you measure percent removal. I don't know what point in the series from the time that I start receiving coal, because you can do various things to the coal once you get it to the time you get out. So that's a point that you need to take. You can wash it, you can do a lot of things with coal. So there's a number of things you have to take a look out in consideration. The, the thing that I wanted to ask you though in your rule is how does this rule, or what does this rule demonstrate that it's going to achieve versus implementation of the CAMR rule will not, you know, in terms of reduction for Pennsylvania?

MR. McPHEDRAN:

Well it's a three year compliance period. And the New Jersey rule is final in December of '04, effective in December of '07. So we went, if we adopted this rule in Pennsylvania, we're expecting a final rule in November of '06. This

rule will be final in November of ’09.

MR. CLEMMER:

So the rule, my, my question to you is how does this benefit Pennsylvania? If Pennsylvania were to adopt this rule by itself, you have an expectation that your lead in slides here, 600,000 and the mercury, the fish, everything else, you’re going to have a benefit to Pennsylvania by reducing mercury emissions in Pennsylvania are going to benefit Pennsylvania state?

MR. McPHEDRAN:

This is a 90 percent reduction by 2009.

MR. CLEMMER:

How does that, the question I’m really asking is how does that benefit Pennsylvania? Have you done an analysis?

MR. McPHEDRAN:

Well that’s nine years before 2018, which is where we expect this phase two CAMR. And with banking, as we’ve heard before, we may not see CAMR fully implemented until 2025. That’s 16 years sooner that we would have reductions in Pennsylvania.

MR. CLEMMER:

So your response, if I interpreted your response, you're saying basically it's a timing issue?

MR. McPHEDRAN:

Timing is the, is the obvious benefit for this.

MR. CLEMMER:

Okay. Thank you.

MR. FIDLER:

Any other comments? Gene.

MR. TRISKO:

Thank you Tom. Gene Trisko of the United Mine Workers. Charlie do you know how many coal-fired power plants there are in the state of New Jersey?

MR. McPHEDRAN:

Subject to this rule, there were about a dozen plants or units.

MR. TRISKO:

Okay. And do you know if any of those plants obtained their coal from Pennsylvania?

MR. McPHEDRAN:

I don't know.

MR. TRISKO:

Would you accept that they do not obtain their coal from Pennsylvania?

MR. McPHEDRAN:

I don’t know if they do or don’t.

MR. TRISKO:

If they purchased coal from central Appalachian states, such as West Virginia.

MR. McPHEDRAN:

I don’t know. I do know their configuration is similar to plants in Pennsylvania.

MR. TRISKO:

You mean the boilers.

MR. McPHEDRAN:

Right.

MR. TRISKO:

Right, not the coal supply.

MR. McPHEDRAN:

Right.

MR. TRISKO:

Thank you.

MR. BRISINI:

Vince Brisini from Reliant Energy. Just a question. It talks about the ability to avoid these requirements if you commit to retire by 2012.

MR. McPHEDRAN:

That’s right.

MR. BRISINI:

Do we know how many plants, if any, committed to retire, coal-fired plants committed to retire by 2012?

MR. McPHEDRAN:

I think you have to commit by 2007 to retire by 2012. So I don't know if anyone's done it yet.

MR. FIDLER:

Other comments, questions? Thank you very much Charlie. Yes.

MR. CLEMMER:

Actually I guess I do have one for Charlie. Do I - - - thank you, Reid Clemmer, PPL. Thanks Tom. Just from compliance options and determinations of demonstrations, it seems that you're willing to accept testing or some sort of testing in lieu of continuous emission monitoring?

MR. McPHEDRAN:

Yes. The New Jersey rule says that continuous emission monitoring becomes an option when, PS, performance investigation is issued by EPA. Before then it's stack testing.

MS. WITMER:

Pam Witmer, Pennsylvania Chemical Industry Council. Charlie what's the, the megawatt that these 12 coal-fired power plants represent in New

Jersey?

MR. McPHEDRAN:

Their, their megawatt capacity? I can get that to you. I don't know that.

MR. BIDEN:

I can help with that. I think it's roughly, Doug Widen, Generation Association. I think it's just a little bit less than 2200 megawatts. It's, well we're just a little less than I think 22,000, including waste coal in this state.

MR. FIDLER:

Billie.

MS. RAMSEY:

Billie Ramsey, ARIPPA. The question about the weight and measure, the 90 percent reduction, with the CFB boiler there are no add on control devices that are commercially available, and to my knowledge no research says, no research has been done on CFB boiler. The question is about how to measure the 90 percent. So when you're talking about a CFB boiler, which is configured completely differently than a conventional coal plant, you're talking about a CFB boiler with limestone injection into the boiler, which acts as a sorbent for removal of sulfur dioxide, and

then a fabric filter on the back end. Does it sound reasonable to you that the 90 percent should be measured in, by fuel in?

MR. McPHEDRAN:

Sure, if that's an air pollution control method. I mean in terms of its text it seems to me it does sound reasonable. But since we focus so much on reduction efficiency, it seems to me we'll have to figure that out, maybe write a definition for it if we adopt this regulation here.

MR. FIDLER?

Nancy.

MS. PARKS:

Nancy Parks, Sierra Club. Tom, I'm wondering are we going to have a chance to go around the table as we have at the end?

MR. FIDLER:

Yes. Yes.

MS. PARKS:

Then I think I want to waive comments until then.

MR. FIDLER:

Yes. Okay. Anyone else? Oh, I'm sorry, Felice.

MS. STADLER:

No, that's okay. Just on the, on the measurements. I, I asked Mike Durham recently

about the inlet/outlet measure, because I, I was under the impression that you could do something sort of, you know, the flue gas right before the pollution control devices and then at the outlet. And he said, actually it's much better, it's cleaner to do it from the, from the coal and that utilities are already sampling coal anyway for a whole number of things. And that it's, it's just much, it's just a much cleaner measurement from doing it from the coal and then to the stack. And my understanding is the, yes, the stack rule is written so that it would be fuel in to stack out.

MR. FIDLER:

Thank you. Anyone else?

MR. AYRES:

The STAPPA proposal is basically from the inlet to the pollution control equipment to the outlet. It's, it's not inlet fuel to, to outlet, to stack.

MS. STADLER:

I guess it would just be - - - this will promulgate - - - call Mike Durham again, because he, he raised some concerns about the ability to do that measurement, that inlet measurement.

MR. AYRES:

Massachusetts I know does it that way. I don't know what other states do, but - - -

MS. STADLER:

Okay. That's what they - - -

MR. AYRES:

That's the extent of my knowledge.

MS. STADLER:

Okay.

MR. BURKE:

I'm going to comment on this just a little bit in my talk, but for the reason you just said, it's very difficult to get the inlet measurement to the pollution control device for a variety of reasons. It's much easier to get the mercury content of the coal, it's a lot less expensive, it's a lot simpler to do that, need a lot more replicate analyses to be able to get reasonable decision for, for measurement. And then do the outlet measurement, because there the temperature and condition are usually controlled by the condition of the particulate, or the pollution control device, for example the scrubber. So it's easier to get that measurement. It's tough to get the measurement of the inlet, say an SCR, when the temperature is 750 degrees Fahrenheit,

and there really isn't technology and there really isn't technology that's well developed to do that. As a matter of fact, what I'm going to say in my suggestions is that the way to measure removal is from coal to the outlet. And there's a practical reason to do that from a coal suppliers perspective, and that is as people begin to look at specifying coals for use under whatever the mercury control requirement is, they're going to be concerned about the mercury content of the coal and the effect of the total system in reducing that to get to whatever the initial target is. So I think for practical reasons from a coal marketing perspective, making, defining removal as the coal to stack has a number of attractive features to it.

MR. FIDLER:

That's a good segue. Are you ready Frank?

MR. BURKE:

Yep.

MR. FIDLER:

Okay. Thank you Charlie. Frank I don't really have a bio. If you could just give us a few statements about your background.

MR. BURKE:

Oh sure. My name is Frank Burke. I am with Consol Energy. I have a BS in chemistry, a PhD in physical chemistry. I've been with Consol for 30 years in research and development most of that time. And I guess pertinent to this discussion we've been doing mercury research for the past, probably 20 years. We developed some of the additional methods for doing mercury in coal measurements. We've done a lot of mercury stack sampling, mercury control technology development. We've looked at a number of things around this issue. And so my comments are, to some extent, informed by my background on this issue that, and I, some of this is technical stuff. And what you have, I've got the slides that I'm going to go through, and then there are some additional slides that are in there that have some tables and graphs on them, which I won't go through, but they're available to help me in case I get some questions, they might help to, to answer. Let me start off by saying the Pennsylvania Coal Association, I'm with Consol Energy, but I'm here on behalf of the Pennsylvania Coal Association. And our position, our option I guess we're offering is that Pennsylvania should adopt the

CAMR rule, both phase one and phase two in its entirety. And what I'm going to present here are comments on reasons that I think that we've arrived at that position. I have the - - - I got it. These are the, these are the items that I want to talk about, reduction versus removal issue in fact is pertinent. I want to talk about that a little bit. The banking issue, hotspots, technology status, and then some recommendations to DEP to take into consideration as they go through the process of performing their, their responsibility to arrive at a Pennsylvania specific rule. This really reflects the comments I think that we were just talking about here in the discussion. I think there's been a tremendous amount of confusion about this issue of removal versus reduction, and how these terms are used. And so what I'm doing is offering my definitions that I'm going to use, at least for my presentation. You can make up some others if you like them better, but these are mine. And that is removal refers to the capture of mercury present in the coal, that would otherwise have been emitted absent some capture mechanism. And that capture mechanism could be a mercury specific

control technology, it could be co-benefits, it could be mercury that's taken out in the mills before the coal goes into the combustion system if it's, if it's removed in the, in the milling process, the grinding process. The mercury removal level is a particularly useful number because it gives us a way of comparing performances of different technologies. So that, it's a percentage basis, or it could be an absolute basis, but removal is coal to stack, coal to outlet. Reduction, on the other hand, and I've seen it used this way a number of times, is emissions relative to emissions during some historic period. So I hear people talk about 90 percent reduction in emissions, is that relative to some historic period. For example Pennsylvania's 1999 emissions in 99 percent, or 90 percent reduction would be a very different number than a 90 percent removal of mercury from the coal burned during that same period. And on the next slide I'll give you some example, or an example, a specific example of that. Now the reduction maybe occurred, this is relative to some emission in some historic period. During that historic period, some removal may have

already been occurring because of co-benefit reductions. Okay. This slide, what I've done is I've shown, what I'm showing here are the required mercury removal versus required mercury reduction based on CAMR phase one and phase two limits. And as you're well aware, CAMR phase one limits for Pennsylvania are 1.78 tons of mercury, phase two limits are .7 tons of mercury. Now in the coal burned in Pennsylvania in, now this is based upon the 1999 mercury and coal data, the ICR Part II data that EPA presented, and based upon 2003 FERC heat input data for the units in Pennsylvania, I calculate a value of 11.2 tons of mercury in the coal that was fed to units in Pennsylvania, assuming those mercury contents and that heat input. Let me get my pointer here. If I compare that then, the 11.2 tons of mercury in the coal, to the 1.78 ton cap in phase one, corresponds to an 84 percent removal. Again, removal from coal in to mercury emission limit. For the phase two limit, phase two limit is .7 tons. Again, compared to the 11.2 ton cap, that's a 94 percent removal. And, again, I think these numbers are significant because this really reflects what the technology is capable of

accomplishing for a comparison of that. Versus required emissions, emissions in 1999, according to EPA were 4., almost 5 tons. Again, that's based upon EPA's data, and I've got the references on the slide here, you can look it up. So the removal to get down to the 1.78 ton cap is, or reduction, pardon me, to get down to 1.78 ton cap is 64 percent. 64 percent reduction corresponds to 84 percent removal. Similarly for 19, the phase two cap, .7, the reduction required below 1999 emissions is 86 percent. That corresponds to a 94 percent removal. Okay, so this is, these are my definitions, but I think the intention here is to point out the basis for this 94 and 84 percent removal number that we've talked about as being a good measure against which to compare the performance of available technologies. Okay, so CAMR requires between 84 and 94 percent mercury removal depending upon the phase from Pennsylvania coals. That's based upon 200-, the year 2003 heat input. If heat inputs increase between now and, and the years in which the requirements are imposed, then these reduction percentages have to go up because the heat input goes up and that means that the, more

coal is being burned, assuming the same mercury contents, the removal rates become higher. Pennsylvania coals are relatively high in mercury and absent the availability of technologies to achieve these levels, it provides an incentive for switching to non-Pennsylvania coals or to natural gas. Now we've heard statements from the administration in this state that the administration is concerned about maintaining the Pennsylvania coal industry, but it's not clear to us, and we would appreciate clarification on that point, how a Pennsylvania specific rule helps Pennsylvania coal miners and their workers. On the banking issue, banking has been criticized as delaying the date at which a cap is achieved. But a bank can only exist because compliance levels were greater, in other words, there was over compliance in early years, and those banked allowances are then used to offset requirements in later years. So to the extent that allowances are bank, the cumulative emissions over time always have to be less than they would be without banking. There's some slides later in the presentation, which I don't plan to go through, but this is just simply a mathematical fact, the

only reason a bank can exist is if there's early compliance. And, therefore, cumulative emissions over time with banking always have to be less than they would be if the cap was simply met on a year to year basis. On the hotspots issues, and this point has been brought up by a number of people in the presentation, or in the comments, not presentations, today. We believe that Pennsylvania, DEP should provide a definition of the term hotspot that is objective, absolute, and that sets some measurable criteria. What does constitute a hotspot. You know the idea that it is a relatively higher level of mercury deposition than some other area doesn't really define a criteria that can be measured. There's no basis for a measurement that says objectively what a hotspot is. So we believe DEP should provide an objective measurable criteria that relates that level to some sort of environmental impact. What does constitute a hotspot. DEP should provide measured deposition data to demonstrate the existence and the extent of hotspots, both before and after CAMR implementation. Obviously, you know, the quality and availability of data to be able to make this

kind of determination is limited. So our recommendation is to establish an expanded monitoring network, conduct monitoring during the implementation of CAMR phase one and then establish the need for remedial action based upon deposition measurements and source apportionment consistent with the hotspot definition that's established in part one above. Okay. Technology status, these numbers I've got some slides in the presentation. These are the, I think, the numbers which I'm most comfortable as far as being adequately represented in the data for what can be achieved through co-benefit mercury removal. This is with an eastern bituminous coal, Pennsylvania type coal. It varies somewhat depending upon the coal type, so this is relevant to Pennsylvania coals. Co-benefit removal with a combination of a wet FGD and a coal sided ESP, about 65 percent. Again, this is removal, so we're talking coal to stack. Co-benefit removal with a combination of an SCR, wet FGD, and a cold sided ESP, I've provided some numbers and some data in the presentation. We see numbers typically in the range of about 80 to 90 percent. Now I note that because this is approximately

equal to what's required for CAMR phase one for Pennsylvania. So the co-benefit effect with an SCR at about 85 percent is pretty much what's going to be required on an overall basis for mercury removal for Pennsylvania units to meet CAMR phase one limits. If you, in Tom Feeley's presentation he talked about this issue of mercury, elemental mercury emission, reemission and FGD's. That is a major concern to us because it appears to limit the degree at which mercury removal can be achieved through wet FGD's, or SCR/wet FGD combinations. Removal also declined with catalyst age. The tests that have been done to date have generally been done on fairly new units. The SCR's have been in operation very long, and the consequence of that, we haven't really seen the full affect of catalyst aging. The affect of catalyst is to reduce activity to the extent that this activity is important for oxidation that may tend to further impair the performance of these SCR catalysts for mercury removal. And given that the phase two cap is going to require about a 94 percent mercury removal on, on an average basis, this level of 80 to 90 percent suggests that there will be a need

for mercury specific technology beyond what can be achieved with co-benefits with SCR/FGD's to achieve phase two. With respect to mercury specific control technologies, it's a harder thing to answer definitively because we don't have very many examples of the application of these advance control technologies, particularly sorbent technologies, to bituminous coal units, and particularly the high sulfur coal units. And Mike Durham talked about some of that in his discussion last week. Early on in the mercury debate one of the big concerns was about the inability to control elemental mercury. Western coals are higher in elemental mercury, and so much of the research effort, the vendors as well as Department of Energy put into this was to develop technologies to deal with western coals. Well western coals are not only different from bituminous coals in Pennsylvania on the basis of elemental mercury content, they're different on the basis of total mercury content, ash chemistry, and sulfur content as well. So the work that was done on western coals, although it is of value, is not directly transferable to the situation with eastern high sulfur bituminous

coals. Only four of 19 full scale tests to date have been done with bituminous coal. A vendors talked about, and as Tom talked about last, last meeting, there are a substantial number of tests being planned now. Only two of those 15 scheduled tests are with high sulfur bituminous coal. So our level of knowledge about the performance of these technologies with high sulfur bituminous coals is limited, and what's currently planned now isn't going to improve that a great deal. One thing that's of major concern to us though, and again this was presented at the last meeting by, by Mike Durham, is that there is evidence that performance is poorer with high sulfur coals than it is with low sulfur coals. And Mike showed you this slide. What we're looking at here is mercury removal versus sorbent injection rate for two cases, one where the coal was burned, and this particular unit, if you recall, had the ability to inject sulfur trioxide. Sulfur trioxide is one of the gaseous products from high sulfur coals, or products in the gas from high sulfur coal. Without the SO3 on they achieved levels in the range of 60 to 80 percent. Now first of all, nowhere in the range

of 90 to 95 percent. They switched the SO3 on, that dropped by about 20 percent. The reason is that the SO3 is a very strong acid gas. It competes with mercury for active sites on the carbon, and as a consequence of that, there's a real concern that with higher sulfur coals, we're not going to see the levels of performance that were achieved with lower sulfur coals, western coals, where the bulk of the work has been done. Mike said in his presentation, was aware of this issue and were working on it, but they don't have a resolution to it yet. So my bottom line here is that the technology for mercury control is a lot better known than it was a few years ago, but as we begin to apply this to high sulfur eastern coals, we're beginning to see things that give us a lot of concern about the applicability of data developed on low sulfur, low ranked coals to high sulfur coal cases. Clearly in this situation where if there's a 20 percent decline in performance simply because of the SO2 content of the coal, levels of performance in the range of 90 to 95 percent are not going to be achievable. Let's see, okay, that's just simply the - - - DOE is conducting an extensive R&D program. This is

not a commercialization program. These are not my words, these are Tom Feeley's words, this program is to extend through 2010, and DOE projects the commercial availability will occur post-2012. Our recommendations then, first is to establish that CAMR is a stringent rule for Pennsylvania EGU's. As written it's going to require 85 percent to 95 percent mercury removal from the coals produced in Pennsylvania. To implement CAMR with interstate trading to give some relief to particularly those units that are burning a higher mercury coal, the smaller, older units, the ones that don't have co-benefit removals to give them some relief to allow them to continue to operate. Provide a practical definition of hotspots, something that we can use as a basis for determining whether or not a hotspot exists, that relates measurable deposition levels to environmental effects. Expand the mercury deposition network to determine the effect of CAMR implementation to see if hotspots do exist, and if so do they persist after implementation of CAMR. And finally, promote the development of mercury specific control technology, recognizing the

limitations of current technology for Pennsylvania's higher sulfur bituminous coals. Thanks.

MR. FIDLER:

Thank you Frank. Do we have comments or questions on any of Frank's slides? Felice.

MS. STADLER:

Yes, Frank you have two charts on the effect of banking. And I, I don't quite understand the, the bullets. I was wondering if you could maybe just quickly walk through those, those graphs.

MR. BURKE:

Those two?

MS. STADLER:

Yeah.

MR. BURKE:

The only thing, I set that up because, it's maybe not that terribly important. What I had seen was that there was, that prior to - - - well this is like, we have two pages here, this is hypothetical, right. Here's the 1.78 ton limit for Pennsylvania in phase one, here's the .7 ton limit for Pennsylvania in phase two. What I'm assuming is that in the first eight years, 2010 to 2018 that, I think it was 20 percent was the

number - - - I based this on the, on the acid rain program. About 20 percent of the emissions were banked in the first phase of acid rain, about ten percent per year were consumed in the second phase. So I said, you know, those numbers are as good as anything. So that's what I assumed. So that means that the actual emissions, instead of being 1.78 would be about 1.4, all right, because you're banking, because you have to reduce emissions to create a bank. And that post-2018, the emissions now, instead of being .7 turn out to be about .8 because you're consuming part of that bank, the emissions are higher than the limit, the bank is being consumed. And then what I do is I simply add up on an annual basis what the total emissions are for the purple line, and what the total emissions are cumulatively over time for the green line. Are you with me? And that's what we get. So these are the cumulative emissions would have been if the emission were simply at the allowable level each year. I went from 2010 through 2030. And this lower line is what the cumulative emissions are with banking. And the point is that the cumulative emissions with banking over time

always have to be less than the cumulative emissions would be without banking because of the existence of this bank in the first place. This bank represents over compliance. It can only be drawn down to the point where these lines meet. After that point, it can never, it can't cross, because at that point the emissions are capped at whatever the allowable limit is.

MS. STADLER:

So if, if you didn't have the banking - - -

MR. BURKE:

If I didn't have the banking, this is what I'd have, the top line. That would be the cumulative emissions over time. With banking, this is what I have. It doesn't really make any difference what you assume about the size of the bank, it just changes the relative, the distance between those lines, but they always fall in that same relationship.

MR. FIDLER:

Anyone else?

MR. CHALMERS:

Ray Chalmers, EPA. I'm interested in one of the earlier slides you showed on the mercury removal and emission reduction under CAMR as compared

with the two different definitions that you gave of removal and reduction. And if you could show that, I'd just like to see if I understand this correctly.

MR. BURKE:

That one?

MR. CHALMERS:

No, no. The second, the next one.

MR. BURKE:

Next one. That one?

MR. CHALMERS:

Okay. You're showing the in the far column, the 86 percent reduction ultimately required by the CAMR rule. Now am I correct in thinking that you would need to get a 94 percent reduction if you used removal efficiency to be equivalent to the 86 percent?

MR. BURKE:

I need to get - - - take these numbers, two here for example. I need to get a 94 percent removal of the mercury in the coal to reduce emissions by 86 percent below the five tons that were emitted in 1999.

MR. CHALMERS:

So when we heard from Charlie McPhedran just

before you that the is recommending a 90 percent reduction, which from his definition seems to be a reduction in the efficiency of the control, which would, I would think be the removal.

MR. BURKE:

More or less be this number, I think.

MR. CHALMERS:

So his word reduction is equivalent to your word removal. So - - -

MR. BURKE:

Possibly with a bit of a quibble, yeah.

MR. CHALMERS:

So isn’t it correct then to say that the proposal by Penn Future is actually less stringent than the CAMR rule in the ultimate control?

MR. BURKE:

I think what I would say is I don’t see much of a difference in terms of the degree of stringency, which is one of the reasons why we think the implementation of CAMR gets us about the same - - - the differences between what’s going to be left in terms of emissions between these two cases.

MR. CHALMERS:

Well I’ll just point out that in order to be approvable, the state plan has to be at least

equivalent to the requirements of the CAMR rule. And this proposal seems to be less stringent.

MR. BURKE:

I don't, again, it's a basis, you know, this is, these are the numbers I'm using, okay. And I don't know what numbers he's using, I don't know what he would arrive at. But this number is EPA's number, these numbers are EPA's numbers, this is arithmetic, okay. These numbers, this is based on two EPA numbers, these are EPA's numbers, this is arithmetic. So there aren't any assumptions on my part to go into these numbers. These are EPA's numbers and, you know, my, my 12-digit calculator.

MR. CHALMERS:

The state would have to demonstrate equivalency for its rule to be accepted.

MR. BECKER:

Can I just follow up on your question to you?

MR. BURKE:

Sure.

MR. BECKER:

There's no date in there.

MR. BURKE:

That's true.

MR. BECKER:

And so you're not thinking that as an EPA spokesperson somehow the CAMR rule is tougher than the proposal that New Jersey or STAPPA/ALAPCO or others are calling for, which is at least six years later and maybe more, are you?

MR. BURKE:

I'm just looking at the numbers and what we're looking at is the ultimate control is the key here. Because you have to meet whatever that cap level is. Certainly this proposal would be more stringent then you're getting the controls sooner, but I'll also point out that there's no real cap in this proposal and, therefore, as more generation comes on line, emissions could go up actually beyond whatever they are. Say if you, if you reduce them three years and then over the next 15 years they're going to rise if generation rises. So that's another concern.

MR. BECKER:

So you are going to be looking at the cumulative effects, not just the, the absolute numbers there. I just want to make sure that - - -

MR. BURKE:

Well under the rule you're required to meet that

cap level. So what we'd be looking at mainly is will the rule meet that cap. And the timing is, you know - - -

MR. AYRES:

It's like doing a financial calculation without considering the time value of money.

MR. BURKE:

I can only (inaudible) what the rule says.

MR. BECKER:

So, so somehow, let's use a hypothetical. If the, if the EPA rule said 94 percent and Rule X said 93 percent, but rule X came into effect ten years earlier, okay, rule X 93, EPA 94, but rule X came into effect ten years earlier, and there's, and there is no assurance that EPA's rule is ever going to meet its full reductions until well past the deadline, are you going to rule that EPA's rule is more stringent because it was a percent more stringent?

MR. BURKE:

I'm simply saying that EPA's rule sets a cap that you have to meet and you have to meet that cap by 2018. And you would never meet that cap with that proposal if the, you know, given those numbers that we just looked at. So I think

that’s the concern. I’m not saying that, you know, it isn’t more stringent in concept to control sooner, but you have to control sufficiently as well. I was surprised as well when I saw those numbers. I hadn’t seen them.

MR. BECKER:

Well I’m not surprised at the numbers, I’m surprised at your response.

MR. BURKE:

I’m simply putting out what the rule requires, that you’re required to meet a certain cap level and you have to demonstrate that you can meet that. That’s the main criteria for approval.

MR. BECKER:

Well actually your cap level isn’t a requirement to meet because it’s not a cap because as we all have learned through the last year through banking, it’s a soft cap. The cap doesn’t have to be met until - - -

MR. BURKE:

But that’s if you’re participating in a trading program. You would not be participating in a trading program under this proposal. That’s the whole point. (inaudible) has to review and approve it, so that’s the main thing you have to

do.

MS. PARKS:

Tom, Tom, can I make a point - - -

MR. FIDLER:

Yes.

MS. PARKS:

On this, on this issue, that, you know, we're proposing a program that protects our children much more quickly, and because we're protecting our children more quickly, we are not seeing additional growth in generation and emissions over a ten or 20 year time period that we would otherwise be seeing under the CAMR rule.

MR. FIDLER:

I think that's the point that was being made here as well.

MR. BRISINI:

I don't know, it sounded to me like Bill was saying we ought to be able to consider the banking of those emissions as we look towards there because we control lower than we otherwise would have. If that's the point you're making, what you're really saying is in EPA's assessment of the rule you should look at "the bank that's established" in determining whether or not it's

as stringent or more stringent as opposed to the simple single year budget. Is that, is that the point? Bill is that the point you were making?

MR. BECKER:

I, I, I'm not sure I understand your question.

MR. BRISINI:

What I'm saying is you said, well this says 94, if it's 93 and I get this many years earlier, you're not going to say that that is as stringent as, which basically aren't you making the case that because you have controlled earlier that you should, in your assessment of stringency, be considering the bank that you've accumulated by earlier reductions in your assessment of whether or not it's meeting the requirements of CAMR.

MR. BECKER:

Well I guess I'm trying to still overcome the point, since the STAPPA/ALAPCO rule is less stringent than CAMR why the industry has been so opposed to our rule this morning.

MR. BRISINI:

Well it's not less stringent. The point being is CAMR also includes interstate trading and that's - - -

MR. BECKER:

It’s not going to get, it’s not going to get approved, it’s not going to get approved by EPA because their rule is clearly more stringent than ours.

MR. BRISINI:

Well the situation you have is what we’re looking for is the ability, you know, quite honestly, one of the treatments of CAMR is the ability to trade. Now, you know, you take the supposition that somehow somebody’s going to go and get this huge block of mercury allowances somewhere, I don’t know where they would come from, and somehow somebody’s not going to do control. I just don’t see that in the cards. But all I’m saying is the case you just made supports banking. I just find that very inconsistent with the presentation up to this point.

MR. FIDLER:

Thank you. Myron.

MR. ARNOWITT:

Well we’re happy to have Penn Future’s proposal accepted as the compromised proposal if that’s where we’re going. But I do have a question on the banking and somewhat connected to Vince’s last comment. It seems to me that the issue with

the banking slide is that it's, you're looking at this from, let's look at it at the CAMR, you're looking at it from the national perspective, right. So you're looking at all the emissions in the nation.

MR. BURKE:

I'm looking at just the state. That was just the state.

MR. ARNOWITT:

So you're assuming that no one trades outside of Pennsylvania.

MR. BURKE:

Yeah. I guess my, my hypothetical was you either meet the cap on a year by year basis or you bank - - -

MR. ARNOWITT:

Within Pennsylvania.

MR. BURKE:

Within, it could be national as well. I mean it's going to work out, the numbers work out to be the same. You're saying - - - go ahead.

MR. ARNOWITT:

They're not. The criticism of why banking prevents us from meeting the Pennsylvania cap is because - - -

MR. BURKE:
That's trading you're talking about. You're talking about trading now. I'm just talking about banking.
MR. ARNOWITT:
And you're saying that all the banking would happen in Pennsylvania by Pennsylvania plants - - -
MR. BURKE:
No, what I'm saying is to the extent that banking occurs it occurs because people have complied early. And to the extent that they then use that bank later it can never cause the cumulative emissions to be greater than what they would have been absent banking. In fact what it does is it gives you greater reductions earlier. That's all I'm saying. I wasn't commenting on trading, just on banking.
MR. ARNOWITT:
Okay. But I still don't understand which plants you're looking at, which emissions you're adding up.
MR. BURKE:
It could be an individual plant. It could be, it's, it's a, in this particular case what I took

was the total cap for the state of Pennsylvania. So I guess what I'm saying is all units in Pennsylvania. And I, and I, and I'm just looking to see what the impact would be of banking, on banking if, instead of meeting the year to year cap, they banked and then consumed that bank later on. And I, what I'm reacting to is comments. I keep hearing that somehow banking, banking, forget about it, banking delays compliance. To me banking accelerates compliance for the reasons that I said.

MR. ARNOWITT:

So are you saying that it's a good idea to only bank but to not allowed trading?

MR. BURKE:

I'm saying that it's a good idea to bank. And I think there's, I think there's - - -

MR. ARNOWITT:

Trading is a different - - -

MR. BURKE:

Trading is a different, they're a different argument, different argument has to be made. I think there's a good reason to bank. The only thing banking does, in fact, EPA's, I don't know if Sam said this when he was here, but banking

provides a strong incentive for technology adoption. Right? I mean there's more of an incentive to adopt technology early if you get a value out of that, and the value is you're able to bank that. So, you know, that's, I don't think that's the strongest driver, but I think that's one of them.

MR. ARNOWITT:

Can I ask a question also on your presentation regarding fuel switching.

MR. BURKE:

Yeah.

MR. ARNOWITT:

It seems that there are costs of fuel switching as well as the supposed benefit of the fear of the mercury content.

MR. BURKE:

Right.

MR. ARNOWITT:

Can you present any specifics on the analysis you've done on why the economics of one is better than the other?

MR. BURKE:

I'm sorry, the economics of one, one being what versus another?

MR. ARNOWITT:

Well the cost appeal, switching to natural gas may cost more, or you may have to transport this coal, lower mercury coal from farther away and you're going to increase your transportation costs. Have you, do you have specific analysis of why one is, why using one is, why the fuel switch, what the economics of fuel switching is?

MR. BURKE:

Yeah. I, I didn't intend to suggest that this would be definitive for that. I said this was an incentive. It's one of a number. The sulfur content is another one. Transportation, economics is going to be an issue, the ability of the boiler to be able to use a specific coal is going to be an issue. So it's going to be on a case by case basis. You're going to add up the positives and add up the negatives. In the case of the higher mercury contents of Pennsylvania coal, that's going to go in the negative column. But I don't have an analysis to give you that definitively says it's going to swing it one way or the other. It will tend to shift it towards fuel switching to a lower mercury coal or gas, but on a case by case basis. It could, you know -

- -

MR. ARNOWITT:

Assuming that’s a phenomenon that’s happening.

MR. BURKE:

Yes. It’s sorted through on a case by case basis.

MR. BRISINI:

Can I give a little insight on the PRB. PRB, the issue with PRB is not only in terms of the cents per million BTU and transportation costs, you’re also looking at an added cost relative to your sulfur dioxide component, also your nitrogen oxide component, and the ability to control easily with sorbent injection, more easily at least than, than we’ve seen up to this point with the higher sulfur eastern coals. What you have to balance against that is not only the transportation cost, is that the boilers in the east have not been designed, typically to burn these kinds of fuels, so as part of that overall program you have to also consider a potential D rate of the unit. In other words you can’t pump enough fuel and oxygen into the boiler to make as many, as much steam to make as much electricity as you previously made. But if you do the

economics there is a real potential, when you look at all of the components of that western fuel, mercury, nitrogen oxide, and sulfur dioxide, if you do, this is a stand alone, there is a real potential, and this is a point that Gene's made, a real potential to move some of your, your coal acquisitions out of the Commonwealth.

MR. ARNOWITT:

And do you have, do you have some specifics on that?

MR. BRISINI:

Well I'll tell you specific enough that I have approval to do a 20 percent blend of one of my coal-fired plants, and I'm looking at other places as well.

MR. ARNOWITT:

So that's for your company, but I just mean we're talking about Pennsylvania.

MR. BRISINI:

I believe there's also plant approvals that have been published for other companies to do considerable PRB blending right now.

MR. ARNOWITT:

Well this sounds, I'd be interested if there's

analysis. I appreciate the anecdote though.

MR. FIDLER:

There, there actually is some movement toward PRB blending in a few plants. Vince is correct; we have received information from some of the utilities that plant approvals are in the process of being, applications for plant approvals are being submitted or in the process of being prepared. David.

MR. CANNON:

David Cannon, Allegheny Energy. Just to confirm that, I mean we're doing it at our Hatfield's Ferry Pennsylvania plants, doing it at our Fort Martin, West Virginia plant, and we're looking at a number of other plants on test burn as well. So ranging anywhere from 25 to 60 percent, depending on the runs.

MR. FIDLER:

We really do need to move on. Frank, thank you very much for your presentation. Felice are you, are you ready to present? Just by way of a few introductory remarks, Felice Stadler is with the National Wildlife Federation and has been since September, 2000. She now manages the national mercury campaign for the organization. She has

been focusing almost exclusively on mercury policy for the past eight years, and clean air policy for 14 years. Thanks for being here Felice.

MS. STADLER:

Thanks, thanks for letting me come and present today. I, I know I haven't had a great attendance record, so I apologize for that. I am going to cover just a few basic points. A lot of stuff we've already discussed at today's meeting as well as the previous meeting, but I never, I think it always helps to reiterate some key points. First I want to talk a little bit about what the federal rule looks like for Pennsylvania. We looked at some of the IPM, the most recent IPM runs. I just want to share some of those numbers. Then I want to do a side by side comparison of what the different options are and then talk about where the options diverge. And I think what, what has struck me in the discussions and in looking at the numbers, it really does come down to the question of not just the level of reduction, because I think we are somewhat close with, with respect to the ultimate level, but it's really a question of timing, and

then the method of, of compliance to get to that level. So here are some of the numbers. Again, this is based on the most recent IPM runs. I do want to acknowledge my colleague, Martha Keating (phonetic) from the Clean Air Task Force who worked with me to pull, to do some of the data analysis. And, again, what, what we see here is that the caps, the allocated caps are soft caps. They are not hard caps. And what we also see is that phase one, as we've already heard will be met primarily through CAIR implementation. Actually it will be met all, entirely through CAIR implementation. And then from 2010 to 2020 we see very little additional reductions in mercury occurring over that period. And then if you look at where we are in 2020, we are still significantly above the, the allocated cap. This is, I'm not going to go through all the details here, but again, just a side by side of the CAMR in Pennsylvania, the STAPPA/ALAPCO proposal that we heard about, and then the Citizen Petition, I want to acknowledge, I know there's a typo under the citizen Petition column, that should be three years from compliance, from final, not 2007. But really the biggest difference that I think we,

that is quite apparent is that there is, if you look at both the STAPPA/ALAPCO and the Citizen Petition there is a date certain by which we see reductions in mercury occurring within the state. And that’s not the case with CAMR, and that’s the biggest problem. There is no date by when the cap must be met, and if the state does opt into the trading program, there’s really no cap on those emissions. And, and again this is what we, we see as one of the biggest problems with the CAMR and one that we hope the DEP addresses in their rule making. Which goes to, so I want to just again touch briefly on some, two, two main unresolved issues, here is how the reduction should be achieved. There are definitely two camps here, one is whether trading should be allowed and whether it’s an appropriate policy, policy choice, and the other camp saying that it’s not a good, good way to go. We obviously fall into the latter camp, and we have for a number of years. And it’s not, and it’s based on what we know about mercury, it’s based on what we know about how mercury deposits on the impact that those depositions have on local and downwind communities, and, and if you look at

Pennsylvania, Pennsylvania is a hotspot. It's currently a hotspot because there's a lot of coal burning in Pennsylvania, and Pennsylvania's also downwind from a lot of coal burning. And so there's, you're going to see deposition immediately downwind of, of plants, from plants within Pennsylvania, you'll see them further downwind in treasured places, the Chesapeake Bay, Acadia National Park, where I grew up. So there are, but again closer to home you do see some real impacts. And then obviously if you sell, happen to sell any credits to upwind states, that mercury is going to end up here. And the, the goal here is to reduce mercury loadings in Pennsylvania, and trading is not the way to get there. There is quite an interesting study that's been done up in Canada where they are purposefully depositing mercury on some lakes and they're measuring how quickly that mercury gets taken up, and they're finding that mercury that deposits today is getting taken up in fish much more rapidly than mercury that was even deposited six months previously. So new mercury that's being emitted today is making its way faster into fish and we also know that obviously the

reductions are, are having an impact. So then it goes to the question of well then when should these reductions be required, and it does go to the issue of timing. Again, knowing that new mercury today is having an impact on, on fish and on wildlife and people that eat the fish, it's prudent for us to move rapidly and to move using the technology that we know is available today and technology improvements that we anticipate occurring. The DEP is already on record supporting something more stringent than the CAMR. We know most of the major hardware installations are already being planned to meet CAIR implementations, so that's 2010. And so if you look at some of these, if you, if you see these investments and you see where we are currently with the state of mercury control technology, waiting until 2018 or again, if you just look at CAMR, waiting until 2025 even, just doesn't make sense. It's just not justified to, to have such a long timeframe, and that we, we, that the, that - - - when the DEP looks at the options we do urge you to look at, again, options that include a much more stringent timeline, also acknowledging that often we need a stringent

standard to be technology forcing. I looked at the, again, this is from the most recent run, so this is supposed to be current, whether it is. You know every, every data set has some, some holes in it, but looked at the different control configurations currently. These are 76, out of 76 boilers that, that EPA has data on, and 61 of those have some level of control on there. And you see that the, the majority of the, of the retrofits are planned for 2010, and then a few in the 2015 timeframe. You also see that, and maybe we could even argue that CAIR in this particular case is technology forcing, it is getting companies to consider making some pretty significant, very significant investments to clean up their NOx and SOx emissions. And what we also see is that some of the conventional control equipment is quite effective in capturing mercury. We heard two weeks ago that the, that the, some of the technologies, again, technologies designed to capture NOx, Sox and PM, that maybe the way that they're installed, the order in which they're installed or even some of the optimizations that could be done with those technologies could increase the mercury capture

efficiency. But we're concerned that those calculations and those discussions will not be occurring, there's no incentive for that to be on the table today if there's no real mercury standard on the horizon, and when I say on the horizon I mean something, again, that's, that's in the foreseeable future, not in a 2025, 2030 time period. So in conclusion, again, I do think that the key questions here are the questions of timing and, and what method of compliance the DEP will propose. And that the, when we look at the CAMR levels, yes, 86 percent control or 86 percent reduction in emissions sounds good on paper, but that's not what the CAMR's going to get us, and it's definitely not going to get us there in 2018. And so again that's a very important point to, to, to reiterate in these discussions. Again, to reiterate the point about trading, it is ill-advised, we are dealing with a pollutant that does deposit locally and regionally. And, and then if we're looking at regularly options, there are, there are a number of things that states have tried with respect to other pollutants, with respect to mercury. I mentioned some here, you know, there's a question

of, you know, hard caps within shorter timeframes, flexibility other than, other than trading. I believe that there's some mention of some of these in the STAPPA documents, and we've already talked about the either/or standard to ease compliance. The National Wildlife Federation is one of the organizations, as Charlie's mentioned, on the Citizen Petition, and we are not endorsing anyone of these other options because as we know, the devil's always in the details. But we would encourage the Department to really think creatively, look and see at what's worked, what's worked well and, and develop a policy that, that would be workable in Pennsylvania. We know that there's a big challenge in Pennsylvania, there's a lot of coal burning in Pennsylvania, but we're confident that the technology is there, that the problem is not insurmountable, and we look forward to working with the agency. And that's it.

MR. FIDLER:

Thank you Felice. Any questions, comments for Felice? Billie.

MS. RAMSEY:

I just have a real simple question. Billie

Ramsey with ARIPPA. On your first or second slide where it says CAMR in PA, what is IPM estimates?

MS. STADLER:

It’s the integrated planning model estimate. That’s the name of the, the big model that EPA uses.

MS. RAMSEY:

Thank you.

MR. FIDLER:

Anyone else? Thank you Felice.

MS. STADLER:

Wow, you’re letting me off the hook easy. Gene’s busy. Gene’s getting ready for his.

MR. FIDLER:

Gene you’re up next.

MR. TRISKO:

Thank you Tom. I’m just grabbing an apple juice.

MR. FIDLER:

Just by way of a few introductory remarks for Gene. Gene Trisko is an attorney who represents Labor and Industry clients in industry and environmental matters. Mr. Trisko represented the United Mine Workers during reauthorization of the Clean Air Act in 1990, and he’s author of more than 20 articles on clean air policy issues

published in economic, environmental and law journals. Thank you Gene.

MR. TRISKO:

Thank you Tom. I appreciate the opportunity to be here. In the interest of brevity I omitted from that short bio the critical Pennsylvania credential that I bring. I am a 1968 graduate of St. Frances Prep School of Spring Grove, Pennsylvania, which in 1972 in a moment of I suppose out of control partying on the part of the class of ’72, burned to the ground. But the rest of the school is still alive and well up in Loreto, Pennsylvania. I’m here to share some observations, a couple of suggestions about, really procedural suggestions about the, the form of the proposal that, that will be forthcoming from, from DEP, and let me go over the points that I made in the previous meeting. The primary concern of the UMWA has certainly been reinforced by the discussion today, and the news to me, not welcome. That a number of Pennsylvania utilities already are considering pursuing switching to powder river basin coal. It was a surprise to us to learn of this. And I think it underscores the nature of the risk that, that mine workers

confront, if DEP were to propose a rule more stringent than EPA's rule. As pointed out in the previous meeting, it's been our experience under the Title 4 acid rain program and approximately one hundred million tons, one hundred million tons of eastern coal production was shifted through fuel switching in phase one of the Title 4 program, mainly to low sulfur coals from the western United States, affecting producing regions from Pennsylvania to northern West Virginia, to central Illinois. It's our experience that when confronted with a new emission control requirement affecting a chemical constituent of coal, that utilities in order to reduce the capital cost of related control technologies will first seek to reduce the amount of that chemical constituent in the fuel. In the case of sulfur, you switch from a high sulfur coal to a low sulfur coal, and in the case of mercury, the particular concern in Pennsylvania is that Pennsylvania has the highest mercury content coal of any coal, not only in the east, but throughout the United States. As you can see from this chart, Pennsylvania is the second bar from the bottom, the average mercury content,

based upon EPA's ICR data is on the order of 16 pounds per trillion BTU. Coals from West Virginia and Kentucky, which already supply plants in Pennsylvania, have average mercury contents on the order of seven to eight pounds per trillion BTU. So there is a clear risk that utilities that are now consuming coals with this relatively high average mercury content, will seek to reduce that, cut it in half if they can on economic basis by switching to coals from other states, whether they be from the east or the western United States. From a procedural standpoint, our recommendations is first that DEP should not think in terms of a single option to be presented for comment by concerned parties. It should offer several options including our preferred option to incorporate EPA's CAMR as Pennsylvania's mercury control strategy. As Frank point out, CAMR requires an overall 94 percent reduction of mercury emissions measured from the coal in Pennsylvania. You know if we were meeting here today in Santa Fe, New Mexico, where the state of New Mexico, as a result of the EPA mercury allocations, received 500 more pounds of mercury than it's expected to emit during

phase one, I could understand easily why the Department and concerned parties would be interested in sitting down and figuring out what to do about the level of mercury control in the state of New Mexico, where they receive more allowances than they emit. But that's not where we're meeting here today. We're meeting in a state with the highest mercury content of coal of any state in the country, and the 94 percent overall control requirement. If one were a Martian listening to this proceeding over the course of the last six weeks I think one could leave with a very confused impression because one side of the table seems to be talking about 90 percent control, we need to do 90 percent control, and the other side of the table seems to be emphasizing that they have to do 94 percent control. And isn't that really the same thing, aren't we saying the same thing. And it comes down to a difference, perhaps, at most, of timing. One option we believe DEP should consider is accepting phase one of CAMR, a 67 percent reduction of mercury emissions by 2010. That's five years from now, it's significant near term reduction. As a practical matter in terms of

steel, concrete and chemicals, that is the maximum amount of mercury that's going to be removed in this state in the course of a five year planning period. Two years from now one can expect the control technology costs and performance will be far more certain than they are today. This debate has been ongoing from the mercury MACT working group at EPA continuing through this process. We know the control technology advances are coming quickly, costs are coming down, performance is improving across all types of coals, sub-bituminous, lignite, and the like, but there is still significant uncertainty today about what level of ultimate removal will be possible for coals such as those produced in Pennsylvania. We recommend that DEP defer judgment on a phase two control program now, reconvene this process, we suggest 2008/2009. Litigation issues before the Court of Appeals, the D.C. Circuit, certainly should be fully resolved by that timeframe. We will know what federal, we will know the contours of the federal program at that point with certainty. And for purposes of your state plan, is you have to submit something to EPA late next year, accept

CAMR phase two as a default provision, the default fall back provision in the absence of agreement on another alternative. A few considerations I'd like to highlight. First, the overriding one, is there a compelling need demonstrated in this process to go beyond the EPA mercury rule. What specific evidence for Pennsylvania do we have on the benefits of exceeding the CAMR rule. What are the costs and other impacts of exceeding or accelerating CAMR. You've seen this chart, and the one that follows, before, and I'm going to show them to you again because they are critical to the understanding of the nature of the benefits, the incremental benefits or the lack thereof of additional controls going beyond the EPA rule or accelerated. The first map is mercury reductions due to CAIR. Most of the mercury that is reduced through CAIR and CAMR actually is reduced by the CAIR rule through both phase one and phase two, mainly by the application of scrubbers. You can see that Pennsylvania, western Pennsylvania receives just about the largest area of benefit, these are mercury deposition reductions, reductions, okay, these are benefits.

Pennsylvania is one of the largest beneficiaries of CAIR. If we go to the next slide we will compare this with the ultimate level of EGU mercury control, zero out emissions. Let us eliminate all mercury emissions from all electric generating units throughout the United States and discern the difference and the benefits to Pennsylvania. There are virtually none. It is, as I've taken this to Kinko's and the guy came out from the back and he Mr. Trisko that weather channel map you gave me I think I got the, I think I got them mixed up, but they're the same, right? Thank you, my point. Now if one parses through these differences - - -

MR. BECKER:

Was that true?

MR. TRISKO:

It was, it was.

MR. BECKER:

Gene.

MR. TRISKO:

Bill, where's your sense of humor.

MR. BECKER:

That's all I wanted.

MR. TRISKO:

Okay. All right. Now I want to spend a couple minutes, I want to spend a couple minutes on the nuance differences, because there are differences, of course there are differences between these two maps, and describe to you the analysis that was performed by USEPA in conjunction with the mercury rule. This is sitting in a 570-page document. It's called the Regulatory Impact Analysis. It was issued in March of this year and the tables that I took these data from are, are back around page, chapter ten of this report. If you don't have the Regulatory Impact Analysis on your, for bedside reading, I highly recommend it. You need it in order to understand for Pennsylvania, you need to understand for Pennsylvania what level of benefits EPA has analyzed if one were to go beyond CAMR. And let me, let me explain EPA's findings to you, they are, they are a matter of, they are a matter of record. The RIA calculates the state specific benefits of the avoided IQ reductions and related earning losses due to CAIR, CAMR, and the zero out mercury strategy we just looked at. The benefits of the mercury rule are concentrated among the families who fish and

eat locally caught fish. This does not get to the effects of mercury from eating StarKist or Bumble Bee tuna fish. That is going to go on. Most of the benefits of the mercury rule occur to people who actually eat fish that is contaminated with mercury that is caught locally. The scenario benefits that EPA estimates can be compared, and they're quantified in dollar terms. EPA has a long history of doing this, going back to the lead regulations, the elimination of lead in gasoline and, and so forth, and the IQ analysis. These are EPA's estimates of the net present value benefits in Pennsylvania. They are Pennsylvania specific numbers of alternative control scenarios. They are discounted net present value. That means you take the stream of benefits over 20 or 30 years, you discount it back to one number today using a discount rate, which is the inverse of the interest rate, EPA uses three percent. For Pennsylvania, the benefits of zero out EGU on a United States basis relative to the 2001 base case are in a range of $1.4 to $2 million net present value, $1.4 to $2. That range is defined, in part, by, by EPA's estimates of differences in fish tissue lag

times. In this instance it's 10 to 20 year estimates, fish tissue lag, lag response times. If you compare the benefits of CAIR, the mercury reductions coming from the CAIR rule relative to EPA's 2001 base case, no CAIR, the benefits in Pennsylvania are almost the same. In fact, this is the difference, this the monetized difference of the two maps we were just looking at for Pennsylvania. The net present value benefits of CAIR relative to the base case are $1.3 million to $1.7 million net present value. EPA estimates that the incremental benefits of the mercury rule relative to CAIR, because there are additional mercury reductions that come from CAMR on top of CAIR, they mainly relate to elemental mercury reductions. For Pennsylvania it is a range, a net present value range of $166,000.00 to $213,000.00. The indicative benefits of zero out throughout the United States relative to the CAIR rule, and when I use the word indicative it's because there's a little glitch in EPA's numerology. They have one calculation that's based on 2001 and another that's projected to 2020. It's just a matter of population change. The indicative benefits are zero out relative to

CAIR, or $132,000.00 to $275,000.00 net present value. It is somewhere within this set of numbers here, roughly bounded, $130,000.00 to $275,000.00, net present value. Somewhere in this range you, you would have the monetized value of the benefits in terms of earnings through avoided IQ losses, and that's what the mercury debate is really all about, of accelerating, accelerating the mercury reductions required by the CAMR rule, moving phase two to an earlier date, or making the rule more stringent. Those are bounded by these numbers. Now because these are net present value numbers of benefits extending over 20 to 30 years, the annual benefits implicit in these net present values are on the order of about, they're on the order of tens of thousands of dollars a year, tens of thousands of dollars a year. I provided another document under my letterhead that lays out EPA's methodology in more detail that, for which this slide is simply a summary, but I do refer you to the Regulatory Impact Analysis. A couple points about jobs. Low cost energies, one of the drivers of the U.S. economy, it's one of our major international competitive advantages. Increasing energy costs in

Pennsylvania by beyond CAMR will further erode Pennsylvania's manufacturing and export sectors. We are concerned, particularly, about manufacturing in Pennsylvania. I estimate the cost of accelerating CAMR phase two limits, say to the year 2010, as being on the order, on the order of $100 million a year. I take that $100 million ballpark estimate, based upon the Hughes and Marchetti (phonetic) estimate presented at the last meeting of $180 million annual cost for meeting a 15 ton cap or 90 percent MACT, I reduce that somewhat and I assume that there is a cost beyond phase one co-benefits for meeting the phase one cap. So accelerating phase two to some earlier date and time by my calculation is on the order of $100 million annually in Pennsylvania. You can think of it in terms of $100 million energy cap. A study was performed by Dr. Adam Rose's of Penn State, and a consultant to the Department on a variety of issues, that estimated the benefits in Pennsylvania of coal production and related electric generation. Dr. Rose's study, completed in the year 2001, assumed a $5.00 natural gas price if coal were displaced by natural gas. In fact, Dr. Rose, today, is

updating this, this study and some new numbers will be produced. His, his estimates of the benefits of coal utilization in Pennsylvania, and these are specific to Pennsylvania, are a 177,000 jobs, $23 billion a year of economic output and $7 billion a year of household income. If the United Mine Workers of America, if President Roberts asked me to submit a comment to DEP on a proposed mercury control regulation exceeding the federal requirement, and I had an estimate from a reliable contractor, that regulation would result in a 20 percent reduction in Pennsylvania coal utilization. I would apply 20 percent to these numbers and cite them as the potential impact of your proposal on the state's economy. We also have the issue of the small plants, 34 small plants, less than 20, less than 250 megawatts of capacity, more than 30 years of age. Pennsylvania has 34 units, 4135 megawatts total. These plants have an average age of 51 years. Now the UMWA noted with great interest yesterday's announcement, the day before yesterday of the new edge proposal for accelerating IGCC gasification technology in Pennsylvania. Clearly that is the direction that

the Commonwealth needs to be moving toward. We support it entirely. I will pose to you the following question, with relation to your, your interest, the Department's interest in encouraging the accelerated deployment of IGCC technology, specifically at these plants, and that is what this, that's what this program is targeted at, these specific smaller, older units. Consider the incentive value of the mercury allowances that these plants will be entitled to under the federal program in phase one and phase two, and consider the loss of that incentive value if limits were to be, limits were to be imposed upon allowance trading. That is the value of those allowances themselves can provide a significant economic contribution to the conversion from a small old plant to a state of the art IGCC. If the, if the Commonwealth were to impose limits on trading or otherwise prevent the sale of those allowances, that would, in effect, be throwing an asset away. An item to be considered. Clearly the Commonwealth has to bare in mind its competitive posture with respect to other states that also depend upon manufacturing for a significant portion of their economic

output and household income. This is a chart, cumulative year to date industrial electric rates through August for Pennsylvania and some nearby competing states, Maryland, Ohio, Indiana and West Virginia. Pennsylvania's industrial electric rate is an average of six cents per kilowatt-hour. That rate is approximately 20 percent higher than the rates prevailing in Maryland and Ohio, and roughly one-third higher than the rates prevailing in Indiana and West Virginia. And of the states that rate on this chart, I think one could very safely handicap both West Virginia and Indiana as accepting both the CAIR and CAMR rules. Ohio, in my judgment, likely will follow suit. So consider not only your current competitive position with respect to nearby states, but also your competitive position should you elect to exceed these federal requirements while other states do not. I considered eight different limitations on trading and ranked them basically in order of increasing costs. Eight ways to spend consumer incomes and reduce competitiveness by reducing the right to trade allowances. And these are rank ordered as follows: first, prevent interstate trading.

Second, prevent intrastate trading within the boundaries of the Commonwealth. Third, prevent subregional trading, say east/west, or using the Susquehanna River as a boundary, that was once discussed OTAG. Fourth, prevent trading by adjacent utility systems. Fifth, prevent trading within systems. And probably if one, if one had a good economic analysis of the cost, the incremental cost for the Commonwealth of moving, moving down this path, probably there would be a very sharp jump in the curve right about there, right about there. And then continuing all the way to requirements for unit specific percent reduction from current emissions. The point, the point of this exhibit and the context of the previous ones is really simply this, if we're talking about accelerating CAMR or if we're talking about increasing the percent reduction, which is almost a factious notion at the levels of control we're talking about, we're comparing an acceleration cost on the order of $100 million a year, give or take, you can have your own consultants come up with your own numbers, we urge others to produce similar Pennsylvania specific cost estimates, because there haven't

been many in this proceeding. $100 million annual cost, EPA's estimates of benefits on the order of tens of thousands of dollars a year. Which brings us to what the mine workers support. We support the implementation of CAIR and CAMR because the combination of these two rules is projected by EPA to result in an increase in demand and production of Appalachian coal and midwestern coal. In fact, coal production across all producing regions increases under these rules. These rules in concert, they are tightly integrated in their design. The electric rate increases that they produce on the order of two to three percent are modest because the mercury reductions are very low cost coming largely from the SO2 and NOx reductions of the, of the CAIR program. These integrated rules to us make a great deal more sense than piecemeal state regulation that ends up in conflict with this national program. Thank you very much. And I appreciate the extra time Joyce.

MR. FIDLER:

Thank you Gene. Joyce do you have a question?

MS. EPPS:

Mr. Trisko, Joyce Epps, for the record. I have a

question for you concerning that table where you cited 34 small coal base generation units are at risk of closure. Are they at risk of closure because of the clean air interstate rule or CAMR, or a combination of both?

MR. TRISKO:

Both. At a September meeting of the Ozone Transport Commission, Stationary Source Committee in Baltimore, I handed out the list of these units, and went through a preliminary economic analysis of the cost of retrofitting a 250 megawatt plant with a scrubber and an SCR to meet CAIR requirements. And, and I noted at the time I don’t need to get to mercury, we don’t get to mercury because you never get past the SCR and FGD costs because they’re an excessive $10.00 per megawatt hour. Pennsylvania is now operating within, within a much larger economic dispatch system at PJM, stretching basically all the way out to Illinois. And proposals that would add $10.00 per megawatt hour generation cost simply will lead either to substantial reduced utilization or premature retirement. My view is that depending upon the level of stringency of a mercury control added to CAIR requirements, it’s,

it’s the straw that breaks the camel’s back. But the largest cost, the largest cost that, that pose risk for all of the units represented in this exhibit, the largest cost is driven by the SO2 control cost of CAIR.

MS. EPPS:

Thank you.

MR. FIDLER:

Charlie.

MR. McPHEDRAN:

Yeah, following up on that, I have a chart that was handed out I think at our last meeting from the ICAC. This goes to the issue of the relative cost for mercury compared to sulfur and NOx controls. And according to his, this is Mike Durham, according to his estimates for 500 megawatt plant, SOx and NOx controls, including FGD and SCR, are $150 million in capital costs, and ACI for mercury is just $1 million. Is it - - - $1 million. If it’s the straw that breaks the camel’s back, is it really that small a straw by comparison to - - -

MR. TRISKO:

It depends on what technology you believe will be adequate to put you over the threshold of an 86

or a 94 percent requirement.

MR. McPHEDRAN:

Do you think ACI is not enough?

MR. TRISKO:

By itself, I don’t know that, and I’m not, I’m not an expert in mercury control technologies. The studies that have been done by various other consultants have used COPACT configurations, bag house and COPACT and TOXECON configurations. Capital costs are substantially greater than just ACI. From what I understand, one of the main concerns with the brominated form of ACI, which shoes the greatest promise for high percent reductions across all coal varieties is the toxic residue that it leaves in the ash. That, in effect, it may require, it could lead to coal ash being classified as a hazardous waste and having to be treated as such. If that were to occur, then all cost estimates for ACI have got to be revisited.

MR. McPHEDRAN:

But have you seen studies, have you seen studies specifically say that plants are going to close or coal will be switched, fuels will be switched if ACI is added, or specific technologies are

added. It sounds like that was the claim you were making.

MR. TRISKO:

If ACI were added?

MR. McPHEDRAN:

If some specific mercury control like ACI were added, that that would be the, the last straw, as you said, for some of these plants.

MR. TRISKO:

If ACI, if, if ACI turns out to have the promise that its developers hope for, then those adverse effects, the purpose of mercury control, I would not expect would be significant. Our point is that sitting here today, we can only speculate about whether it will or will not prove to be as economic and as effective as its developers would hope. We are dealing in this state with a 22 gigawatt coal fired industry. And speculation about technology performance in 2005 to us is not sufficient for reasoned rule making. We need long term commercial demonstrations. We don’t have any, especially not on high sulfur bituminous coals.

MR. FIDLER:

Questions?

MR. AYRES:

I have a question about the benefit calculation. Can you put that slide back up?

MR. TRISKO:

Yeah. I knew you would like that Dick.

MR. AYRES:

Well I already expressed an opinion about that. But, no, the question that I was, that occurred to me was you have incremental benefits in their discounted present values of CAIR in 2020.

MR. TRISKO:

Right.

MR. AYRES:

Now CAIR only begins to have much of a bite in 2018. And is this incremental benefit calculated from today, I assume?

MR. TRISKO:

No. The incremental, no, no. The incremental benefit is calculated, if it says 2020 - - -

MR. AYRES:

But it’s discounted back to today though, right?

MR. TRISKO:

No. It’s discounted back to 2020, and it’s expressed in 1999 dollars, and the benefits would occur roughly over the period 2020 to 2050.

MR. AYRES:

Okay.

MR. TRISKO:

I, I, I commend chapter ten of the RIA to you, careful perusal.

MR. FIDLER:

Gene you were not at the last meeting, but we did have a presentation about loss of economic productivity as a result of mercury ingestion, through ingestion of fish contaminated by, by mercury. I don't know if you've had a chance to review the presentation that was made by Dr. Trasande or - - -

MR. TRISKO:

This is the Mount Sinai presentation?

MR. FIDLER:

Yes. Yes.

MR. TRISKO:

I have not had a chance to review it.

MR. FIDLER:

Because the, the, I mean we've seen so many different statistics and numbers through this process, you know, and numbers can be developed in a way to convey a particular message, but there's a marked disparity between your benefit

numbers and the benefit, not benefit, but the loss in economic value or economic productivity provided by Dr. Trasande is very marked, very different, just to point that out. If you have any comment after having reviewed his presentation, I'd be interested in your comments.

MR. TRISKO:

Okay. Certainly.

MR. FIDLER:

Felice, I'm sorry.

MS. STADLER:

Gene I have a couple, I have a couple points and questions. There's, there's a lot going to be required of plants to meet CAIR and two weeks ago we saw this cost analysis done that, and some of the numbers you have in here that, that sort of blamed, that attaches a lot of the costs and a lot of the, you know, decisions of plants to either retrofit or shut down on mercury. And yet I hear you saying that CAIR is, in fact, going to be driving a lot of stuff and is driving a lot of stuff. And then we hear today that companies are starting to blend for PRB. And there's no real mercury limit that they're required to meet. And I just worry that so many things are blamed on

this mercury level that is so far in the future and, and so I just, you know, that's more of a comment. So I know you'll respond to that comment. And, and then the question is based on that last one with, you know, what happens with central Appalachian coal under CAIR and CAMR, if we already know that there's some switching going on I'd love, I'd just like your thoughts about, you know, what, what is driving that. Is it just that much cheaper to get it all the way from the western part of the country than it is to scrub. And then another point, I know I'm throwing a lot of stuff out here, on, on the cost of accelerating CAMR, this $100 million, is this, again, is this a scrubber cost, is this fuel switching, is it both?

MR. TRISKO:

Which, which exhibit are you referring to?

MS. STADLER:

The jobs and the Pennsylvania economy one.

MR. TRISKO:

Jobs and the economy. Let me find that.

MS. STADLER:

It's the, the $100 million a year in Pennsylvania to accelerate CAMR.

MR. TRISKO:

That is, as I explained, that's, that's my interpolation of some other study results. One study finding presented here at the previous meeting by Tom Hewson that is based predominantly on the installation of, of COPACT, all right, and TOXECON type technologies, which involve large capital investments. The estimated capital investments for either meeting the 15 ton cap or a 90 percent MACT type control level were a billion dollars, and the annual costs were $180 million annually. So I'm saying knock some off that. Maybe that, call it $150 million, but we know that there will also be costs for meeting the phase one limits of the mercury rule beyond the level of co-benefits. I'm not sure what those costs would be. So let's just say that it's something, it's significant. You don't get there entirely by co-benefits in this state. You can't. So I'm - - -

MS. STADLER:

Yeah, but if you look at the IPM you get there through co-benefits for phase one. So that there is no additional, if you just look at IPM there is no cost, mercury cost, it's a CAIR cost, and I

just worry that sometimes those costs are associated with CAMR, but it's not a CAMR cost.

MR. TRISKO:

Okay. That's not my understanding. My, my understanding of the reality in Pennsylvania differs from the IPM model projection. My understanding is that there will be additional mercury specific control requirements in order to meet phase one CAMR limits, that is co-benefits alone is not going to get you where you need to go. So my $100 million annual estimate for accelerating phase two, and I'm just talking about accelerating the phase two limit, is, it starts with the $180 million a year estimate by Hewson and Marchetti, chops that down, call it $150, and let's say that there's $30 or $40 million a year required to go beyond CAIR in order to meet the CAMR phase one limit, that gets you in the ballpark of $100 million. It's just a ballpark. I don't have the precise, I don't have the precise number.

MR. FIDLER:

Bill.

MR. BECKER:

I have a, an observation and then a question.

The observation is, I said before there are probably tens of thousands of sources non-utilities who have had to meet MACT requirements over the years and have reduced by significant amounts their hazardous air pollutants over, since the 1990 Clean Air Act. And I kind of wonder, I observe how many, if any of them, would be required to do much, if anything, if they had to go through, not the technology test that EPA had required, but the risk management incremental benefits test that you're suggesting be applied here. But my question is based upon a comment you made which I thought was interesting. I think it was in response to, perhaps Dick's comment, or someone else's about activated carbon, and the question was asked whether or not in essence you thought activated carbon could do the trick with relatively minimal expense and you could achieve, you know, significant benefits. And your, your response was, here's what I heard from you, we can't predict with certainty that we can. But, you know, it certainly is a beneficial technology that seems to be promising and if the vendors turn out to be right, then this looks like a pretty promising one. And I guess the question

is, what, let’s say that, let’s say that you put on everything, look at your past history of this, of the industry and - - -

MR. TRISKO:

Whose past history, yours?

MR. BECKER:

The utilities, and the coal interests, and the others, show me a time, show me anyone at the table, show me an instance where you have done everything asked of you, you’ve done everything asked of you, you’ve complied with exactly the requirements you were going to do, you put on the equipment, and it didn’t work, where a state or local official punished you.

MR. TRISKO:

Where a state or local official punished you?

MR. BECKER:

Sanctioned you. What I, what I, my experience shows - - -

MR. BRISINI:

Pardon me, you’ve never been to New Jersey?

MR. BECKER:

I have been to Jersey and I know them very well.

MR. BRISINI:

Are you familiar with affirmative defense where

you get a notice of violation even when you have to run the unit to fix what's broken?

MR. BECKER:

What I have found in my experience, including New Jersey, is the regulators - - - Vince, Vince excuse me a second, the regulators have found ways of addressing the scenario that Gene has suggested that if you do everything possible, you put on your ACI and it just doesn't work, the regulators work with the industry very well to not penalize you, to let you continue, to work out alternative emission limits, to work out other ways of complying. And I wonder why that isn't good enough for, for this.

MR. TRISKO:

Well, well Bill I think that the difference in Pennsylvania is, again, I refer to the New Mexico example. If we were in New Mexico I could understand why this group would be meeting. But the level of stringency that is required of utilities in this state under this rule in particularly, five years from today, the level, the level of stringency is, is substantial. In fact if one looks at Felice's data on the percent removal, one cannot be confident that this state

is going to be able to meet phase two based on, based on your numbers, based on your numbers. But Bill, Bill, I, I think that, I think that your question about regulatory penalties at the state level really misses the point.

MR. BECKER:

Regulatory flexibility.

MR. TRISKO:

Well regulatory flexibility. But sometimes you put the best equipment on that is available from the vendors with limited amount of commercial experience, and the SIP Call is an excellent case in point with AEP’s installation of SCR technology at the Gavin plant in combination with their scrubber. As a result of the blue emissions emanating from the, from the combined FGD/SCR system, AEP had to buy the town. They had to buy the town that the plant was located. But they did their best. The technology did not work as it was expected to work, and an unintended consequence arose. So AEP bought the town in Ohio in order to avoid the other liability problems associated with the failure of the technology. These things happen.

MR. FIDLER:

Pam.

MS. WITMER:

Third-party lawsuits.

MR. TRISKO:

Say again?

MS. WITMER:

Third-party lawsuits. Certainly agencies in DEP, you know, has shown willingness to work with individuals, companies, the regulated community on a variety of different things, but it does not prevent third parties from entering into legal action.

MR. FIDLER:

Vince.

MR. BRISINI:

I just wanted to address a little bit relative to the discussions on the control. The representation the people made, the vendors made relative to very inexpensive activated carbon injection was related to just injecting in front of a precipitator, which has a minimal capital investment, you have the investment to control, you know, to buy the sorbent and you have other issues. The real issue that you get into is if you were to be in a situation where you had SCR

and you have a scrubber and you, and you achieved 80 percent reduction. If you said you have to have 90, regardless of what control you have in place and that means that you do - - - and you're only going to, and we're talking 90 percent in terms of a polishing bag house, kind of the EPRI TOXECON polishing bag house, sorbent injection, downstream of the precipitator, upstream of your scrubber, what happens is that that's about a $50.00 per kilowatt installation cost, plus the cost of the material. So when you talk about activated carbon injection you have to differentiate between whether that's just upstream of an existing precipitator or is part of a fabric filter installation. And you want to do, to do that most inexpensively you've got to do that downstream of an existing, or of a precipitator, because otherwise the area is too large and the cost is considerably higher. So that's kind of that, that disconnect. Now they showed some good performance with the western fuels. As Frank pointed out, we don't have that at this point on the eastern bituminous. We are actually a host site starting next year for sorbent injection upstream of the precipitator to

see, you know, we have a very good precipitator operating, very good precipitators at Portland Plant. We're going to operate those, we're going to, we're in a DOE host site with Alstom to try and determine what sorts of sorbents would work best. Now I look at the sorbent at this point not as a mercury specific 95 or whatever percent removal, but I look at it as potential for trim technology. Because just kind of to put this into perspective, everybody's, you know, afraid that you're going to get all these, all these unused allowances and move them over. If we were to look at, say, 1250 megawatts all emitting at the same level and I needed a 64 percent reduction from that level to be able to meet that, that 64 percent reduction cap, if I were to scrub a thousand megawatts with, I have SCR and get 80 percent removal, I would have enough unused allowances to account for 250 megawatts to operate at the level they used to operate, not to go above it, but to operate there. So what you have is this kind of 4 to 1 ratio. My expectation is that, you know, typically you're not going to scrub as part of that first part, the first part of CAMR you're not going to scrub

all of that generation, and when you do all that scrubbing you're looking at the cost relative to the SO2. And the reason mercury is not as big an issue in the CAIR and CAMR is that as you take it as a co-benefit we're basically getting all those reductions at zero additional cost for mercury. So that's really, that's really the issue, and that's where we're getting confused because they make a representation that they're getting the same level of control as people with a fabric filter, and that's not what has been, has happened so far with eastern coal and those sorbents.

MR. McPHEDRAN:

If I could just ask Vince a question. So the chart I'm looking at from the previous meeting is pretty basic, it's not tailored to any specific plant. If the answer is it depends on the plant configuration, which it sounds like it does, is $150 million capital cost for a 500 megawatt plant for sulfur and NOx reasonable, is it a reasonable comparison to say that ACI in a plant like that would cost a million dollars, or is it - - -

MR. BRISINI:

It all depends if you're adding a bag house. If you have to add a bag house as in a TOXECON, what you would do is you would take the kilowatts, if you have to add a bag house and do an ACI to get 90 percent control - - - this is, this is the point, this is exactly the point Charlie, if you're just going to do it as a trim technology, it may provide no additional benefits, and see that's the point. If I do sorbent injection upstream of a precipitator, I may just, in fact, be gathering the same specie of mercury that I'm already gathering. So there's no benefit to that control. If, on the other hand, I somehow collected and, and convert the elemental mercury to an oxidized form and enhance the performance of the scrubber, then we're in great shape. That was my point last time where I said I'm not interested as much in mercury specific, but what controls and what can we do to enhance the performance of the NOx control and the SO2 control. How can we make those perform so that we aren't having to stick a TOXECON between there and spend $50.00 a kilowatt, so what would that be on a - - - what size plant was that?

MR. McPHEDRAN:

500 megawatt.

MR. BRISINI:

500 megawatt.

MR. McPHEDRAN:

50,000 times 500.

MR. BRISINI:

500 megawatt?

MR. McPHEDRAN:

Yeah.

MR. BRISINI:

So that would be 500,000 kilowatts, right, times $50.00.

MR. TRISKO:

$25 million.

MR. BRISINI:

That would be about $25 million, and plus then the cost of the sorbent. And once you get - - -

MR. CLEMMER:

Vince, that’s with the assumption that it’s a simple installation, you don’t have - - -

MR. BRISINI:

Right. That’s what I’m saying - - -

MR. CLEMMER:

(inaudible / talking over each other)

MR. BRISINI:

- - - that’s what I’m saying, that’s getting the best cost, and I’m just saying, you know, I’m not getting into the detail - - -

MR. CLEMMER:

(inaudible / talking over each other)

MR. BRISINI:

- - - I’m just saying, that’s kind of a number people throw out. So now if you look at that and say I get 90 percent control with that, and I’ve taken all that away, do you cost that technology and say my levelized cost of control is the 90 percent over that TOXECON or is it the incremental 10 percent or whatever more you get? That’s really the fundamental issue and the economics when you analyze these things and how, how do they add up. One of the things that’s going to be really important - - -

MR. McPHEDRAN:

I don’t think we’re trying to repeal CAIR, so I would say that the mercury is a marginal cost on top of CAIR.

MR. BRISINI:

It can be, if we, if we go with CAIR it can be a very, very minor cost, if we go with the co-benefit. If you don’t do it as a co-benefit, it’s

a major cost and it’s something that does push you over the edge.

MR. FIDLER:

Any other questions for Gene? Felice.

MS. STADLER:

Yeah, I want to get back to this, why utilities are blending. It might not be a question for you, maybe it’s for the companies that are blending.

MR. TRISKO:

I have the answer.

MS. STADLER:

Well - - -

MR. TRISKO:

You asked it before, but - - -

MS. STADLER:

Yeah.

MR. TRISKO:

But you asked - - -

MS. STADLER:

Several, right.

MR. TRISKO:

Yeah, compound, multiple.

MS. STADLER:

Okay. Well I want to know what - - -

MR. TRISKO:

It’s simple.

MS. STADLER:

Cost of the fuel is cheaper than controlling?

MR. TRISKO:

Banking. No, it’s banking. It’s simple, it’s banking in advance of phase one of CAIR. Anything that I can do as a utility fuel or allowance manager, anything I can do right now that will allow me to bank against my Title 4 baseline, bank allowance against my Title 4 baseline, anything that’s economic, okay, don’t do crazy things, but anything that I can do that will allow me to bank allowances is desirable. It’s good to have allowances to bank.

MS. STADLER:

But if you see a shifting, I guess in the sense that aren’t, you didn’t really like this information, so do you then not like banking for this, because - - -

MR. TRISKO:

Oh no.

MS. STADLER:

But you’re shifting, you’re seeing a shift from - - -

MR. TRISKO:

No, I agree with Frank. I agree with Frank. There's a very, another important piece of history out of, out of the Title 4 experience. Only 13 gigawatts of capacity, that's 13 one thousand megawatt plants, only 13 gigawatts of coal capacity was retrofitted with scrubbers for phase one of Title 4. Phase one was an emission rate limit, the equivalent of about two and a half pounds of SO2 per million BTU. It was easy to meet that limit by switching from high sulfur coals, particularly in places like Illinois, Ohio and West Virginia, to low sulfur coals produced in the east. Piece of cake. And in many cases contracts were voided, high sulfur contracts were voided and replaced with contracts for lower sulfur coals below the two and a half pound limit at a lower contract price, meaning the cost of the bank allowances is negative, okay. But the only reason the 13 gigawatts of capacity got scrubbed in phase one was because Senator Byrd and Senator Kit Bond of Missouri got together and worked out an approach to provide a bank of allowances, bonus allowances to encourage the use of technology in phase one. And some of the

utilities in this room took advantage of those bank, of that Byrd/Bond bonus allowance pool. In fact it was so popular it was over-subscribed. They had to have a, in effect, the EPA proposed a telephone lottery where you would call at midnight and get in line, get your name on the list to get these bonus allowances. Those bonus allowances ultimately UR negotiated an arrangement. Those bonus allowances helped to pay for the 13 gigawatts of capacity that got scrubbed, that we wanted - - - it was a 300,000 ton pool, you're dealing with SO2. The numbers are - - -

MR. BRISINI:

It was 3.5 million tons.

MR. TRISKO:

Pardon me, 3.5 million tons.

MR. BRISINI:

It actually, that pool was achieved by moving the first date of the Clean Air Act amendments of the acid rain from 1996 to 1995. So that's how that, that's where those allowances came from that went into the eligible phase one extension pool.

MR. TRISKO:

Right. We wanted to make, we wanted more than

five million because we knew what an incentive it would be, but the senator from Wyoming told Senator Byrd that three and a half was the limit.

MR. FIDLER:

Excuse me Gene. Felice did you have any other questions?

MS. STADLER:

No.

MR. FIDLER:

Was there - - - Billie.

MR. TRISKO:

Simpson, Senator Simpson.

MS. RAMSEY:

Billie Ramsey from ARIPPA. The slide that most intrigued me was the slide on limits on trading, eight ways to spend consumer income. You have kind of a - - -

MR. TRISKO:

Litany.

MS. RAMSEY:

Yeah. And the reason it interests me is because I've been sitting here listening to opinions divided straight down the middle. We need trading under CAMR, unrestricted, or we can't have any trading at all, one or the other. And

so I've been sitting here just thinking to myself about trading, but not trading to the extent that CAMR would permit.

MR. TRISKO:

Right.

MS. RAMSEY:

But still permit trading as a compliance option. And you said that the fall off point was somewhere, I think you said between subregional trading within Pennsylvania - - -

MR. TRISKO:

And trading within systems.

MS. RAMSEY:

Right. And I - - -

MR. TRISKO:

It's absolutely critical.

MS. RAMSEY:

And I was wondering if you had done any analysis of that. You must have done some to make that statement.

MR. TRISKO:

I've just, I've just studied trading markets like many folks in this room have for a long time. What this exercise, this increasing order of cost exercise is proportionally related to the

reduction in the number of trading entities. The lowest costs are associated with the largest number of trading entities, that’s the national trading market. The highest cost is associated with the smallest number of trading entities, being unit specific, unit specific control options.

MS. RAMSEY:

Was it your sense then that if Pennsylvania were to allow subregional trading, within eastern Pennsylvania, within western Pennsylvania, do you think that would significantly reduce compliance costs?

MR. TRISKO:

I think that would have to be studied. I’m not prepared to offer a judgment, but more trading is better, more trading is better than less trading.

MR. FIDLER:

Any other questions? Yes.

MR. ARNOWITT:

I was just wondering, how many mine workers are employed in Pennsylvania?

MR. TRISKO:

I don’t know. But we’ve got over, we’ve got over 200,000 retirees in Pennsylvania. And retirees’

incomes are, are determined in part by the active members. I don’t know, I don’t know what the count of UMWA members is here.

MR. ELLIS:

7000.

MR. TRISKO:

7000 says George.

MR. ARNOWITT:

And has the UMW done a job analysis looking at the incremental differences between some of these proposals in terms of how it would effect mine worker employment in Pennsylvania?

MR. TRISKO:

Which proposals? We don’t have a proposal from DEP.

MR. ARNOWITT:

Well, for instance, between CAMR, between accelerating CAMR, between STAPPA proposal?

MR. TRISKO:

The mineworkers’ official position is that the union supports implementation of the CAMR rule, including national trading in part on the basis that the flexibility of trading will help to provide a more level playing field for the states that were particularly disadvantaged as a result

of EPA’s decision to allocate allowances based upon fuel type, which gave large numbers of allowances to western states and took them away from the east.

MR. ARNOWITT:

Do you think CAMR will cost mineworker jobs in Pennsylvania by itself?

MR. TRISKO:

That’s hard to say. EPA’s projections are that it will not. EPA projects that northern Appalachian production with CAIR and CAMR will increase over the course of the next 20 years.

MR. ARNOWITT:

But you haven’t done an analysis say if you accelerate CAMR the way, sort of looked at some of the cost issues here.

MR. TRISKO:

No.

MR. ARNOWITT:

Okay.

MR. TRISKO:

No.

MR. FIDLER:

Other questions? Thank you Gene.

MR. TRISKO:

Thank you Tom.

MR. FIDLER:

What I would like to do before we, before we leave, break up today is go around the room and I'd like an opportunity for anyone to express any other option that you would like the agency to consider as we move forward with the develop of a model, not a model, but a draft rule. You know when we began the process it seemed that CAMR was the rule of choice. At the very first meeting I indicated that we were going a different way in Pennsylvania as a result of the EQB's direction of the agency. After three meetings hearing that CAMR's still the preferred option is interesting, but not helpful. You know, I would really like some suggestions and some productive feedback from all members as a result of all of the information that has been shared over the last three meetings. Outside of that we will move forward and develop some language that we'll share with AQTAC in mid-December and again with the workgroup as a follow up meeting. But I do appreciate any thoughts that any of you have over and above the clean air mercury rule. Okay. Why don't we start with Roger.

MR. WESTMAN:

Just that I was surprised at part of Gene's presentation and the part that surprised me the most was where he was asking to put off decisions about what to do beyond phase one. I don't think that provides the certainty in the direction that we're looking for, or the utilities would be looking for. That's my immediate thought on that.

MR. FIDLER:

Any, any ideas or suggestions for alternative approaches?

MR. WESTMAN:

Not at this point in time.

MR. FIDLER:

Okay. Thank you.

MR. CANNON:

Dave Cannon, Allegheny Energy. I've got to echo Roger right now. I don't have anything specific. I've got to wait a little bit.

MR. CLEMMER:

Reid Clemmer with PPL. I don't have anything really to add at the present time. We're still very supportive of CAMR, and with everything that we've been listening to over the past several

meetings, on thing still is in my mind in terms of what's the compelling argument for Pennsylvania to move forward on its own independent of CAMR, and we even had some interesting discussion today about what a hotspot is. I know there were recommendations made for the Department to consider and come up with what are hotspots, what the Department considers to be hotspots, and I think that that issue needs to be taken head on in any rule making or even consideration that Pennsylvania, as Pennsylvania moves forward. So I'd really like to have that addressed and so we could have some further discussion here on that issue.

MR. FIDLER:

Okay.

MR. VALENTINE:

I'm actually alternating, so I don't have anything to offer, but this was very, very, very educational for me. I just wanted to offer that.

MR. FIDLER:

Thanks. Frank.

MR. BURKE:

I, I think I had my - - -

MR. FIDLER:

Yeah, actually those that offered options, yeah, there's really no need unless you have some additional comments.

MR. BURKE:

I guess, I guess just to, just to reiterate one point that's not specifically regulatory, and that is a lot of the problem is lack of information, you know, deposition information, fuel technology information that's specific to this state. And to the extent that DEP in a parallel path can help to remediate that situation it would be very beneficial now and in the future.

MR. WELSH:

Mike Welsh, IBEW, I have nothing really to change the position at this time.

MR. FIDLER:

Okay.

MR. BIDEN:

Well as the industry, that's the primary target of any Pennsylvania mercury rule, I guess I should say something. Unfortunately I didn't have a chance to put a formal presentation together. I guess I should reiterate that, you know, we still have not heard any compelling evidence that

moves us from our originally stated position that we feel that Pennsylvania should follow the clean air mercury rule. We feel that the emission reduction requirements of Pennsylvania are steep, the 64 percent reduction by 2010, 86 percent reduction by 2018. We have discussed those levels with other Pennsylvania policy makers. Legislators have asked us to come and discuss it with him. We haven't done that, not on our own volition, they have asked us to come and discuss them with them, including the House Democratic Policy Committee, and we have heard nothing but impressions of concern at the General Assembly. And I would say this, that if we're going to have a Pennsylvania only mercury rule, I think the General Assembly should be involved up front and that this, this, this should come from and emanate from the General Assembly. And the General Assembly's involvement should not be relegated to the backend of the regulatory review process. So other than that, I can't offer you anything else at this point in time.

MR. FIDLER:

Okay. Thanks Doug.

MR. McPHEDRAN:

Charlie McPhedran with Penn Future. I guess the one modification I would make to the other proposal on today is adding an output option to the multi-pollutant option in our flexibility package, like STAPPA/ALAPCO has done their rule. Thank you.

MS. PARKS:

Okay. Nancy Parks, Sierra Club. My comments are not necessarily in any particular order, but I believe that we have seen over the last couple of meetings that we have both availability and success in specific mercury reduction technologies. I particularly appreciate the information that came from STAPPA/ALAPCO today in confirming that, that they are relatively a lower capital cost, particularly compared to NOx and SOx controls, and that mercury specific controls can give us, quickly, the best technologies for reductions and the protection of our children, which I think is still the main issue here. We've seen that we have mercury specific controls on the market, and ICAC gave us information on their strong market sales. That we also have CEMS available already at this point. And I believe that we should add continuous emission

monitoring evaluation to our discussion of any program for mercury reduction in this state. I also believe that we should have controls applied to all applicable sources on particular sites, that we should not be trading between different locations within the state. It is vitally important that we minimize any kind of concentration of mercury pollution in this state, because of the severity of the type of pollutant that this is. This is not something that we should be playing around with. We need to get this done as quickly as possible, and as well as we possibly can. I believe that we should continue and expand the mercury monitoring program permanently here in Pennsylvania, as we've done for criteria pollutants. I also will again say that I believe that we should have output base standards and that those are particularly important. And I also, I didn't get a chance to reiterate this last time since we didn't go around the room, but in questioning Dr. Trasande last time it became obvious that it was particularly important that we have an infant testing program of mercury levels in cord blood, and again I would say that the Pennsylvania

Department of Health should be commencing a permanent testing program to give us both a baseline and an idea of how well we're succeeding in reducing those emissions here in Pennsylvania.

MR. WILCOX:

Nathan Wilcox, Penn Environment. First of all, I second everything that Charlie and Nancy said. As far as the ideal proposal, in our mind we stand behind the original petition that Penn Future submitted that we were a co-signer of. I think that, the only quick thing that I add to what Nancy and Charlie said was there's been a lot of talk about the case, or the incremental difference between CAMR and a state level rule, and I think, again, this comes back to the public health angle. So the case for the incremental difference is reducing mercury exposure in Pennsylvania. Can I point to a specific woman in a specific town in Pennsylvania and say that her children have IQ levels five points higher if we do this rule, no. But I do know that Pennsylvania power plants emit more mercury pollution than those in all, those in all but two other states, and obviously doing as much as possible to reduce that mercury threat from

Pennsylvania power plants should be the purpose of a state level rule and I look forward to further engaging that process to make that all happen.

MS. FLORA:

Toni Flora from Clean Air Council. Of course I would like to say that I support Nathan's statements, Nancy's statements, and Charlie's statements here today. And I would also like to say that I applaud you DEP being leaders in your voluntary efforts to reduce mercury controls by, for instance, the voluntary mercury automobile removal switch program, which I worked with Sharon and Jane on this past year, and also the dental mercury removal program. But I also would like to encourage you to be leaders in the nation on this mercury reduction effort here, on a larger source of mercury, which is coal-fired power plants.

MR. FIDLER:

Thank you.

MR. ARNOWITT:

Myron Arnowitt, Clean Water Action. First, Clean Water Action supports the proposal set forth by the petitioners. There are a couple of important

aspects that I just wanted to stress. One was, I would like to address the idea of delaying action. I think that is going to be a real problem. I think the technology forcing rule is clearly needed, and I think waiting to see what happens for a couple of years will result in our being back here in a couple of years saying, hmm, we don't know what happened. I think if we move forward, that's when you're going to see more happen. So I think that delay is, is not a very good option for what, what we're trying to achieve. Delay is essentially saying we think the federal rule is what we should do. The other aspect I wanted to stress is around trading, and we certainly support the past statements from the Department that trading of mercury emissions is not a good idea. Obviously the way Pennsylvania is set up geographically, selling credits to the west obviously is going to result in no environmental benefit for Pennsylvania. So we would encourage, or discourage the use of trading in terms of it really reducing the benefit of doing the mercury rule. Finally, just Clean Water Action has nearly a hundred thousand members in the state. Some of our members live

very close to coal-burning power plants. I work with a number of them. This is one of the reasons why hotspots are an important issue for us, and why we think that concentrating emissions in certain plants is going to be a real problem. We're here to speak for those members and make sure that their health is equally protected as everyone else's health in Pennsylvania is, and that we don't leave it to chance or the market that their health is going to be protected. Thanks.

MS. RAMSEY:

Billie Ramsey with ARIPPA. Just in general terms, I believe that it would be more productive if everyone moved off the extremes of the spectrum here and started talking about perhaps middle ground that could be reached in a Pennsylvania rule. I'm assuming that we're going to have a Pennsylvania rule and that, that's where we should start discussions. As far as the specifics, I think there are very positive aspects to the model rule, the STAPPA/ALAPCO model rule, mainly the fuel neutrality, the simplicity. That's something that our members would support very strongly. On the other hand,

the absence of trading I think is perhaps not as positive. And I would be interested in discussing a limited trading option for Pennsylvania, perhaps along the lines of what Gene had mentioned earlier, to see if that would achieve the environmental goals of the regulations, but still reduce compliance costs for Pennsylvania generators.

MR. FIDLER:

Thanks.

MR. BRISINI:

First I'd like to thank everybody that did a presentation today. I appreciate all of those. I give you all a hand. I think the - - - I think what's really important, and I think we have to take this away, and I hope we all take this away from the meeting, we're all taking about mercury reduction, we're all talking about very significant mercury reduction. I think that's a positive. The forum that we desire is somewhat different, but we're all trying to get to the same place in that we're trying to achieve what we perceive as the correct way to get to the level that's adequate. I will say that I keep hearing people talking about mercury specific

controls, mercury specific controls, and quite frankly I don't want mercury specific controls. I want mercury control through measures that allow me to get that control within the cost of my sulfur dioxide and my nitrogen oxide or my particulate control or something else because I can all of the sudden start to amortize those costs, and while Charlie says that's $150 million a year, guess what, if I get there with $150 instead of $175 that's a pretty significant opportunity. I support co-benefits. It's really the smart thing to do. Whether you call it co-benefits or you call it pollution prevention it's one in the same thing. What is, and what puts me in somewhat of a different spot is, is that at this point in time I really haven't seen a compelling basis for a rapid acceleration of timelines or for more stringent control requirements in terms of reductions or in terms of implementation beyond CAMR. I don't believe we're in a crises situation. I believe this is something that we, we keep our heads, we implement the controls properly, we take advantage of all the economies, and we move ahead. As far as a proposal, I don't have any

proposal at this point, but, you know, those things can happen. Because frankly, one of the problems of coming in to today with a proposal is I don't believe we have specifically addressed what it is we want a proposal to be in response to. So that would be helpful if the Department could provide some direction relative to what they perceive are the most important issues that they would want to see addressed in a, in an alternate proposal.

MR. TETKOSKIE:

Bruce Tetkoskie, Citizens Advisory Council.

MR. FIDLER:

Bruce, excuse me, just - - - at the last meeting Vince we did indicate that any option that would be discussed today should focus on timeframe, should focus on either emission rates or a percent removal, however that's measured, or however that may be calculated, as a starting point. You know, and we will move forward and provide everyone something to react to and, you know, further the discussion at that point. Bruce.

MR. TETKOSKIE:

Bruce Tetkoskie, Citizens Advisory Council.

Perhaps consideration could be given to an alternative approach in Pennsylvania that's voluntary in nature and incentivized based on timelines, coming in before the CAMR rule and percent reductions, sensitive percent reduction. This also may lend some time to the research and development and more investment towards research and development and may have a co-benefit in alternative energy projects.

MS. SEPPI:

Sue Seppi with GASP. I certainly agree with many of the comments that came from Charlie McPhedran, Nancy Parks, Nathan Wilcox, Myron. I think it should be done sooner rather than later. The important goal here is improvements in health. I think we're seeing some health issues that we may not be taking into account in these calculations, which might refer to the mentioned cardiac problems, in addition to the problems with children and memory and so forth that we know about. There's also the co-benefits of some of these toxics which really shamefully we know so little about that may well be removed and, and have some other benefit that I don't think we're taking into consideration. I think if CEMS are

available they should be used. That would be quite important. I think it's very important to force some technology, and I commend DEP for wanting to have a state program and hopefully other states join in. This is a worldwide problem, and the sooner technology is developed overall the better. Another reason why I think we need to get this done sooner rather than later is that mercury is revolatilizing. That's a word, it's not just going away. And for all these, for the timeline issue all that extra mercury that gets out into the environment I think is also of concern.

DR. GOODMAN:

Cynthia Goodman for Pennsylvania Department of Health. What I have to say is really nothing drastically new. Mercury is a persistent bio-cumulative neurotoxin, as we've heard numerous times. It endangers pregnant women, children, sustenance fisherman and recreational anglers who are most at risk for health effects, that includes the brain and the nervous system damage in children, and the heart and the immune system damage for adults. It should be regulated as a hazardous air pollutant because of these

significant adverse affects on the public health and the environment. And it should not be governed, we do not believe, by interstate, that’s among the states, trading program. That means we’re not ruling out an among the states, Pennsylvania state trading program. Anyway it might produce some hotspots, I do realize there might be hotspots, but that’s an area that we’re, one area that we’re saying we could be flexible in just to try to bring some sort of flexibility to the program. Otherwise we were trying to say that really and truly a lot of the things that were in the original, as I understand it, or as researching it understand it, the Clean Air Act, before the, I hate to say Bush amendment, but anyway, the previous amendment changed it, that a lot of the things that were in the Clean Air Act, if those were reput in seems to be that those would be very protective of the public health. Like going from the 70 to the 90 percent reduction in mercury emissions by three years, after the completion of the rule, NOx emissions 72 percent by 2009 and the SO2 to 80 percent by 2010.

MS. STADLER:

Just some final thoughts, Felice Stadler with National Wildlife Federation. First we are one of the organizations that supports the petition that's been submitted to the DEP. I'm glad that this process has started. We also think the STAPPA rule has some good elements in it, and we encourage the DEP to look at that to see what might work for Pennsylvania. And when you're evaluating what options to pursue one, one request I have is when you put out your proposal, and if you put out more than one option, to put out options that you're actually seriously considering. We have some states where they put out options that we know they're not really considering and it just wastes everybody's time. So I encourage you to, to only put out those that you're really seriously considering. We want certainty, so we don't want to see delays. We don't want to see phase two delayed. We definitely don't want to see voluntary programs. And then the last point is I do think we need to be honest about CAMR. We always hear about the 86 percent reduction by 2018. We're not getting 86 percent reduction by 2018, and I just think it's really important that we, that we just be

honest with, with those numbers with all constituents. Thanks.

MR. ORD:

Chuck Ord, IECPA. I would support the gentleman who indicated that he doesn't believe that we're in a crises situation, so therefore I see no reason to rush pall mall into something that we'll have to fix later. Secondly I think that the early involvement of the General Assembly is a good idea and will save much, many trials and tribulations later on, because that is an avenue. And thirdly, I would urge you to remember that, you know, whenever the corporate entity cannot produce a profit on its product, the board of directors determines what to do by voting with their feet. They move out of the state. And that is something we should consider when we're looking at the cost benefits ratios.

MR. CHALMERS:

Ray Chalmers, EPA. I'd just say that EPA certainly understands that the state wants to adopt its own requirements and not just adopt the EPA's model rule. But as has been mentioned, the model rule does have some provisions for flexibility in it, and I think as the state looks

at what it wants to achieve, I recommend that they look at whether they can achieve that by, by exercising some of that flexibility. If not, and the state wants to develop a completely independent rule, I'd just, again, reiterate that the state should at least make certain that it meets the minimum requirements set forth in the rule. Certainly it's what's being talked about, being more stringent in terms of the timing of the controls, and in terms of preventing trading and so forth, but you'd also have to mention the caps set forth in the rule.

MR. FIDLER:

George, anyone in the audience care to offer any - - -

MR. ELLIS:

No, I think Frank summarized our position.

MR. FIDLER:

Or Bill or Dick since you took the time to sit through the discussion of options, any observations?

MR. BECKER:

I just wanted to thank, Tom I wanted to thank you and Joyce for inviting us to be here. This was my first opportunity to see you in practice. I

know many of you from the past and it was a very interesting exchange, and I commiserate, I commiserated privately with Joyce the difficulty she's going to have trying to assimilate all of this. But thank you very much for the invitation.

MR. FIDLER:

Thank you. Thank you for coming. Next meeting Joyce?

MS. EPPS:

The next meeting is scheduled for December the 16th, the day after the Air Quality Technical Advisory Committee meeting. We will get an agenda to you, and I would like to indicate that we will provide concepts for discussion, hopefully, but not regulatory language during the AQTAC meeting.

MR. FIDLER:

For those of you that took the time to prepare slides discussing options, I wanted to thank you very much for, for sharing your ideas and your thoughts. We, we will have concepts for discussion at the next, at the next meeting, and hopefully we'll have some lively discussion. Yes.

MS. RAMSEY:

Would it be appropriate for the Department to provide copies to this workgroup of whatever it is they provide to AQTAC on this issue?

MR. FIDLER:

Certainly.

MS. RAMSEY:

Okay.

MR. FIDLER:

Certainly. And, and actually we'll try to get information out along with the agenda, at least several days in advance of the meeting. The timeframe has been so short that it's been very difficult lining up speakers, finalizing agendas, getting meeting materials together. So I'm sure you can appreciate that, but we'll certainly try to get the information out ahead of time so that everybody has a chance to review and be prepared to react.

DR. WESTMAN:

Any thoughts on meeting after December for those of us have to travel?

MR. FIDLER:

Yeah, I really doubt it with the holidays and just the need for us to regroup after we have reaction and feedback to the concepts, it's going

to take us a little bit of time to digest that and massage that and, and redraft the documents. So I doubt that we'll be meeting again until after the first of the year.

MS. RAMSEY:

Will we be in this room next, in December?

MR. FIDLER:

I think so.

MS. EPPS:

We will likely be in the training room on the second floor, on the second floor. It's my understanding that this room may not be available. So we have the second floor training room reserved. If there's any change in that location, we'll certainly let you know.

MR. FIDLER:

Any other questions that I may not be able to answer? Okay. Thank you very much.

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