BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
NITROGEN OXIDES EMISSIONS FROM VARIOUS SOURCE CATEGORIES: AMENDMENTS TO 35 ILL. ADM. CODE PARTS 211 AND 217	)	R08-19 (Rulemaking - Air)

Proceedings held on October 14, 2008, at 10:04 a.m., at the Illinois Pollution Control Board, 1021 North Grand Avenue East, Springfield, Illinois, before Timothy J. Fox, Hearing Officer.

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INDEX

EXHIBITS

NUMBER	INTRODUCED	ENTERED
Hearing Exhibit No. 1	11	11
Hearing Exhibit No. 2	12	12
Hearing Exhibit No. 3	12	12
Hearing Exhibit No. 4	206	206

PROCEEDINGS

(October 14, 2008; 10:04 a.m.)

HEARING OFFICER FOX: Having indicated that she is ready, the court reporter allows me license to proceed. Good morning, and welcome to this Illinois Pollution Control Board hearing. My name is Tim Fox, and I'm the hearing officer for this rulemaking proceeding entitled "In the Matter of: Nitrogen Oxide Emissions from Various Source Categories: Amendments to 35 Illinois Administrative Code Parts 211 and 217." The board docket number for this rulemaking is R08-19. The Illinois Environmental Protection Agency filed this rulemaking proposal on May 9 of this year, 2008, and the Board accepted it for hearing in an order dated June 5 of 2008.

Also present today from the Board on my immediate right is Board Member Andrea S. Moore, who is the lead board member for this rulemaking. At my far left is Board Member Thomas E. Johnson, and also present at my immediate left is Anand Rao of the Board's technical staff.

Today we are of course holding the first hearing in this rulemaking. The second is now scheduled to take place beginning Tuesday, December 9 in Chicago. This

proceeding is governed by the Board's procedural rules so that all information that is not relevant -- that -- forgive me -- is relevant but is not repetitious or privileged will be admitted into the record. Please note that any questions that are posed today by the Board and its staff are intended solely to assist in developing a clear and complete record and -- for the Board's decision and those questions do not reflect any prejudgment of the proposal filed by the Agency.

For this first hearing, the Board on August 29 of 2008 reviewed -- received prefiled testimony from the Environmental Protection Agency by Mr. Robert Kaleel, from Mr. Vir Gupta and Dr. James Staudt. The Board has received prefiled written questions for those witnesses from Midwest Generation, from ExxonMobil and the Illinois Environmental Regulatory Group, and on September 30 of 2008, the Agency filed its written responses to each of those questions that had been prefiled earlier.

We will begin this hearing with the testimony -- the prefiled testimony of the Agency as the proponent in this proceeding. The written responses are -- The questions for the Agency's witness and the responses to those are in the Board's record in this proceeding, and we will then proceed question by question with any

clarification or follow-up questions that the participants may have.

I recognize that virtually all of you are veterans of proceedings of this nature, but for the benefit of the court reporter and for a record that is as clear as possible, if you would please avoid speaking at the same time as any other person. I don't think we'll have any amplification issues in terms of making one another heard, but if you would speak loudly and clearly for her benefit, we will have the clearest possible transcript.

What I would like to do -- It appears that all of the participants who have prefiled questions are present. What I would like to do is very briefly just to go off the record, iron out a couple of fairly simple -- what I believe are fairly simple details about the orders of proceeding, and then we can reconvene almost immediately and get underway with the substantive testimony. Any questions in the meantime before we go off the record briefly? Excellent. If we may do that.

(Off the record.)

HEARING OFFICER FOX: We're all set. In going off the record briefly to discuss procedural issues relating to the course of the hearing -- and I'm sorry to

repeat that for those who are present here -- it was determined that it was most logical to begin with the prefiled questions submitted by the Illinois Environmental Regulatory Group; to proceed then to the prefiled questions from Midwest Generation that were directed specifically to Dr. Staudt; at the conclusion of the follow-ups to those, to proceed with the prefiled questions filed by ExxonMobil; and ultimately to return to Midwest Gen for follow-ups to those questions it had filed specifically for Mr. Kaleel on behalf of the Agency.

At this point it's appropriate, I think, to turn to the Agency. In the hearing officer order I had indicated that if the Agency wished to offer a brief summary that that certainly would be in order. If you would prefer to proceed to follow-up questions and clarifications, that certainly seems like a productive way to proceed as well. Do you have a preference, Ms. Roccaforte?

MS. ROCCAFORTE: I think we're going to go straight to questions, but I just had a couple of procedural issues.

HEARING OFFICER FOX: Absolutely. Go ahead.

MS. ROCCAFORTE: I'm Gina Roccaforte,

assistant counsel on behalf of the Illinois EPA. With me today is Dana Vetterhoffer, assistant counsel, and John Kim, managing attorney of the Air Regulatory Group, and we are here representing the Illinois EPA. This rulemaking is intended to satisfy Illinois' obligation under Sections 172 and 182 of the Clean Air Act pertaining to reasonably available control technology for major stationary sources of nitrogen oxides in areas designated as non-attainment with respect to the eight-hour ozone and the PM2.5 national ambient air quality standards. On March 24 the USEPA made a finding that Illinois, among other states, failed to make a RACT submittal required under Part D of Title I of the Clean Air Act. I have copies of this and would like to move to enter it as an exhibit.

HEARING OFFICER FOX: Very well. If you can distribute those to the participants, Ms. Roccaforte, that would be great.

MS. ROCCAFORTE: This finding starts the 18-month emission offset clock, sanctions clock, and the 24-month highway funding sanctions clock and the 24-month clock for the promulgation of a federal implementation plan under the Clean Air Act. Therefore, Illinois is required to submit a complete plan by September 24, 2009,

so as to avoid the imposition of at least a two to one offset requirement on new and modified sources for emission units for which a permit is required under Part D. As such, this rule proposed reasonable and cost effective NOx controls on various source categories. The proposed rule is expected to reduce NOx emissions by 46.3 percent or 20,666 tons per year beginning in 2010. I would also like at this time to move to file as exhibits the agency analysis of economic and budgetary effects of the proposed rulemaking.

HEARING OFFICER FOX: Ms. Roccaforte, why don't I address the first document that you had circulated, and for the sake of the record, that is Volume 73 of the Federal Register, pages 15416 to 15421, entitled "Finding of Failure to Submit State Implementation Plans Required for the 1997 Eight-Hour Ozone NAAQS." Was there any objection on the part of any of the participants to admitting that into the record as Hearing Exhibit No. 1? Neither seeing nor hearing any objection, it will be marked and admitted into the record as Exhibit No. 1. Ms. Roccaforte, thank you for letting me interrupt you.

MS. ROCCAFORTE: Thank you.

BOARD MEMBER JOHNSON: Speaking of volume --

and I -- it's age compounded by allergies -- but if you'll speak up a little for me, Gina.

MS. ROCCAFORTE: Sure. As I was saying, I would like to move now at this time to submit the agency analysis of economic and budgetary effects of the proposed rulemaking for Part 211 and Part 217.

HEARING OFFICER FOX: Ms. Roccaforte, having heard your motion, what I would like to do is divide it into two parts since there are documents addressing separate parts of the Board's regulations.

Ms. Roccaforte has moved to admit as Exhibit No. 2 the analysis of economic and budgetary effects of the proposed rulemaking with regard specifically to Part 211, the definitions and general provisions. Is there any objection on the part of any of the participants to admitting that as Exhibit No. 2 in this proceeding? Neither seeing nor hearing any, it will be so marked and admitted into the record. And secondly, Ms. Roccaforte, again dividing your motion, is there any objection to marking and admitting as Hearing Exhibit No. 3 the analysis of the proposed rulemaking with regard to Part 217 specifically addressing NOx emissions? Neither seeing nor hearing any, it will be so marked as Exhibit No. 3 and admitted into the record. Thank you,

Ms. Roccaforte.

MS. ROCCAFORTE: Thank you. And with us today from the Illinois EPA are Rob Kaleel, manager of the Air Quality Planning Section, Division of Air Pollution Control, Bureau of Air; Vir Gupta, environmental protection engineer, Air Quality Planning Section, Division of Air Pollution Control, Bureau of Air; and also with us is Dr. James Staudt, president of Andover Technology Partners. I'd ask that the witnesses be sworn in at this time and we can begin answering questions.

HEARING OFFICER FOX: Very good. If the court reporter would swear the agency witnesses in as a panel, please, we can proceed.

(Witnesses sworn.)

HEARING OFFICER FOX: Thank you very much. Ms. Hodge, it's time to turn to you, as it appears. You had mentioned that you had some general questions that you wished to raise before seeking specific clarifications and follow-ups to the written answers that were filed by the Agency. If it's -- you're prepared to begin with those, why don't we turn things over to you.

MS. HODGE: Yes. Thank you so much, Mr. Fox.

HEARING OFFICER FOX: Certainly.

MS. HODGE: My name is Katherine Hodge, H-O-D-G-E, and I am with the law firm Hodge Dwyer Zeman, and I'm here today representing the Illinois Environmental Regulatory Group, and with me today to my immediate right is Mr. David Kolaz, and Mr. Kolaz is a consultant to IERG. Seated next to him, Ms. D.K. Hirner, and she's the executive director of IERG, and then seated to her right is Mr. Alec Davis, and he is general counsel to IERG. Also in the audience today we have representatives from several IERG member companies, and as you said, Mr. Fox, I do have some general questions for Dr. Staudt that I'd like to start with, and I'll just get right to that, then.

Dr. Staudt, my first question is, does the cost analysis that you conducted here include an estimate of the amount of lead time necessary to plan, design, finance, construct, implement and test the various types of control technologies that you evaluated?

DR. STAUDT: Well, the analysis presented here, the costs all incorporate -- are all based upon to a large extent actual projects. The data that's been collected are based upon real projects that have been installed over a period of time. The TSD does not

explicitly have a section that analyzes lead times for specific projects, if that's what you -- that answers your questions.

MS. HODGE: Okay. Thank you. Based upon your experience, what is a typical time frame that would be necessary from the initial concept to implementation and testing for these types of projects?

DR. STAUDT: I -- For combustion technologies like SNCR, it would typically be a -- perhaps about a year or less. For something like selective catalytic reduction, which is a much larger capital project, typically it would be longer than that, but there may be differences from project to project or from facility to facility that may change that.

MS. HODGE: Okay. Thank you. Have you conducted any analysis to determine RACT for any of the specific emission units that would be subject to this rule?

DR. STAUDT: Well, to -- if you're looking at any particular unit or looking at the units -- the characteristics of the Illinois units in general, we have not examined -- done a unit-by-unit, case-by-case type of analysis. We don't think that that's necessary, and I think frankly it would be practically -- you know,

impractical to do. To -- A more practical approach was to look at the source categories by types, whether they be industrial boilers, and the fuel types and combustion characteristics, and then to examine what has been achieved and what's been published relative to those types of source categories, so we did consider the types of source categories but we did not do a case-by-case RACT.

MS. HODGE: So in making --

(Off the record.)

MS. HODGE: In performing your analysis based upon the various industrial categories, did you factor in the age of a particular unit? For example, did you say in your analysis, well, I'm looking at an industrial boiler that's twenty years old or that's ten years old or five years old? Did that factor into your analysis at all?

DR. STAUDT: No, and I'll explain why. By and large, many of these industrial boilers -- whether it's ten years old, twenty years old or thirty years old, many of them have been shown to live well beyond ten, twenty, thirty years, so in terms of factoring that into the analysis, it -- what I found is these boilers tend to last a fairly long time, so, you know, what I think you

might be getting at is saying, well, if a boiler has a specific -- if you only expect a boiler to be around for another five years, how does that affect the cost analysis. Well, that -- in my experience, there -- these boilers tend to last -- tend to -- even if they're twenty years old, more often than not they can continue running for another twenty years. Moreover, we don't have -- you know, we did not look specifically unit by unit to do any kind of analysis and ask the people, well, do you plan to shut this down in five years. If someone plans to shut it down in five years, that might be something to consider.

MS. HODGE: So it's your testimony, though, that the age of the particular unit, let's say an industrial boiler, would not have any impact on the cost for the controls or on the technical feasibility?

DR. STAUDT: Well, it would -- it depends upon what aspect of the age you're talking about. If it's a -- In terms of the technical feasibility, I don't see where it would necessarily have a factor on the technical feasibility. In terms of the economic volubility of the project, it potentially could if the owner intends to shut the plant -- shut the facility down in the near future, so -- but it's not for me to make --

to say that an owner plans to shut it down in the near future.

MS. HODGE: All right. Thank you.

MS. BASSI: While you are conferring, can I ask one quick follow-up?

HEARING OFFICER FOX: Ms. Bassi, please go ahead.

MS. BASSI: One of the questions that Miss Hodge asked you was how long it -- the -- how long it takes to construct and install some of this control equipment, and I believe you answered that an SCR, selective catalytic reduction equipment, would take longer than one year. Could it take as much as four years?

DR. STAUDT: That -- I am not aware of any facilities where it's taken four years to do. I've done -- I've -- A more typical number might be around two years, but actually, I've seen some facilities as short as a year, but for an SCR, you know, that -- using that year is kind of about as short as it gets, but more typical numbers would be close to two years for an SCR. Four years, I can't say that no one has ever taken four years to do it, but my guess is that they probably could have done it faster. It's just that maybe they had other

things going on that --

MS. BASSI: Does your calculation of that time period include obtaining financing?

DR. STAUDT: When I talk about the one year or the two years, no, that does not include getting financing.

HEARING OFFICER FOX: Yes, sir. If you before going into your question would just provide your name and --

MR. ELVERT: Yes.

HEARING OFFICER FOX: -- spell it for the court reporter.

MR. ELVERT: Yes. Robert Elvert -- it's spelled E-L-V as in Victor, E-R-T -- ExxonMobil. Dr. Staudt, was any safety factors or requirements by OSHA industry or other guidelines, requirements taken into effect as to how long it may take to replace a unit?

DR. STAUDT: Well, in terms of -- I think I've talked about how we treated the time, but the -- we didn't explicitly look at time in the TSD, and so you can tell from the TSD we didn't explicitly look at the time frame. We were mainly looking at cost. From the context of cost, all of the costs represented in the TSD are based upon historical information, many of them actual

facilities, and of course those cost numbers are based upon actual facilities that were installed I presume within OSHA requirements, or I hope they were all installed within OSHA requirements and safety requirements, so from the context of cost, that would have been factored in. Unless you have -- If you have something more, like, specific, unique requirements that you want to explore, ask me about, I'm not sure what you mean.

MR. ELVERT: Could they -- Could there be a difference from industry sector to -- within the various sectors within industry, is it a refinery, is it a chemical plant, different than some other manufacturing plant that you're aware of as far as safety type or federal requirements, federal safety requirements?

DR. STAUDT: Well, yeah, there are some different requirements at refineries, okay, but when you -- what -- we did consider what -- you know, we looked at the process -- we had a whole chapter on process heaters, and from the perspective of process heaters, the information on cost are based upon information on process heaters which are used at refineries. They're not used at power plants and they're not used at other facilities. So in that perspective,

assuming all of those process heaters that formed the basis of the data that was relied on for the cost were installed properly -- and I assume that they were -- they -- that would have addressed it from a cost perspective. In terms of timing, as I said, I think I've already addressed the timing question that you raised.

MR. ELVERT: Thank you.

MS. HODGE: Just a follow-up on the -- a clarification on the timing. Again, you know, my question related to planning, design and finance, and I think you testified that you would not consider the financing timing, construction and implementation. When you talk about a year, is that from the time someone starts construction? Is that from the time that they would plan the project and then have to go seek a permit, or could you just clarify a little bit what you mean by the timing?

DR. STAUDT: Well, it could mean -- it depends upon the technology, okay, but when I talk about a year for -- for an SNCR system, it would typically be under a year, I mean, on the outside for a selective non-catalytic reduction system.

MS. HODGE: What would the start be?

DR. STAUDT: The start period would be -- it

could very well be from the point of planning, even before you file for the permit, and so -- but again, you might -- you know, in many cases it might take longer than that. In some cases it might take a year and a half, but it's not going to be a three-year period for an SNCR unless somebody's really working slowly or there's some unusual situation, but --

MS. HODGE: Do you know what the lead time is for some of these technologies?

DR. STAUDT: Yes.

MS. HODGE: Let's say I have a plant and I would want to order one today.

DR. STAUDT: Okay. If you want to place an order today, an SNCR -- I'll give you -- burners can typically be done in less than a year, you know, from the time you place the order, engineering, delivery, installation. Of course one of the things you have to factor in, one of the issues to some of these folks is planning it within your normal outage cycle, okay? I know that's a factor for many of the industries here. Of course you want to factor that in to the extent you can. For something like an SNCR system, same thing. It's about -- It can be done within a year from the time you place the order. That includes engineering, procurement,

construction, mobilization, startup, testing, commissioning, and turn over to the owner. An SCR system, from the time you place the order, again, typically within two years, okay, from -- you place the order, that includes engineering, and you typically have some -- you know, engineering, procurement, construction, startup, you know, and, you know, the end -- you know, commissioning and final acceptance testing. So that's what you're looking at in terms of timing. Again, you may want to plan it a little bit around your outage schedule, which may cause you to accelerate things or may cause you to move something back.

MS. HODGE: Okay. Did you factor in any time for obtaining the construction permit, if such would be necessary?

DR. STAUDT: Well, yes. I mean, in the studies that I've done for EPA -- in fact, there's a study that's referenced in the -- I did a study for EPA we completed in 2002 on specifically all of this, and that is timing for scrubbers, timing for SCRs, timing for other control technology all relating to multi-pollutant control, and we're focusing primarily on tail end systems, and --

MS. BASSI: I'm sorry. What kind of

systems?

DR. STAUDT: What I call tail end -- selective cat tail end system, not combustion controls. Combustion control is typically faster, okay? For an SCR, that's a bigger construction project so it takes a little bit longer, but when I say two years for an SCR, that includes, you know, the permit. It's -- What you -- Because what -- you can get the permit -- you can apply for the permit and concurrently do engineering. You don't buy equipment and you don't start doing construction until you get the permit, but you can do engineering while the permit is being processed.

MS. HODGE: And we're talking about the air permit here.

DR. STAUDT: Talking about the air permit and the construction permit, because you can't break ground until you get a construction permit, but you can do engineering.

MS. HODGE: Okay. And back -- a follow-up on my prior question about would the age of a particular boiler, you know, influence the types of controls. Would there be any particular design characteristics of an industrial boiler that could impact the economic reasonableness and/or the technological feasibility?

DR. STAUDT: Yeah. Well, in terms of the economic reasonableness for sure, if there are some kind of space constraint that makes it necessary to move a lot of equipment around or do something that makes -- it makes it very difficult -- obviously difficulty means money, okay, so makes it much more expensive to install the equipment, then it will affect -- impact the economic reasonableness. Now, whether or not it affects technical feasibility, the guides I've seen from EPA is that space considerations by themselves are not -- do not make something technically infeasible. It's really -- That really tends to factor more into the economic feasibility, because you can say, well, the process, yes, can be treated with this technology, but it would be very expensive to do it because they have to make these modifications to the unit that costs a lot of money.

So space constraints have a tendency to factor more into the area of economic -- what you call economic reasonableness or the economics, as -- but potentially could be -- affect the technical feasibility, but you'd have to look at a specific -- if it has to do with the process gas, that's really -- you know, the chemistry or the process gas or something has more to do with the technical feasibility.

MS. HODGE: Okay. Thank you. I think -- I believe you've testified that you did not do, you know, specific analysis on the particular emission units to be covered by this rule, but you are generally familiar with the types of those -- types of units, aren't you?

DR. STAUDT: Oh, yes, yes.

MS. HODGE: Okay. Do you believe that there could be a number of emission units subject to the proposed rule that could not economically implement the control technology you identify within the one-year or less lead time?

DR. STAUDT: Well, you know, I -- nothing is impossible, okay? I'll never say that nothing -- I'll never say that it's impossible, but I would be surprised -- I would have to look at what you're talking about before I would say I agree or disagree, but just to say a general statement, is it possible, perhaps, but depending upon what it is, I might be -- you know, I would be surprised.

MS. HODGE: So --

DR. STAUDT: If you're -- I don't believe that anybody has to install an SCR to comply with this rule, in my -- you know, I don't see -- I don't think it's necessary, and so in most cases you're looking at

boilers or SNCRs -- or rather -- excuse me -- combustion controls or SNCR systems. I would be surprised if someone needed to install an SCR to comply with this rule.

MS. HODGE: Could you clarify on that and just add a little bit of detail on why you believe that's the case?

DR. STAUDT: Because the emission rates that are in the rule are achievable and have been demonstrated to be achievable with other control technologies that are less expensive than SCR.

MS. HODGE: Do -- And do you mean combustion controls?

DR. STAUDT: Well, combustion controls and post-combustion controls like selective non-catalytic reduction.

MS. HODGE: Okay. Thank you. The limits proposed for industrial boilers in this proposal appear to be among some of the most stringent in the nation. What is the justification for such stringency, especially for a coal state such as Illinois, and considering that any additional controls will not be in place in time for the effective compliance date of the ozone and fine particulate standards?

DR. STAUDT: That sounds like a question that might be better directed to the Agency in terms of the rationale for the rule, but I -- what I will say is that there are other states that have far more stringent rules than what's being proposed here, so --

MS. HODGE: Could you identify those states --

DR. STAUDT: California.

MS. HODGE: -- let's just say for the industrial boiler category?

DR. STAUDT: Certainly California. If you look at Texas, down in the Houston-Galveston area, it's far more stringent, so, you know, you're looking at other cases where there's more stringent regulations, so -- for industrial boilers.

MS. HODGE: Okay. Thank you. Are you aware that within the state of Illinois that there are circulating fluidized bed boilers that are as much as 24 years old and were not designed with SNCR in mind?

DR. STAUDT: I'm not aware of the age, but I can tell you this much: I was in the business of selling SNCR systems years ago, so I'm very, very familiar with that technology, and so CFB boilers have unique combustion characteristics that make them uniquely

well-suited for selective non-catalytic reduction, and whether they were built 24 years ago or not. They -- Essentially they were built with a time -- with a residence time and a temperature and the gas and good mixing characteristics, and that was before people started putting SNCR systems on them. They're basically -- The way they're built, they're well set up for SNCR systems. I would be very surprised to see a CFB boiler that did not perform very well with SNCR.

MS. HODGE: When you say that circulating fluidized bed boilers can meet a 0.1 pound per million BTU NOx limit, have you considered any potential difficulties faced by retrofitting SNCR on the older boilers where temperature and residence time are not optimized?

DR. STAUDT: Well, again, as I stated earlier, even before people were installing SNCR on CFBs, CFBs were designed with specific combustion characteristics, okay, even absent the existence of SNCR, and those specific combustion characteristics, the temperatures of the combustion, the exhaust gas and the fact that you typically have a cyclone at the exit that provides good mixing characteristics, but you also have a fairly long residence time. That was before people were

installing SNCR systems, and what we discovered is that -- when we were selling -- when we were developing the SNCR technology years ago is that CFB boilers that weren't even built for SNCR technologies responded very well to this technology because they had certain combustion characteristics that lend themselves very, very well to that technology, so even if you go back -- as I said, even if you go back 20 years ago -- and I was in the SNCR business, I'm afraid, that long ago -- yeah, CFB boilers were well-suited for SNCR.

MS. HODGE: Okay. Thank you. In Table 2-2 of the Agency's technical support document, this table appears to for the most part include data from new boilers. When you say that the emission limit can be met without the use of flue gas recirculation, are you aware that the boiler population in Illinois includes older coal boilers that have been converted to gas-firing?

DR. STAUDT: Could you repeat the last part of the question?

MS. HODGE: Sure. Are you aware that the boiler population within Illinois includes some older coal boilers that have been converted to gas-firing?

DR. STAUDT: Well, actually, an older coal boiler that has been converted to gas-firing, generally

that's probably even easier to retrofit, because a furnace that's been designed for coal is going to be bigger and is going to give you more time -- more -- it's going to be bigger than one that's originally designed for gas. That's just the way they're designed, because with gas, you have to have lower gas velocities in a coal-fired boiler because there's fly ash and things like that and the combustion isn't quite as quick. Because of that, it also gives you a lot more flexibility in terms of what you can do with a boiler like that. An old coal-fired boiler that is currently burning gas, it's typically a field-erected unit. It's bigger, you probably have the option for putting -- you have -- probably have room for overfire air, which you typically would not have on a new gas-fired boiler because they're -- generally a new gas-fired unit is more compact.

But having said that, the data here is not all for -- they're not all new units. It's a mixture of new units as well as retrofits, and the attachment -- the attached letter that has a more comprehensive list -- the attachment to the TDS has a more comprehensive list and actually identifies some of the retrofits, but you don't find a big difference in the performance.

MS. HODGE: Okay. Do you believe that such boilers -- and by such boilers, I mean that -- coal boilers that have been converted to gas-firing -- can meet the 0.08 pounds per million BTU with or without flue gas recirculation?

DR. STAUDT: Yeah. Without the flue gas recirculation, they should be able to do it. 0.01, I would say no. 0.01, you got to have flue gas recirculation. 0.08, you can do it without flue gas recirculation. Most of the current low NOx burners are capable of achieving that level without flue gas recirculation.

MS. HODGE: How would such an installation use proper planning and boiler configuration as is stated in the Agency's technical support document? Could you just provide a few more details on that, please?

DR. STAUDT: Well, you know, essentially, that's really boiler specific. You know, in terms of planning -- in fact, if you could just direct me to the page where that is, because I want to -- can you direct me to the page where that's --

MS. HODGE: Sure. I'll try.

DR. STAUDT: I think it was a prefiled question that referred to that, so I'm looking here.

MS. BASSI: Mr. Fox?

HEARING OFFICER FOX: Yes, Ms. Bassi.

MS. BASSI: While they're looking, can I ask a procedural question?

HEARING OFFICER FOX: Yes.

MS. BASSI: Was the Agency's testimony sworn as written? I -- Did I miss that?

HEARING OFFICER FOX: They were -- All three of them were sworn in as a panel and their testimony was admitted as if read.

MS. BASSI: How about the responses to the questions? Have those been accepted as testimony?

HEARING OFFICER FOX: Those have been filed in effect, yes, as testimony before the Board.

MS. BASSI: So they have the weight of testimony.

HEARING OFFICER FOX: Yes, they do.

MS. BASSI: Thank you.

HEARING OFFICER FOX: I'm sorry. I think I may initially have misunderstood your question, but I think we got to the answer.

MS. HODGE: Dr. Staudt, could you look at page 13 of the TSD, please?

DR. STAUDT: Okay.

MS. HODGE: It's down in the last paragraph.

DR. STAUDT: Yeah. Okay. Adequate -- yeah. Planning -- okay. Well, part of that has to do with if you're building a new boiler. Part of it had to do if you were building a new boiler, you would actually plan the boiler configuration. In the event of a retrofit, you don't have the benefit of planning the boiler configuration. You've got the boiler configuration that you have to have. So in a retrofit, you do -- you've got the boiler configuration you've got and you have to work within the constraints of it. Most of these units that they refer to in these Cleaver-Brooks studies, you can see some of them are fairly small. It's much more difficult with a small boiler, frankly, than it is with a large boiler, because in the small package boilers, the small ICI boilers, you don't have the space to do some of the things you do on a large boiler. As I said, you don't have the ability to put in overfire air.

If you're talking about an older -- you said a 26-year-old field-erected boiler that has now been converted from coal to gas, you know, if someone were building a gas-fired boiler today, to save money they'd make it really tight and compact. For the purpose of NOx control, they'd like to make it really big like that

field-erected coal-fired boiler that's been converted to gas, so what you really have when you have an older boiler that has been converted to gas, you've got a pretty good situation from the perspective of NOx control, because you may be able to do other things like adding overfire air and doing other things with staging air that you would have a difficult time with a new gas-fired unit, because a new gas-fired unit, the constraints are actually more difficult because they try to make them as small as possible to save space and cost.

MS. HODGE: Okay. Thank you. Does this TSD include any information on such retrofitted boilers, and if so, could you point us to --

DR. STAUDT: Sure. Go back to the -- We talk about retrofitting boilers with -- retrofitted industrial boilers with SNCR.

MS. HODGE: Is that coal-fired boilers?

DR. STAUDT: Coal-fired boilers. Here, stoker -- Table 2-12b.

MS. HODGE: That have been converted to gas?

DR. STAUDT: Oh, converted to gas.

MS. HODGE: That have been converted to gas.

DR. STAUDT: No, I don't think it -- I don't know that it does.

MS. HODGE: Okay. Thank you. In response to the prefiled question 18 of IERG -- and that question was does the Agency believe that a larger than 250 million BTU per hour coal-fired boiler using Illinois coal can meet a NOx limit of 0.18 pounds per million BTU without SCR -- reference was made to Ameren's Sioux unit 1. This unit is a utility boiler. Can you cite any industrial coal boilers that are meeting a limit of 0.18 million -- 0.18 pounds per million BTU without SCR, excluding CFBs?

DR. STAUDT: Okay. Let's go to -- if you go back to near the -- it's on this cost effectiveness Table 2-17c on page 45, all right, and this is information, in fact. You can look at -- If you look at coal-spreader stoker, coal stoker, you can see units here, and reference 1 is the 1994 ACT document, so it shows an SNCR system on a coal stoker in the range of 0.15 to 0.18. Now the reference 1, again, is the 1994 ACT. I would venture to say that that document using data from close to 15 years ago represents, you know -- we can do better today than we could then, so, you know, there are -- you know, the technology is there to provide the emissions levels below 0.18, and particularly if you combine combustion controls with SNCR, you can do better than

that.

MS. HODGE: I'm having a hard time just following. Can you point us to the exact lines on the table --

DR. STAUDT: Okay. If you go to page 45, go down along -- follow the -- you're talking about a stoker boiler, right, as what kind of --

MS. HODGE: Yes.

DR. STAUDT: Okay. Go down to coal-spreader stoker, okay, and coal stoker, all right? And you can see the second one there shows with ammonia SNCR. It's getting under 0.18 pound per million.

MS. HODGE: And what size was that boiler in this example?

DR. STAUDT: It doesn't say. The information wasn't available.

MS. HODGE: So we don't know that it's greater than 250 million BTU, right?

DR. STAUDT: It's -- We don't know.

MS. HODGE: Okay. Is there one on this table that is over 250 million BTU?

DR. STAUDT: Well, there's one that says 250 to 750, it says 0.22; however, with urea. Ammonia will typically work -- may work better than urea, but, you

know, 0.18 is certainly within the capabilities of -- without a doubt a combination of combustion controls and SNCR.

MS. HODGE: So did you review any information on boilers larger than 250 million BTU that could in fact meet the 0.18? I mean, this says 0.22, and my understanding is your testimony is that you think it could meet the 0.18?

DR. STAUDT: Well, you just -- we just talked earlier about anything over 250 million BTU. Certainly there are utility units -- there are small utility units as well that are able to achieve that.

MS. HODGE: What about for an industrial boiler, though?

DR. STAUDT: Well, the data isn't as good -- to be honest, the data isn't published as much on industrial boilers.

MS. HODGE: So --

DR. STAUDT: So -- But we do have this to rely on, and we also have -- do we have -- I would like to get back to you on that, because I've got some references that I'm going to pull out for you.

MS. HODGE: And I think that would be helpful for us, if you could do that, and just for the

record, you know, my understanding of this table is that the only unit that's greater than 250 million BTU, that we're showing an actual limit of 0.22. Okay. In your experience, have you found that a number of older industrial PC boiler installations lack the space necessary for advanced combustion controls?

DR. STAUDT: It depends upon the combustion controls you're looking at. All of them can adopt combustion controls. It depends upon which combustion controls you're looking at. Many of them can't put in -- you know, they may not have the room for a separated overfire air. Most can incorporate some form of overfire air.

MS. HODGE: How would this affect your view of RACT in such situations?

DR. STAUDT: Well, you know, I don't see where it has a big effect except for the fact that as we've incorporated into this, smaller boilers have a tendency -- we've given smaller boilers higher emissions levels than the large boilers, so that's why the utility units have stricter limits than the industrial units over 250, which have a stricter limit than the industrial units from 100 to 250.

MS. HODGE: Okay. Thank you. Could

ammonium bisulfate also blind the bags in a baghouse and corrode the baghouse internals?

DR. STAUDT: It potentially could, but the way you -- but that's a matter of managing your baghouse temperature. If you maintain your baghouse temperature at the proper level, you won't have that problem. Where that has been a problem is people who had leakages in their baghouses and their baghouse temperatures dropped, so if you maintain your baghouse temperature at the proper temperature, it's -- you're not going to have that problem. Potentially you could, but it's a matter of managing your -- how you manage your facility and being careful to keep your baghouse temperature adequately high.

MS. HODGE: Thank you. If an SNCR system is pushed beyond its capabilities by adding more and more ammonia, would that exacerbate the formation of ammonium bisulfate?

DR. STAUDT: It potentially could, but these -- the limitations that we have here shouldn't make that -- shouldn't cause that to happen, you know, if you're -- unless you're operating the system improperly, but these systems are designed to be capable of achieving the emission rates that we're looking at here.

MS. HODGE: Based on your experience, what percent of the emission units identified as being subject to this proposed rule will in fact be able to install the necessary controls in the time frame currently dictated by the rule and in the cost range that you've indicated?

DR. STAUDT: Well, as I stated earlier, I think most of them are capable of doing it. We have not looked -- In the TSD we did not explicitly have a section examining time, but, you know, if you're looking at a one-year time frame, potentially most of them could, but again, you're looking at everybody installing it at once, so, you know, that might -- that could present that issue.

MS. HODGE: Okay. Did you consider the impact of the use of SCR as MCR on wastewater discharges and management of solid waste? For example, did you consider cost and feasibility associated with additional treatment of wastewater and/or disposal of pollution control waste?

DR. STAUDT: Well, there isn't a wastewater problem. I'm not sure what they're talking about. I've been to lots of SCR systems and I -- lots of SNCR systems, and I don't know what you're talking about.

MS. HODGE: So you're not aware of any

wastewater problems.

DR. STAUDT: Well, what you're -- what you may be getting at is the potential for ash -- ammonia getting on fly ash. That's the only thing that I can imagine that you might be getting -- looking at, for people who wet process their fly ash, but an SNCR system doesn't produce -- there isn't a wastewater stream as a result of an SNCR system.

MS. HODGE: And I think you're correct. I think with the management -- storage and management of ash --

DR. STAUDT: Okay. So --

MS. HODGE: You know, I believe that most people have permitted discharges associated with those kinds of units.

DR. STAUDT: Yeah.

MS. HODGE: Did you evaluate, you know, potential impacts there?

DR. STAUDT: Well, that's considered in the cost analysis. You know, most of these facilities, you know, these -- the cost estimates were not -- were based upon the published information based upon real facilities out there, hundreds of them that use these technologies, and so in reality, there is a potential for ammonia to

get on the fly ash, but there's a way of managing that. The way you manage that is you design your system properly, you operate it properly so that you don't have high ammonia slip, and the degree to which you will have a problem with ammonia on fly ash really depends upon a number of things. One is how the fly ash is handled. If it's handled in a dry manner, generally it's not a problem. If you wet sluice it, there's a risk, depending upon the actual chemistry of the fly ash. There may be a slight ammonia odor, but again, it goes back to operating your system properly and controlling that ammonia slip. There are literally hundreds of these systems out there and the businesses haven't gone out of business. They still run these systems.

MS. HODGE: Are they all dry systems?

DR. STAUDT: Excuse me?

MS. HODGE: Are --

DR. STAUDT: I'm talking about SNCR --

MS. HODGE: Would their fly ash be managed, then, as --

DR. STAUDT: No. I mean, there are systems with wet systems that operate SNCR systems, and I work with utilities who have SNCR systems and some of them have wet sluicing systems.

MS. HODGE: Okay. What about for industrial boilers?

DR. STAUDT: Well, for industrial boilers, it's exactly the same situation, okay? The chemistry doesn't change. It's just that it's a smaller boiler.

MS. HODGE: Could you point us to where in the TSD it discusses consideration of that kind of information, you know, the cross-media impact?

DR. STAUDT: Excuse me?

MS. HODGE: Could you point to the location within the Agency's TSD where there's information that shows the consideration of, you know, the cross-media impacts in your analysis?

DR. STAUDT: Well, we didn't explicitly address what you call cross-media impacts. The fact is, these are technologies that have been used at hundreds of facilities. I mean, it's -- hundreds of facilities, if not, you know, close to 1,000 facilities have SNCR; SCR, again, close to 1,000 facilities to roughly 200 utility coal-fired units as well as hundreds of other types of facilities, and these what you're calling cross-media impacts, this has been -- you know, this is something people have been living with for years. They've -- It's understood if people have -- know how to design these

systems, they install them. It's not like we're talking about, you know, the very first one, so the questions that -- you know, the questions about these things are -- you know, it's as if this is some kind of newfangled technology that's never been used. This has been installed on hundreds of facilities worldwide.

MS. HODGE: No, my question is, is there any information in this TSD that shows how that issue was considered, or is this just for air pollution -- the cost and the technology, is this just related to the air pollution control aspects?

DR. STAUDT: We focus primarily -- We focused on what the technology was capable of doing and what the technology is shown to -- has shown to cost and on facilities that have to think about this stuff, okay, so while we did not explicitly have a chapter on cross-media impacts, I guarantee you every one of these facilities that has installed an SNCR system on a coal-fired unit or an SCR system on a coal-fired unit has thought about this, and that's captured in their costs, their reporting costs.

MS. HODGE: Okay. You testified that you guarantee that that's factored into the cost here.

DR. STAUDT: I'm telling you that it is --

that the costs here are based upon reported costs for the -- this equipment.

MS. HODGE: Okay.

DR. STAUDT: Okay. And these are real people who use this stuff.

MS. HODGE: Thank you. Do you have any follow-up? I have a couple more, but I don't know if you had anything particular on this.

MS. BASSI: No, not yet.

MS. HODGE: Okay. Then I have just a couple more questions. For EGUs, do you consider SCR or SNCR to constitute RACT, or would it be beyond RACT?

DR. STAUDT: Are we getting to the prefiled questions here? I think that was one of my prefiled Midwest Gen questions.

MS. HODGE: Pardon me?

DR. STAUDT: This is identical to one of the prefiled questions I got from Midwest Generating, so are we going to go -- are we shifting over to prefiled questions now?

MS. BASSI: You can answer it again. I don't care.

MS. HODGE: Okay. We -- We'll -- I'll be happy to wait.

MS. BASSI: Okay. We'll wait.

MS. HODGE: Okay. Thank you. That's all the questions that I have for Dr. Staudt.

HEARING OFFICER FOX: Of the general questions you --

MS. HODGE: Of the general questions, yes.

HEARING OFFICER FOX: Very good. And, Ms. Bassi, did I understand you to indicate that you had some general questions as well following up on the answers we've just heard, or did I misunderstand you?

MS. BASSI: No, I -- just one second. I have one question in follow-up on one of Miss Hodge's. You mentioned that there were more stringent rules for NOx limits in California and the Houston area. Were those adopted as RACT rules?

DR. STAUDT: I don't know if they were RACT rules or not. They were -- They had to do with attainment.

MS. BASSI: Okay.

DR. STAUDT: They had to do with attainment, so from that perspective, there may be some similarity, but they weren't -- they were attainment.

MS. BASSI: And this may not be a proper question for you, Dr. Staudt, but for the Agency

generally. Do you recognize that there is a difference between a rule that is adopted for purposes of satisfying a RACT, slash, RACM -- R-A-C-M -- requirement as opposed to one that is adopted just for purposes of attainment?

DR. STAUDT: That might be better for the Agency --

MS. BASSI: Yeah.

DR. STAUDT: -- because I've never heard RACM before, so that's a new acronym for me.

HEARING OFFICER FOX: Ms. Hodge, should we -- shall we turn to the prefiled answers to the questions that were filed by IERG at this point?

MS. HODGE: Okay. But, now, these questions go more generally to some of the agency witnesses and not just Dr. Staudt.

HEARING OFFICER FOX: Yes, although they appear to be to a large extent directed to Mr. Staudt -- or Dr. Staudt, or that Dr. Staudt would be the most likely person to answer it. I'm sure the Agency's witnesses will be available to supplement any answers. I will just start, of course, with number 1. Recognizing that there are four subparts to it, let me begin with number 1 itself, which addresses the Agency's intent with regard to switching fuel sources. Did IERG have any

clarification or follow-up with regard to question 1 -- the answer to question 1 itself?

MS. HODGE: No, I do not.

HEARING OFFICER FOX: Does any other participant have any follow-up to question 1 before we turn to the subsections? Seeing none, Ms. Hodge, let me turn to question number 1a regarding the Agency's expectations with regard to fuel switching. Did IERG have a follow-up or clarification in that regard?

MS. HODGE: No.

HEARING OFFICER FOX: None? Any other participants? Seeing no response, sub b, 1b, regarding the Agency's consideration of the availability of alternative fuels, did IERG have follow-up or clarification with regard to that?

MS. HODGE: No.

HEARING OFFICER FOX: Very well. Any other participant? Seeing no indication that that is so, sub c, number 1c, regarding the Agency's belief about the feasibility of conversion, fuel conversion, any follow-up, Ms. Hodge?

MS. HODGE: No.

HEARING OFFICER FOX: None? Any other participants? Seeing no response, we'll turn, then, to

the final subpart d regarding the conversion of boilers. Ms. Hodge, any follow-up there?

MS. HODGE: No.

HEARING OFFICER FOX: Very well. Any other participants? Seeing no indication that there is, we will turn to question number 2, which regards agency determinations regarding Illinois units that may be affected by this proposal. A follow-up, Ms. Hodge?

MS. HODGE: No.

HEARING OFFICER FOX: None? Any other participants? All right. Turning ahead, then, to number 3, the Agency's consideration of RACT emission limits from other states, a follow-up, Ms. Hodge?

MS. HODGE: No.

HEARING OFFICER FOX: Any other participants on question number 3 with clarification? None? Number 4 --

MS. HODGE: Excuse me.

HEARING OFFICER FOX: I'm sorry, Ms. Hodge.

MS. HODGE: Excuse me, Mr. Fox. I think I would like to ask just a follow-up on question number 3.

HEARING OFFICER FOX: Please go ahead.

MS. HODGE: Could the Agency provide the states -- the other states it did consider?

MR. KALEEL: Yes, we can.

MS. HODGE: Could you do that today or would that be something that you would do later?

MR. KALEEL: Yeah, we should be able to provide that today.

HEARING OFFICER FOX: And --

MR. RAO: Could you just state for the record what other states you considered?

MR. KALEEL: Yes. We've looked at -- and it depends a little bit on which source category, but for boilers, for example, we've looked at Wisconsin, Ohio, Texas, south coast in California, Missouri, Indiana, Pennsylvania and some of the northeast states.

MR. RAO: Thank you.

MS. HODGE: And do all of these other states, do they have NOx RACT rules?

MR. KALEEL: I believe most of them have NOx RACT rules. I think Dr. Staudt had already mentioned that the limits in Texas and perhaps south coast were adopted for other purposes, but I believe most of the other states adopted them for the purpose of meeting NOx RACT.

MS. HODGE: And are you aware, have they all been approved as SIP revisions by USEPA, these RACT rules

in these other states?

MR. KALEEL: It's my understanding that they have been, or at least in most cases.

MS. HODGE: Thank you. Okay. That's all I have. Thank you.

HEARING OFFICER FOX: Very good. Prepared to turn to number 4, Ms. Hodge?

MS. HODGE: Uh-huh.

HEARING OFFICER FOX: Very good. Question number 4 regardless -- regarding the Agency's awareness of particular boiler sizes, Ms. Hodge, any follow-up on your part for IERG?

MS. HODGE: No.

HEARING OFFICER FOX: Very well. Any other participants? There is a subpart "a" also, Ms. Hodge, of course, which I overlooked -- I apologize -- regarding consideration of large boilers. Any follow-up to the written answer?

MS. HODGE: No.

HEARING OFFICER FOX: Any other participants? Seeing no indication, question number 5 does have five subparts. Let me turn to the base question itself, Ms. Hodge, regarding the proposal as it applies to gas-fired boilers of a particular size. The

Agency has filed a written answer, "Yes." Is that sufficient or do you have a follow-up?

MS. HODGE: That is, and quite frankly, I don't have any follow-up on any of the subsets in question 5.

HEARING OFFICER FOX: Thanks for helping us move expeditiously. Of course is there -- I must check if there's any other participant that would wish to follow up with the answers provided by the Agency to subparts "a" through "e" on question number 5. Seeing no interest in that, Ms. Hodge, again, thank you for letting us move to number 6 regarding uncontrolled emissions. This question does have two subparts, but let us turn to the base question, Ms. Hodge, if you have any clarifications on that.

MS. HODGE: I do not, and again, not any on the subparts.

HEARING OFFICER FOX: And of course, Ms. Bassi, if you have a follow-up.

MS. BASSI: I do have some follow-ups on this notion of the baseline, and perhaps they're not direct follow-ups to question number 6 that IERG has presented, but if we could get to the notion of baseline and talk about that for a minute, I'd appreciate it.

When the -- Is it the case that the baseline that the Agency was using for this rulemaking is 2002?

MR. KALEEL: That's correct.

MS. BASSI: Okay. And -- Thank you. And so as a baseline, what does that mean? What is the baseline?

MR. KALEEL: For the purposes of planning for ozone and PM2.5, I think of 2002 if not as a baseline, at least as a base year, which is kind of an anchor point both for developing emissions inventories, for planning, and also an anchor for demonstrating reasonable further progress, which is a separate requirement that the State of Illinois needs to meet.

MS. BASSI: So as 2002 as the base year, then if -- please correct me if I'm wrong -- as I understand what you're saying is you look at the inventory and determine what the emission levels are in 2002 and then that is the point from which reductions are measured; is that correct?

MR. KALEEL: For the purposes of reasonable further progress, that's correct, yes.

MS. BASSI: Okay. So does the baseline then assume whatever control measures might already be installed on a unit such as low NOx burners?

MR. KALEEL: I guess I'm -- maybe we're confusing uncontrolled emissions from baseline emissions. Our inventory should reflect whatever controls were in place at each and every unit in 2002. That -- We haven't made a determination that those controls don't count from a standpoint of meeting a RACT requirement. I mean, if a company already has controls and that does figure into the cost of complying with the RACT rule, that -- it's really kind of mixing issues there from reasonable further progress.

MS. BASSI: Thank you.

MR. KALEEL: In general, for reasonable further progress, the non-attainment area as a whole, not unit by unit, but as a whole must demonstrate reductions to the level needed for attainment.

MS. BASSI: Thank you.

HEARING OFFICER FOX: Anything further, Ms. Bassi?

MS. BASSI: No. Thank you.

HEARING OFFICER FOX: Surely. Were there other participants that had follow-ups or clarifications with regard to question 6 or any of its two subparts? Very well. Ms. Hodge, we can move forward to question number 7 regarding the Agency's evaluation of stoker

boilers. Did IERG have a follow-up?

MS. HODGE: No.

HEARING OFFICER FOX: Any clarifications on the part of other participants? Seeing none, we will turn to question 8, which does have three subsequent subparts. Question 8 addresses the Agency's belief with regard to the feasibility of SCR. Follow-up on the part of IERG, Ms. Hodge?

MS. HODGE: No, and again, not on any of the subparts.

HEARING OFFICER FOX: And any other participants? Seeing no follow-ups on question number 8 -- thank you again, Ms. Hodge -- we can turn to question number 9 regarding the Agency's performance of analyses. A follow-up, Ms. Hodge?

MS. HODGE: No.

HEARING OFFICER FOX: No? Any further clarifications? Seeing none, question number 10 regarding the Agency's information gathering with regard to retrofit controls. Ms. Hodge, follow-ups on that issue?

MS. HODGE: No.

HEARING OFFICER FOX: Seeing none from IERG or any other participant, let's proceed to question

number 11 as filed by IERG. That addresses sources -- categories of emission units that do not now exist in the area covered by the rule. Any follow-up, Ms. Hodge?

MS. HODGE: Yes.

HEARING OFFICER FOX: Please proceed.

MS. HODGE: Thank you. In response to prefiled questions, the Agency responded to questions concerning the inclusion of emission unit categories that do not exist in the non-attainment areas or which are not operational. Regarding emission units which do not exist, your response alluded to the possible expansion of the non-attainment area in the future. Based upon the way the rule is written at this time, explicitly specifying the geographical extent of the non-attainment area, would the designation of a new non-attainment area require a rule revision?

MR. KALEEL: Yes, it would, if -- in this particular example we -- or question we referred to the possibility of Massac County, Illinois, southern Illinois, becoming non-attainment. Massac County is not currently listed as one of the counties that this rule would apply. If it does become non-attainment, we would have to propose an amendment to the rule.

MS. HODGE: Thank you. In your response to

the prefiled questions on this topic, you refer to Massac County and Rock Island County as two examples of possible areas that would be included in a rule, thereby justifying inclusion of an emission source that exists in Massac County but not in the areas currently covered by the proposed rule. These areas that the USEPA is proposing for non-attainment are in regard to the 24-hour fine particulate standard, so my question is, how does the averaging times and limits of the proposed rule address the unique characteristics of this type of violation?

MR. KALEEL: The -- I mean, it is a very good point. The averaging times considered in this rule are both annual and ozone season. They don't explicitly address a daily standard. However, many of the controls that are envisioned here, especially combustion controls, they're either on or they're off, and we would expect that these controls would help on a 24-hour daily basis as much as seasonal or annual. There may be some circumstances where that doesn't work, but --

MS. HODGE: Would the Agency have to do a specific analysis there to determine whether these NOx reductions would even be required?

MR. KALEEL: Well, there'd be a number of

analyses that the State would be obligated to perform for the 24-hour standard. As of now, there are no non-attainments yet promulgated. The EPA hasn't finalized those non-attainment designations yet. What would be envisioned once an area or new areas become non-attainment is that -- is to start a new planning cycle, including evaluation of RACT, including reasonable further progress and a demonstration of attainment, so there would be a number of analyses that we would have to look at. We would have to look again at this rule and see whether or not it would exactly match the requirements of the standard.

MS. HODGE: The Agency and the States of Iowa and Kentucky have indicated that they disagree with USEPA's proposal in this matter. Is there anything in the Agency's analysis here of the emission sources in these two areas -- and again, I'm referring to Massac County and Rock Island County -- that indicate that the imposition of the proposed NOx rule is necessary or reasonable?

MR. KALEEL: I think it's our position today that the exceedances or violations of the standards that have occurred in Davenport, Iowa, and Paducah, Kentucky, that Illinois sources did not contribute to that. That

would speak to the conditions that have occurred for present-day air quality from the standpoint that a future analysis, a modeling analysis or future violations of the standard that might occur before attainment is achieved, it may change that conclusion, but our belief today is that Illinois sources do not significantly contribute.

MS. HODGE: Thank you. Does the Agency intend to purposefully include emission units that don't exist in the non-attainment areas, and if so, what is the basis for making this determination?

MR. KALEEL: I'm sorry. I'm not sure I'm totally following your question.

MS. HODGE: In the NOx rule right now, what is the basis for inclusion of these types of units; for example, cement kilns?

MR. KALEEL: I think I attempted to answer that. The -- At least to a certain extent, the inclusion of those categories stem from two things. In the case of aluminum melting furnaces, there was an aluminum melting furnace in existence in Chicago in the initial inventory year that we examined to identify units that may be subject to RACT. That unit or that facility in Chicago has since shut down. We don't know their intention as far as potentially reopening, but as of now it is not

open, and my understanding, it's surrendered its permit. We have no indication they intend to open. We also have no indication that they've torn the facility down or are using it for some other purpose, so our preference is to leave the limit where it is. In regards to cement kilns, quite frankly, the existence of the emission limits stem from the fact that when we initially drafted the rule, the rule was going to be proposed as a state-wide applicability, and there are other cement kilns in the state of Illinois that are located in attainment areas of the state. Subsequent modeling has shown that we don't need to implement attainment area controls. The emission limit for cement kilns was still there. We prefer to leave it in the rule, again for the circumstance that under the new ozone standard, under the revised PM2.5 standard, there may be some adjustments necessary to non-attainment boundaries.

MS. HODGE: But didn't you just testify that -- you said a rule revision would be necessary to extend this out to areas other than the non-attainment areas covered here?

MR. KALEEL: Yes.

MS. HODGE: Again, is there a basis to include these kinds of units or cement kilns at this

point in time if the rule revision would be necessary anyway?

MR. KALEEL: Well, the -- I guess the basis -- and maybe from your perspective it's not a valid basis -- but the engineering work, the cost analysis has been performed. The limits have been established. They would send a clear message to units that potentially become non-attainment in the future that they would know what their target is, what it is they have to meet, but there would be a rule revision needed. Your point is well taken.

MS. HODGE: Did the Agency perform any outreach related to its proposal here to owners/operators of cement kilns located outside the non-attainment areas?

MR. KALEEL: Our initial outreach was really geared towards state-wide application of the rule, so my understanding is that at least some of the owners or operators were aware of these requirements or at least of our proposal.

MS. HODGE: Has the Agency received any comments on its proposal here from owners/operators of cement kilns?

MR. KALEEL: Not to my recollection.

MS. HODGE: Okay. That's all I have.

HEARING OFFICER FOX: Ms. Bassi had a follow-up.

MS. BASSI: Mr. Kaleel, I'm sorry. I didn't hear what you said about the aluminum melter's permit. Did you say that it has been surrendered?

MR. KALEEL: My understanding that it has been surrendered, yes.

MS. BASSI: And so if permit has been surrendered and particularly if some period of time has passed since that point, would not the aluminum smelter have to go through some sort of new source review in order to reopen?

MR. KALEEL: In theory, yes.

MS. BASSI: Okay. Is it possible if that were the case that the emission limitations on the aluminum melter would be even more stringent than this rule theoretically?

MR. KALEEL: Theoretically, yes.

MS. BASSI: Thank you. One other question.

HEARING OFFICER FOX: Go ahead.

MS. BASSI: When -- Were -- These sources that have the potential of being located in future non-attainment areas, when the rule -- when the Agency pulled back the scope of the rule during its outreach

process and -- to the non -- to the current non-attainment areas, were these sources that are located in potential future non-attainment areas notified of this pullback so that they would believe that the rule was no longer applicable to them?

MR. KALEEL: We did not make a specific notification, like an e-mail or anything like that, to all affected units, but we have done outreach. We've made various presentations to various groups about what our proposal includes. I'm quite certain we highlighted quite plainly the change in the applicability from being state-wide to just non-attainment area, and I feel confident that we had sufficient outreach that people were aware of that.

MS. BASSI: Thank you.

HEARING OFFICER FOX: Sure. Ms. Hodge, did you have any further follow-up with regard to question number 11?

MS. HODGE: No.

HEARING OFFICER FOX: Very well, and was -- I think we established that there were no other participants that had follow-up with regard to 11. We can turn, then, Ms. Hodge, to number 12 regarding IERG's question regarding the definition of industrial boiler.

There were two brief answers to the base question and the single subpart. Did you have follow-up or --

MS. HODGE: I do.

HEARING OFFICER FOX: Please go ahead.

MS. HODGE: If a heat recovery steam generator recovering heat from the exhaust of, A, process, B, turban, or C, engine, is considered a boiler for proposed -- for this proposed rule, then does the Agency intend to define the boiler's rated heat input capacity as a direct heat input to the heat recovery steam generator from combustion of fuel in the heat recovery steam generator -- for example, from a duct burner -- or does it intend to also include the heat input from the upstream process in the rated capacity?

MR. KALEEL: I'm not sure at this point I have a specific answer. I think if it's okay, I'd prefer to address that in writing. That sounds like a unique circumstance.

MS. HODGE: That's fine. If the rated heat input capacity of the boiler is intended to include energy from the exhaust of an upstream unit, then how does the Agency anticipate resolving the NOx emissions and controls from the unit and from the heat recovery steam generator?

MR. KALEEL: I don't have a specific answer to that right now. I think we'd prefer to respond to that in writing.

MS. HODGE: Okay. Thank you. Is there any language in the current proposal that the Agency understands to resolve the regulatory status of upstream units and heat recovery steam generators? If not, is the Agency contemplating introducing language to clarify this issue?

MR. KALEEL: It's possible that we need to make some sort of a clarification.

MS. HODGE: If the Agency does intend to regulate heat recovery steam generators as boilers, has the Agency performed any analysis to determine either technical feasibility or economic reasonableness?

MR. KALEEL: We have not performed any kind of a unit-by-unit assessment. Again, if this is a unique situation that you're describing, we've not done that.

MS. HODGE: Okay. Thank you. Thank you. And then my final question, follow-up on this, is that again, in this situation where you would have a heat recovery steam generator, would that unit be regulated under this proposal? And that's -- my understanding is you're going to get back to us on that, but we're

interested too in the interplay of regulation under the proposed subpart Q for IC engine rules too. Would it perhaps be regulated under subpart Q? Would it be regulated here? Would it be regulated both places? I think we just need clarification on that, please.

MR. KALEEL: Yes, we'd be happy to provide that.

MS. HODGE: Okay. I do have a couple more, please.

HEARING OFFICER FOX: With regard to 12?

MS. HODGE: Uh-huh.

HEARING OFFICER FOX: Please go ahead.

MS. HODGE: Okay. In response to prefiled questions, the Agency mentions that it had not performed an analysis of the technical feasibility or cost of controlling heat recovery steam generators, cogen units, chillers. Have these units been included in the estimate of emission reductions included in Tables 10-1 and C-2 of the technical support document?

MR. KALEEL: I'm sorry. We moved to question 13? Is that just a follow-up --

MS. HODGE: No, we're still on 12.

MR. KALEEL: And I'm not aware that we've done any specific analyses in regards to gas-fired

chillers.

MS. HODGE: Okay. Thank you. Okay. That's all I have. Thank you.

HEARING OFFICER FOX: Very good. Were there any other follow-ups with regard to question 12? I know, Mr. Kaleel, you've indicated a willingness to provide some clarifications in writing, and I know -- I think Ms. Hodge has indicated her appreciation. The Board appreciates that willingness as well and looks forward to that information. That would bring us, of course, Ms. Hodge, to IERG's question number 13. Did you have any follow-ups with regard either to the base question --

MS. HODGE: No.

HEARING OFFICER FOX: -- or the subparts?

MS. HODGE: I do not.

HEARING OFFICER FOX: You do not? Any other participants? Sir, if you would before going to your question please provide the court reporter with your name and spelling and any organization you might represent.

MR. DENNIS: It's Pat Dennis, D-E-N-N-I-S. I'm with ADM. And point of clarification, the answer to 13 says, "If refrigerant is heated directly by gas firing, it's a process heater," and I'm wondering if the Agency meant to say indirectly there, because a

process -- to be a process heater, the unit should incorporate indirect heat transfer rather than direct heat transfer.

MR. KALEEL: I think you're right, that it meant indirect heating.

MR. DENNIS: That's all I have.

HEARING OFFICER FOX: Very good. Thank you, sir. Any further questions on IERG's question number 3? Any clarifications?

BOARD MEMBER MOORE: 13. You said 3.

HEARING OFFICER FOX: I jumped back ten questions. Questions number 13. My mistake. I apologize. That brings us, Ms. Hodge, to question number 14, which does have five subparts. Why don't we begin with 14a based on -- regarding implementation. Did you have a follow-up or clarification?

MS. HODGE: I do have several follow-up questions, and some of the questions cover, you know, one or more of the subsets, so --

HEARING OFFICER FOX: It's difficult to tease them apart. Why don't we go ahead with your questions, and certainly any other questions we'll entertain in due time.

MS. HODGE: Okay. In response to prefiled

questions, the Agency has stated that the compliance date for the proposed rule of May 1, 2010, is one year later than USEPA requires in its final rule to implement the eight-hour ozone national ambient air quality standard. Since for all practical purposes the compliance date occurs too late to impact compliance with the ozone standard, what benefit will the proposed rule have in achieving compliance with the current ozone standard?

MR. KALEEL: Hopefully the area will achieve attainment at the time frame that is required -- which is 2009, slash, 2010 -- with control measures that are already being implemented. The NOx RACT proposal is a specific requirement of the Clean Air Act regardless of how much it contributes to attainment. It is a specific requirement that must be addressed, and this proposal is intended to address it.

MS. HODGE: Okay. Thank you. If the Agency needs an extension of time to attain the ozone standard, what are the requirements it must meet to qualify for an extension, and in your opinion, how will the May 1, 2010, compliance date impact USEPA's decision to grant an extension?

MR. KALEEL: I guess I'm not aware that there's a specific mechanism to seek an extension of an

attainment date for ozone. There is a provision for achieving an extension of the attainment date for PM2.5. If we fail to meet the attainment date for ozone, I believe the Clean Air Act would provide for a bump-up to a higher classification, and in so bumping up the area to a higher classification, we would also have a later attainment date, I believe three years later, if the area goes from moderate to serious. The NOx controls in 2010 could still potentially help to keep the area in attainment.

The -- And perhaps the extension that you were referring to, the Clean Air Act does provide for one-year extensions if the area is achieving clean air in the first of the -- of three years. The -- Back up for a second. To be able to determine whether or not the area is attained, three years of clean monitoring data must be observed or measured in the non-attainment area, so presumably the first clean year would be 2009, and as you pointed out, we would not have full implementation of NOx RACT in 2009. If we make it -- If the meteorological conditions are right, if other control measures are helping to achieve clean air in 2009, we can request an extension to 2010 and then again till 2011, so even though NOx RACT might not help us in that first year,

implementation by the ozone season of the second year of at least most of those controls would help to keep the area on track to attain the standard, and again in 2010 and in '11, so maybe those were the extensions that you're referring to.

MS. HODGE: Yes. Yes, they were. Okay. The fine particulate standard attainment date is April 14, 2010. According to the USEPA, what is the date by which RACT control measures must be in place for fine particulate control purposes?

MR. KALEEL: For fine particulate, the -- well, I guess it's similar to what it is for ozone. The RACT is intended to be achieved by the year that attainment is also to be reached, so in that specific instance, April of 2010 would be the attainment -- or the compliance date under the federal guidance.

MS. HODGE: Okay. What are the USEPA requirements for qualifying for an extension of time to attain the fine particulate standard, and in your opinion, how will the May 1, 2010, compliance date impact USEPA's decision to grant an extension? And again, this is on the fine particulate.

MR. KALEEL: The requirement for achieving an extension for PM2.5, the State needs to make a

demonstration that control measures needed for attainment could not be implemented in time, that there was some reason why feasible control measures could not be implemented in time by 2010.

MS. HODGE: Thank you. In your opinion, is the rule's compliance date a factor to consider in the overall determination of whether RACT is reasonably available in a specific situation?

MR. KALEEL: Obviously the State intends to have a compliance date that can be reasonably achieved, and from our standpoint, again, it depends on the duration of the rulemaking as to how much time would still be available. I think we believe -- and I've responded to some of the questions here in a like fashion -- we believe that in most cases there is still enough time for companies to comply. There are undoubtedly and we are aware of some circumstances where that might not be true, and we remain open to discussing those unique circumstances. If the rulemaking process becomes very protracted, then there's certainly an obligation that we would have to work with the Board and work with affected industries to derive or determine a more reasonable compliance date.

MS. HODGE: Thank you. Do you believe that

the rule's compliance date can potentially impact the availability of a control technology and the cost of implementing the technology?

MR. KALEEL: At least a portion of that, perhaps it would best be addressed by Dr. Staudt. I guess our opinion is we're not to that point yet. We believe that the control measures that are needed to attain are reasonably available at the present time, so --

MS. HODGE: Thank you. And I know we hit on this a little bit earlier in questions for Dr. Staudt. Would you have anything to add --

DR. STAUDT: No.

MS. HODGE: -- at this time? No? Thank you. Has the Agency considered the impact that current economic conditions will have on financing procurement, construction and timing for the kind of projects required by this rule?

MR. KALEEL: We read the newspapers. We know it's a difficult time right now. Hopefully that will be resolved for all of us. I don't have a specific reaction to availability of credit right now, but I haven't tried to obtain a home mortgage or buy a car recently, so I can't really directly respond to what --

MS. HODGE: So the Agency has not considered the current economic impact?

MR. KALEEL: We have not, no.

MS. HODGE: Okay. Thank you. Also, in response to question 14c, the Agency made a statement that the Illinois EPA believes that stakeholders have already had ample time to plan and design the control measures needed to comply with this proposal since they've been aware of it for several years. Can you just provide a little bit of an overview for the Board about how this rule has changed over the last several years from maybe some of your early initial outreach to the proposal that you have before the Board right now?

MR. KALEEL: Sure, and the Agency has worked with stakeholders for a number of years and we've made presentations and had meetings to IERG and its members and to other groups as well. The obvious -- The biggest obvious change that has occurred with the proposal from its inception was pulling back on the requirement for -- or at least our initial ideas or thoughts about making this state-wide rulemaking. There may have been some other specific changes, I believe, in certain circumstances that a certain emission limitations have been relaxed somewhat, although I think for the most part

the emission limits that we originally stated a couple years ago are still contained in this proposal. But another change that I know has come about, and perhaps not just strictly as a result of outreach but just the evolution and the duration of the time to make this proposal, is pushing back the compliance date. I believe we originally proposed 2009 to match up with the federal requirement. We have pushed it back a little bit, but --

MS. HODGE: All right. Thank you. So as you just testified, one of the big changes was change of the rule from state-wide applicability to applicability just in the non-attainment areas. Does the Agency think that it would have been a prudent business decision, then, for a facility located in an attainment area to move forward with controls let's say 18 months ago?

MR. KALEEL: Probably not a prudent decision to go ahead with implementation of controls. I think what we intended here is to, again, make the Board and make -- state the obvious fact that companies have been aware of these limits. There are a certain amount of planning undoubtedly that goes on internally within each of the companies as far as what control measures may be needed, so there is some up-front work that could be done short of applying for a specific construction application

or initiating controls, you know, spending significant capital down there for construction of equipment, so I think there's a fair amount of up-front work that could be done and probably has already been done by a number of companies.

MS. HODGE: And how familiar are you with business planning for capital expenditures?

MR. KALEEL: I don't have a great deal of familiarity with that.

MS. HODGE: Would you think that it would be routine to go forward with approval for capital for a proposed rule?

MR. KALEEL: I don't think it would be routine to actually obtain loans or to let contracts. In fact, in terms of letting contracts, that may even violate our permitting requirements.

MS. HODGE: So is it the Agency's position that you think companies shouldn't move forward with planning and design for a proposed rule?

MR. KALEEL: I think in many cases they could have done that. I think we certainly know there's been enough planning that has gone forward within the companies to provide negative feedback to our proposals as early as a couple of years ago, so we know that people

have been looking at it. They've already been aware of what we're asking for and at least were prepared enough at the time to say that they didn't think it was feasible, so just even making that statement would make me think they've been doing some planning.

MS. HODGE: Okay. Thank you. I think that's all that I have on 14.

HEARING OFFICER FOX: Very well. Were there -- Ms. Bassi?

MS. BASSI: I won't ask my questions. Not nice.

HEARING OFFICER FOX: Did you have another nicer one that you wanted to pose?

MS. BASSI: No. Miss Hodge covered them.

HEARING OFFICER FOX: Very well. Yes, Mr. Elvert.

MR. ELVERT: Yes. One of the questions that Mrs. Hodge asked was do you believe that the rule's compliance dates can potentially impact availability of control technology. In the past we've only been talking about boilers and process heaters. Is this -- Is your answer the same in regards to part 75 and part 60, CEMS equipment?

MR. KALEEL: I'm not aware of the current

availability or lack of availability of monitoring equipment.

MR. ELVERT: Okay. Thank you.

HEARING OFFICER FOX: Thank you, sir. Any further questions with regard to question -- IERG's question number 14? Ms. Hodge, why don't we proceed to IERG's question number 15 with regard to emission averaging plans. It does have three subparts. Would it make sense once again perhaps to address those in effect together?

MS. HODGE: Yes.

HEARING OFFICER FOX: I suspect that you have some follow-ups.

MS. HODGE: Thank you.

HEARING OFFICER FOX: Please go ahead.

MS. HODGE: Mr. Kaleel, in response to the prefiled questions, the Agency stated that new units subject to the rule cannot be included in emission -- in an averaging plan because of the need to track emission reductions from the 2002 base year. Are there USEPA guidance or policy documents that preclude the Agency from allowing averaging of the newer units?

MR. KALEEL: I'm not aware of anything in the federal guidance with regard to including or not

including averaging. The concept of averaging was something that was brought to us by stakeholders as a means of providing flexibility towards compliance.

MS. HODGE: Thank you. Given the potential for a facility to make important energy efficiency decisions that could be adversely impacted by this exclusionary limitation, has the Agency considered any methodology that could be employed to address their concern, allow such averaging -- that would be such averaging of post-2002 units?

MR. KALEEL: The one circumstance that the proposal does allow in terms of averaging is in the context of a replacement unit. We certainly envision that a new unit would be more efficient -- or certainly conceivable to us it would be more efficient than the existing one, and I don't -- at least in terms of replacement, the rule allows for that.

MS. HODGE: Is the term replacement unit defined anywhere in the proposed rule?

MR. KALEEL: I don't recall if we've specifically defined it.

MS. HODGE: Okay. And in your answer to 15c, I think the Agency said for the purposes of emission averaging under this proposal, a replacement unit must be

essentially the same as the unit it replaces.

MR. KALEEL: Yes.

MS. HODGE: Are you aware of any industry that would routinely do replacement in kind? Wouldn't there be some kind of improvement or enhancements?

MR. KALEEL: Well, the averaging concept originally was put forward by the natural gas pipeline folks in the development of subpart Q, the engine rule. What they envisioned was a replacement of a gas-fired engine perhaps with an electric engine. Again, that would be alleviating all emissions, and we did allow for replacement of a unit that has emissions with one that has no emissions at all, so that -- I mean, that obviously makes sense, but the concept was that that engine does the same job as the one it replaced, and what it was providing was an air quality benefit.

MS. HODGE: So could you -- could we consider a definition that replacement unit would be doing the same job as the unit it replaces?

MR. KALEEL: I think that's consistent with our intent. If -- Just throwing out an example, if a company wanted to replace a 100 million BTU boiler with a 100 million BTU boiler, that certainly is consistent with our intent of what is a replacement unit.

MS. HODGE: Okay. Thank you.

MS. BASSI: Can I follow up on that, please?

MS. HODGE: Sure.

HEARING OFFICER FOX: Please go ahead, Ms. Bassi.

MS. BASSI: I have two questions, I think, in follow-up, in following up on that. The first one is, you said if they could replace a 100 million BTU boiler with a 100 million BTU boiler. Could they replace it with a 150 million BTU boiler?

MR. KALEEL: I don't have a specific threshold in mind. Again, I think what we are thinking is it's essentially doing the same work as the unit that it replaced, and if you could play that game back, what about 149? What about 139?

MS. BASSI: Right.

MR. KALEEL: We don't have a specific criteria in mind, but again, the --

MS. BASSI: So I have more than one question, more than one question on that. Is this then something that would be determined in the permitting process, or exactly where?

MR. KALEEL: I think there's some discretion involved. I think we would intend for companies to

propose in an averaging plan what it is that they have in mind, but --

MS. BASSI: Is the replacement unit -- or could the replacement unit effectively be viewed as the -- as one of the company's methods of complying with the rule; in other words, by replacing an old unit with one that's more efficient in terms of emissions, then that that is its compliance methodology?

MR. KALEEL: I could conceive, again going back to the engine rule example, that if a company wanted to use an electric engine rather than a gas-fired engine, it made sense for them to do that both from an efficiency standpoint and from an emissions standpoint, that certainly that that's what we envisioned, and a replacement of a dirtier unit with a clean one is -- we would encourage that.

MS. HODGE: Just a quick follow-up on that. So would the Agency entertain a proposal from IERG in that regard consistent with your testimony here today?

MR. KALEEL: We'd be happy to discuss it, sure.

MS. HODGE: Okay. Thank you.

HEARING OFFICER FOX: With regard to question number 15, Ms. Hodge, any further questions?

MS. HODGE: No.

HEARING OFFICER FOX: No? And from any other participant, Ms. Bassi or otherwise, on question number 15? Noting the time, we have been at it for nearly two hours, and I appreciate your stamina. It certainly seems that there's time for lunch. Why don't we take a break and resume here at 1 o'clock. We can begin, Ms. Hodge, with question number 16 on IERG's part, and that will turn to some questions that appear to relate very specifically to Dr. Staudt's prefiled testimony, and we can wrap up the questions and answers from IERG. And with that, we can go off the record and I'll see you -- we'll see you back here at 1 p.m.

MS. HODGE: Thank you.

(One-hour lunch recess taken.)

HEARING OFFICER FOX: We're at the end of our lunch break at 1 a.m. -- 1 p.m., rather. We haven't been here that long, of course. The court reporter indicates that we are ready to go back on the record, and in the interest of diving right in, Ms. Hodge, we left with the answers to IERG question number 16 relating to construction or modification. Why don't we dive right in and see whether you have any follow-ups or clarifications on that issue.

MS. HODGE: Mr. Fox, I don't have any follow-up to any of our additional prefiled questions and the Agency answers. I have more questions in the general category.

HEARING OFFICER FOX: Very good. Why don't I -- You've indicated that neither 16 -- none of the questions, your own questions, 16 through 21, require on your part any further clarification or follow-up.

MS. HODGE: That's right.

HEARING OFFICER FOX: Why don't I just throw that open to the other participants, if there are any follow-ups or clarifications you would like to ask the Agency based on IERG's last -- I believe that would be six questions. I'm seeing no indication that there are any follow-ups, so there's a reprieve for the Agency to that extent, at least. Why don't we turn, Ms. Hodge, to the follow-up questions of a general nature that you just referred to a moment ago.

MS. HODGE: Will do. Will do. And I think these are for the most part for Mr. Kaleel but may involve some others as well. In the Agency's statement of reasons and your prefiled testimony, one of the purposes of the proposed rule is to achieve NOx emission reduction for use in the ozone and fine particulate

attainment demonstrations the Agency is preparing or has prepared. What is the status of the Agency's stated limitation plans for ozone?

MR. KALEEL: I think as I indicated at least in response to some of the other questions -- I don't recall if they were IERG questions or someone else -- the Agency has not yet filed the ozone attainment demonstration as was required by I believe June of 2007. There have been a number of slow-downs or delays, the most recent one being the vacatur of the CAIR rule. One of the premises of our attainment demonstration was that CAIR would be providing regional emission reductions which were believed to be necessary for attainment, so we had to do a demonstration since the time of that vacatur to show or to determine whether or not CAIR was needed for attainment. We've completed that modeling. We're wrapping up the technical write-up right now. We hope to be able to have public hearings on the attainment demonstration before the end of the year with a submittal to USEPA by early next year, and that would be the attainment demonstration, reasonable further progress demonstration, conformity demonstration. The NOx RACT of course is -- and also BOC RACT would be elements that wouldn't be included until rulemaking is completed.

MS. HODGE: And that would be for both the Chicago and the Metro East non-attainment areas?

MR. KALEEL: Good clarification. I'm sorry. We did file the attainment demonstration for the St. Louis metropolitan area on time in June of 2007. We've not received any comments or any reaction or any actions at all by USEPA, so the dates that I was describing were for Chicago.

MS. HODGE: Chicago? Okay. Thank you. Does the Agency intend to submit an implementation plan for the Chicago area that will show attainment by the June 2010 attainment deadline?

MR. KALEEL: The additional analysis that I had described does demonstrate that the Chicago area will attain by the attainment date 2010, even without full implementation of CAIR. It shows southeast Wisconsin, Indiana and Illinois all attaining by 2010. It does not show attainment for the monitor in Holland, Michigan. The modeling goes on to show that Holland, Michigan, will attain by 2012.

MS. HODGE: Okay. Thank you. Does the Agency's attainment demonstration for the Metro East portion of the St. Louis non-attainment area show attainment by the June 2010 deadline?

MR. KALEEL: Yes, it does, with the proviso that the modeling that we submitted in June of 2007 assumed implementation of CAIR. We have not looked at the St. Louis area specifically to see whether the vacatur of CAIR impacted that demonstration.

MS. HODGE: Does the Agency believe that it has sufficient information to request the Chicago area be redesignated as attainment for the eight-hour ozone standard?

MR. KALEEL: Based on the three prior years of air quality data, including data from 2008 which has not yet been fully quality assured -- the ozone season just ended a few days ago -- but based on the information that we have, the Chicago area is -- Chicago area again including southeast Wisconsin and northwest Indiana -- is meeting the ozone standard.

MS. HODGE: Thank you. What is the status of ozone air quality emissions in the St. Louis area in terms of supporting a redesignation request at this time?

MR. KALEEL: Again, based on the most recent information, I believe there's still one monitor on the Missouri side of the river that is not attaining the standard, so as of today, St. Louis does not qualify for redesignation.

MS. HODGE: Thank you. What is the status of the fine particulate attainment demonstrations?

MR. KALEEL: The -- I'm going to try to separate where we are with Chicago versus St. Louis, because there's some differences. The modeling we've performed so far for Chicago was demonstrating attainment, assuming the reductions from the CAIR program. The revised modeling doesn't show that anymore. The revised modeling shows that Chicago will not attain by 2010, that the CAIR reductions -- or not getting the CAIR reductions is enough to undermine the previous model or attainment demonstration. It does show that Chicago would attain by 2012. There have been some discussions, nothing concrete, about the possibility of requesting an extension of the attainment date until 2012. Again, nothing is solid on that yet. For St. Louis, we're not too close yet. We have a local scale monitoring problem. Most of the monitors in the St. Louis area, all of them in Missouri and most of them in Illinois are showing attainment. There's one hot spot, if you will, one area that is not showing attainment, and as -- to date we've not developed an attainment plan. We do not have sufficient control measures identified to demonstrate attainment.

MS. HODGE: Okay. Thank you. The Agency has proposed these NOx rules as part of its strategy for attaining the eight-hour ozone standard; is that correct?

MR. KALEEL: That's a portion of the strategy, yes.

MS. HODGE: And is it also correct that these rules are intended to be part of the strategy pertaining to fine particulate annual standard of 15 micrograms per cubic meter?

MR. KALEEL: Again, it's an element of the strategy.

MS. HODGE: In the Agency's statement of reasons, the 24-hour fine particulate standard is mentioned, and there seems to be an inference that the proposed NOx rule is designed to address emission reductions as part of an attainment plan for both the annual fine particulate standard and the 24-hour fine particulate standard. Is this rule specifically intended to address emission reductions related to the 24-hour fine particulate standard or just the annual fine particulate standard?

MR. KALEEL: As of right now, we don't really know what will be required for the new standards. Certainly we don't know what's going to be required in

terms of demonstrating attainment. USEPA's not finalized action towards establishing non-attainment boundaries in Illinois for either of those standards, and our SIP process kind of pivots off of the date that those non-attainment boundaries are established, so we really haven't started the planning process yet for those standards. We offered in the statement of reasons and again in my testimony that obviously NOx emissions are an important element or constituent of any plan for ozone or PM2.5, so the expectation is that the emission reductions that we're proposing with the NOx RACT proposal will help us to meet those standards, but I don't want to make any claim at all that that would be all that might be necessary to meet those standards.

MS. HODGE: Okay. Thank you. In your testimony, you refer to reasonably available control technology, or RACT. Is the proposed rule intended to represent RACT for the source categories it addresses or is it designed to achieve a level of emission control that goes beyond RACT?

MR. KALEEL: What we intended with this proposal was to satisfy the requirements to implement RACT. We don't believe that these requirements go beyond RACT.

MS. HODGE: Have the emission reductions of NOx from this proposed rule been included in attainment demonstration modeling for both ozone and fine particulates?

MR. KALEEL: Yes.

MS. HODGE: How have these emission reductions been included in the model? That is, were the reductions computed for each of the affected sources specifically included in the model in each case or was another technique used?

MR. KALEEL: No, we generally try to implement the emission limits for specific units or specific point sources in the modeling.

MS. HODGE: Does the Agency intend to use the emission reductions from this rule for its rate of progress demonstration for ozone and/or fine particulate?

MR. KALEEL: For ozone, no. The requirement for ozone for rate of progress or reasonable further progress was VOC, volatile organic compound demonstration, and we were able to show -- or are able to show for both non-attainment areas that we are achieving sufficient progress, at least to 2009 or 2010 based on VOCs alone. For PM2.5, the NOx reductions would be included.

MS. HODGE: Has a sensitivity analysis been performed for ozone and/or fine particulate to determine the impact that these emission reductions may have been contributing to the attainment demonstration?

MR. KALEEL: Not a specific analysis. Just isolating Illinois' NOx RACT proposal, the modeling that has been performed to date has been done in cooperation with the Lake Michigan Air Directors Consortium and modeling runs look at strategies across multiple states, not specific state-wide contribution. We do know that, as I mentioned, the Holland monitor is not showing -- Holland, Michigan, monitor is not showing attainment -- either based on currently observed air quality or based on air quality modeling is not showing attainment until 2012, and as I mentioned, the NOx RACT proposal for Illinois is included and is -- at least my opinion, is at least helpful to helping the Holland, Michigan, monitor attain in 2012.

MS. HODGE: Thank you. In Tables 10-1 and C-2 of the Agency's technical support document, the Agency shows that this rule will result in a 46.3 percent reduction of emissions from the 2005 base year, which the tables show equals 20,666 tons per year. In your opinion, would a reduction of just 10,000 tons per year

make a perceptible change in the modeling results for either ozone or fine particulate?

MR. KALEEL: I guess I can't really -- I don't have a good feel for what the change in tonnages would require, and we didn't approach the RACT proposal with the idea that there was a certain emission target that we needed to achieve, that kind of a top down approach, you know, here's a certain budget that we have to achieve, how do we achieve it. That's not the way we did it. It's more bottom up, what are the control measures for each source category that we consider to be reasonable, and achieve the emission reduction estimates that are included in the table that way.

MS. HODGE: Is it correct to conclude that the primary purpose of this rule is to satisfy the NOx RACT requirements mandated in the Clean Air Act and contained in the ozone and fine particulate implementation regulations the Agency referenced in the statement of reasons?

MR. KALEEL: I mean, it's intended to both contribute towards attainment demonstrations and to meet the specific requirement in implementing RACT.

MS. HODGE: Thank you. In the Agency's statement of reasons and in your testimony, Mr. Kaleel,

you referred to the federal requirement to adopt RACT for the eight-hour ozone attainment plan. Is it your understanding that the particular Clean Air Act reference for this requirement, Section 182(b)(2), as well as the EPA's final rule to implement the eight-hour ozone national ambient air quality standard final rule -- and this is 70 Federal Register 71612 dated November 29, 2005 -- require the adoption of NOx RACT without regard to the significance of the impact of the resulting emission reduction in the ozone attainment plan?

MR. KALEEL: That's -- My understanding is that RACT isn't specifically tied to the modeling, that RACT is tied to the designation of an area as a moderate ozone non-attainment area, moderate or higher.

MS. HODGE: Okay. Thank you. In your opinion, are the RACT emission limits in your proposed rule absolute limits that would be found in other similar rules, or are these values a factor of the particular characteristics of the emission sources and economics of the region to which the rule applies?

MR. KALEEL: There's not a specific emission limit published by USEPA that qualifies as RACT. The determination of RACT is really incumbent on each state to determine based on the mix of sources that they have

and also to a certain extent the time period that they are implementing the rule. Many states have implemented NOx RACT back in -- prior to 1996 in response to the 1990 Clean Air Act amendments, and we're approaching NOx right now with respect to the eight-hour ozone standards many years later so that the -- I mean, the cost effectiveness numbers, the control technology, how effective the technology is, it's different now than it would have been years ago, and that's something that again goes to the state-specific estimate of what is RACT.

MS. HODGE: Thank you. As part of your analysis for this rule and for the ozone attainment demonstration, have you computed the emission reductions derived from the NOx SIP call for the emission units that are subject to this rule?

MR. KALEEL: In -- Perhaps not specific to the NOx RACT proposal, but we've made estimates in many different analyses that we've done with the emission reductions both from the NOx SIP call and also from CAIR.

MS. HODGE: Do you know whether the USEPA would accept compliance with the NOx SIP call trading program as RACT for purposes of the ozone attainment demonstration?

MR. KALEEL: I'm not aware of any specific

guidance with respect to the NOx SIP call. There was in the CAIR rule -- for electric generating units, there was specific provision that at the State's option that utilities meeting CAIR could be deemed as meeting RACT. I don't know that there's similar language in the NOx SIP call. Consistent with USEPA's rulemaking that CAIR equals RACT, we felt that our multi-pollutant standards contained in the mercury rulemaking and also in our CAIR rulemaking exceeded the reductions that would have been provided by CAIR, so we included the multi-pollutant option as a compliance option for EGUs.

MS. BASSI: Is there --

MS. HODGE: Sure. Go ahead.

MS. BASSI: Mr. Kaleel, do you recall what the emission rate basis was for industrial boilers in the NOx SIP call rulemaking?

MR. KALEEL: My understanding was the NOx SIP call reduction for industrial boilers was 60 percent reduction.

MS. BASSI: Was there an emission rate?

MR. KALEEL: I don't believe there was an emission rate.

HEARING OFFICER FOX: Anything further, Ms. Bassi?

MS. BASSI: Oh. No, I'm done. I'm sorry.

MS. HODGE: Mr. Kaleel, if USEPA has made any statements about how they would accept compliance with the NOx SIP call trading program as RACT for purposes of ozone attainment demonstration, would that change or affect the Agency's decision on this proceeding in any way?

MR. KALEEL: I don't know that it would affect it. I think the multi-pollutant standards for utilities, that is an already established state rule, and we've included that as an option for compliance for NOx RACT. As I mentioned, a RACT proposal is intended not just to address ozone but also PM2.5, and the standard is an annual standard. The NOx SIP call is just an ozone season trading program, so I don't believe it would be equivalent to RACT unless there was a commitment on the part of the utilities to operate their controls year-round.

MS. HODGE: What about for industrial boilers, though?

MR. KALEEL: Again, the industrial boiler requirement in the NOx SIP call is a summer season requirement only, not an annual requirement.

MS. HODGE: But for ozone purposes, wouldn't

that be sufficient?

MR. KALEEL: Well, we've not made that determination, and again, I'm not sure that the NOx SIP call -- that there was any provision in the SIP call language. I could double-check that, but I don't believe there was ever a provision that it would constitute RACT or be equivalent to RACT, and I think the -- what we consider to be RACT for industrial boilers is -- would provide greater reductions than a NOx SIP call would; not just in the summer season, but any of them.

MS. HODGE: If the emission units that were subject to the NOx SIP call complied with that program on an annual basis, would that affect your decision-making here?

MR. KALEEL: I guess I doubt it, again, because I don't think the emission reductions are equivalent to RACT based on our calculation or our demonstration.

MS. HODGE: Have you or other agency staff determined whether the collective emissions from all emission units subject to the proposed rule already achieve the emission reductions proposed by this rule?

MR. KALEEL: Could you repeat that? I'm -- I think I missed something there.

MS. HODGE: Have you or other agency staff determined whether the collective emissions from all emission units subject to the proposed rule already achieve the emission reductions proposed by this rule?

MR. KALEEL: I don't believe that they do. I guess I haven't looked specifically at the most recent reported emissions to see whether or not they're already complying, and I'm not sure we would even have the data in-house to do that. My expectation is that we're looking at retrofits, additional controls, and that at least my expectation is that companies are not currently meeting the limits that are proposed in many cases.

MS. HODGE: Thank you. In the Agency's statement of reasons and in your testimony, you refer to the federal requirement for NOx RACT for the fine particulate attainment plan. Is it your understanding that the particular Clean Air Act reference for this requirement, Section 172(c)(1), as well as EPA's clean air fine particulate implementation rule -- it's final rule, 72 Federal Register 20586 dated April 25, 2007 -- provides some degree of discretion to determine the scope and extent of NOx RACT?

MR. KALEEL: Yes, I'm aware of that.

MS. HODGE: Thank you. Do you believe the

EPA's clean air fine particle implementation rule gives the Agency and USEPA the authority to conclude that no fine particulate measures are required if such measures could not advance the attainment date by one year if the Agency would be attaining the standard by April 2010?

MR. KALEEL: That's my understanding, or it's consistent with my understanding of the implementation rule. As I indicated in response to one of your previous questions, I don't believe either the Chicago area or the Metro East area will be attaining the PM2.5 standard by the deadline, so I don't think we have that discretion.

MS. HODGE: Thank you. Do you believe that the EPA's clean air fine particle implementation rule gives the Agency and the USEPA the authority to exclude RACT measures that can be shown not to advance the fine particulate attainment date by at least one year?

MR. KALEEL: I think I answered that there is some discretion in terms of how to define RACT.

MS. HODGE: Thank you. In response to IERG's question 3 regarding whether the Agency considered the federally approved NOx RACT emission limits from other states when it formulated its proposal, you answered yes. Actually, I think we've already answered

this one. I'm asking for elaboration on the other states. We've already done that. Okay. In response to prefiled questions, the Agency stated that if a facility switches fuels after the effective date of this rule, it would be subject to an emission limit based upon the original fuel. Does the Agency intend to amend the rule to make that explicitly clear in the rule?

MR. KALEEL: We're open to doing that if it's not clear enough in the language of the rule. That is our intent.

MS. HODGE: It's your intent? Thank you. And I have just a couple of questions for Mr. Kaleel and then I think for Mr. Gupta, and we'll go ahead and wrap up with Mr. Kaleel. In proposing subpart D for industrial boilers, did the Agency consider whether a boiler fueled with coke oven gas could meet the proposed emission limitation in Section 217.164(a)?

MR. KALEEL: Indirectly, yes. I don't think we specifically anticipated coke oven gas, but we are aware that some boilers use what's called process gas in their boilers, and in general we believe that the emission limits can be met with the control technologies that we provided in the TSD.

MS. HODGE: And in the Agency's TSD, were

any of the units or any of the data or information considered boilers that were fueled with coke oven gas?

MR. KALEEL: Certainly certain boilers that burn coke oven gas are listed in our TSD as affected units. We don't have specific information available to us right now about the specific constituents of coke oven gas or other process gases to the extent that it may make it difficult to achieve compliance with reasonably available control measures, and there's at least one affected unit we're having discussions with right now in that respect.

MS. HODGE: Thank you. Thank you. In proposing subpart H here for iron and steel and aluminum manufacturing, did the Agency consult with affected sources in the state to ascertain whether emission units of these affected sources could actually comply with the proposed emissions limitations?

MR. KALEEL: Yes, we have consulted with companies, at least many of them.

MS. HODGE: And do you anticipate submittal of a revised proposal for some emission unit types covered by subpart D?

MR. KALEEL: I guess I --

MS. HODGE: I'm sorry. For subpart H.

Subpart H.

MR. KALEEL: We don't rule that out. There are some ongoing discussions and we certainly are willing to continue those discussions, and if as a result of any information that's put before us it changes our mind, we'd certainly entertain a revision of the proposal.

MS. HODGE: Okay. Thank you. And now I have a few questions for Mr. Gupta, and this really goes to the Table D-1 in the appendix to the Agency's TSD, and first of all, I would ask whether the Agency could get us a better copy of that table, and it's nearly impossible for me to read, and I understand others as well, and even when I look at, you know, the version that's online, I'm having a very difficult time, and I was wondering if the Agency could make the document available to us in its original Excel file form so that we can --

MS. BASSI: Read it.

MS. HODGE: -- read it and allow us to, you know, really determine what's there.

MR. GUPTA: Yeah, sure, no problem. We can provide that.

MS. HODGE: Okay. Thank you very much. Have -- And, Mr. Gupta, have you compared the affected emission units on this Table D-1 with current permitted

or actual emissions to the emission reductions you have estimated as coming from this rule?

MR. GUPTA: No, we have not. We have looked at it as a group, but not as individual sources. Basically, what we looked into was what is the baseline NOx emissions in the ACT document and looked at that information to calculate how much of a reduction will be needed to comply with the limitations, and that's what we had done rather than going source by source, how much emissions are currently in -- currently they have.

MS. HODGE: Okay. So even though the Table D-1 is pretty much a listing source by source, you didn't conduct your analysis on a unit-by-unit basis.

MR. GUPTA: Right. That's correct.

MS. HODGE: Okay. Could you tell us a little bit more about how you did prepare this table in the analysis? Could you walk us through the table and maybe just pick a particular company or unit, just explain to us what you did, please?

MR. GUPTA: My table is also as unclear as yours. Okay.

MS. HODGE: Okay. Mr. Kolaz has indicated that we could use Table 23 as just an example here today, and that one's a little more legible for us.

MS. BASSI: Miss Hodge, is that Table C-2?

MS. HODGE: It is C-2, "NOx Reductions from the Application of NOx RACT (Reductions By Categories)." Again, this is not on a unit-by-unit basis, but if you could just walk us through the categories.

MR. GUPTA: Okay. Let's look into the gas-fired boilers, which are the very first row under Chicago non-attainment area. Based on our ACT document for ICI boilers, we have certain baseline emissions, and those baseline emissions were used to compare with the NOx emission limit, which is 0.08, to get that -- on an average we got 69.2 percent reduction, and same thing was applied to other source category as you go down.

MS. HODGE: But -- I'm sorry. A reduction -- What is the 69.2 percent? A reduction from what to what?

MR. GUPTA: Okay. The ACT document is -- lists uncontrolled emissions from each of those source categories. Take the example of natural gas-fired boiler. They have hot water which are more than 100 million BTU per hour, so much uncontrolled emissions. I don't have the number right in front of me, but let's say the X are emissions which are uncontrolled, and then our limit is 0.08, so X minus 0.08 and divided by X, that

gives the reduction from this particular source.

MS. HODGE: Okay. So the uncontrolled emissions, is that your estimate for the category --

MR. GUPTA: Right. That's what --

MS. HODGE: -- or -- you haven't looked at individual units --

MR. GUPTA: No. It was not --

MS. HODGE: -- what their uncontrolled rates might be.

MR. GUPTA: That's correct.

HEARING OFFICER FOX: Ms. Bassi?

MS. BASSI: Mr. Gupta, according to this Table C-2, I believe it's saying that you were looking at 2005 NOx emissions?

MR. GUPTA: Right.

MS. BASSI: But isn't the base year 2002?

MR. GUPTA: We started with the year 2002, but since that time there were several sources which have been either shut down or reconstructed, modified, so the year 2002 emissions were no longer granted as far as looking at what is, you know, the more recent number, which we used 2005, as, you know, that -- like, some of the steel plant sources, several sources have been shut down, done some modification to those sources, so we used

2005 to get a little better data on what's the current status of those sources.

MS. BASSI: Could I follow up with that a minute?

HEARING OFFICER FOX: Yes. Please go ahead.

MS. BASSI: I'm not sure whose questions these were. I think they might have been IERG's questions about using averaging plans or including units in averaging plans that were post-2002 new units. Did you have that?

MS. HODGE: Right, we had a question like that.

MS. BASSI: Okay. And what you're telling me is or what we understood was is that 2002 was the base year, and yet your analysis is based on 2005, and yet units that were built after 2002 cannot be included in an emissions averaging plan; is that correct?

MR. KALEEL: If I could maybe try to respond to that. We're not intending that 2005 be a base year for this analysis. We were just trying to represent at the time we were doing this what is the most recent information that we have available through our annual emission reports to make this demonstration. We're not computing reasonable further progress from these numbers.

We're not using this particular calculation in our attainment demonstration. It was really just geared maybe more for the benefit of stakeholders to provide the most recent information that we had at the time that we were doing our outreach, so it doesn't tie in -- the fact we used 2005 does not tie into averaging plans, does not tie into reasonable further progress. That was just trying to use the most recent information we had available.

MS. HODGE: So the emission reductions that you're estimating are from the '05 levels.

MR. KALEEL: For the purposes of this table and this TSD, that's right.

MS. HODGE: And for the purposes of this rule, support for the rule.

MR. KALEEL: For illustrating the amount of reductions that we are expecting, we used 2005, but we're using it to represent the population of sources as currently as we know them, at least at the time that we were putting this stuff together, but that's -- when we did our modeling, we used the 2002 inventory. When we are doing our reasonable further progress calculations, we're using the 2002 inventory.

MS. HODGE: Okay.

MR. KALEEL: Again, I think just to add to the comment I made before, we're not trying to determine that there's a certain tonnage reduction out there that represents RACT and then trying to show how we meet that. We started at the bottom, what sources would be affected by the rule, how much reduction do we expect from those sources, so -- from application of reasonable controls. So there's nothing magic about the total amount of emissions that we're showing in this table. That's --

MS. HODGE: So again -- I think we discussed this before -- the total amount of emissions that you're showing here is not necessary for -- to demonstrate attainment.

MR. KALEEL: It's not a target that we are trying to achieve. It's not a budget. It's, you know, similar to, like, the SIP call or CAIR. It's not how we arrived at it. If there was a different total that we achieved as a result of application of RACT, we'd have been comfortable with that different total, anything we don't achieve through RACT that might ultimately lead to more stringent measures somewhere else in terms of demonstrating attainment, if the modeling had shown that that was necessary, but again, it's not a budget. It's -- That's not how we approached it.

MS. HODGE: Okay. Thank you. Let's go back and look at this Table C-2, Mr. Gupta.

MR. GUPTA: Uh-huh.

MS. HODGE: And the first emission category, the gaseous fuel-fired boilers greater than 100 million BTU, again, we're looking at total. Please go over to the column, the heat input, million BTU per hour, and we see a number of 6,911.9.

MR. GUPTA: That's the heat input capacity of the units as we had in our inventory, so the total heat input capacity of all the sources in that category.

MS. HODGE: Okay. And then if you go over a few columns to the estimated controlled NOx, the tons per year, and the number here is 368.2.

MR. GUPTA: Uh-huh.

MS. HODGE: How did you -- Was that a calculated number, the 368.2? Did you apply the 0.08 or -- could you explain how you arrived at that number?

MR. GUPTA: That was based on the application of 0.08 to the original numbers. If you see the column below -- before that one is 69.2 percent reduction, so if you apply 69.2 percent reduction to a column before that one, 1196.5, you get 368.2.

MS. HODGE: If you divide the heat input

number by the estimated controlled NOx number or vice versa -- I mean, I -- we can't get these numbers to come out the same.

MR. GUPTA: Okay. This is not how we did it. The heat input is the heat input capacity of the unit, which has nothing to do with how much NOx emissions are generated, so the reduction was calculated based on how much NOx emissions were there and then apply 69.2 percent reduction to get estimated reduction.

MS. HODGE: Okay. So then the 2005 NOx emissions, tons per year, that column, the 1,196.5, is that based on actual emissions for '05?

MR. GUPTA: These are based on actual emissions, yes. Sorry. These are based on the actual emissions in our inventory.

MS. HODGE: I'm sorry.

MR. GUPTA: Those -- That -- These emissions are based on actual emissions in our inventory.

MS. HODGE: In your inventory.

MR. GUPTA: Yeah.

MS. HODGE: Okay. Thank you. And then where did 69.2 percent -- where did that number come from, the estimated NOx RACT reduction?

MR. GUPTA: As I pointed out here, we have

these uncontrolled emissions in ACT document. Let's take natural gas-fired boilers. The uncontrolled NOx emissions is 0.26 pounds per one million BTU, and when you bring it down to 0.08 pounds per million BTU, that calls for 69.2 percent reduction.

MS. HODGE: May we request this Table C-2 as well?

MR. GUPTA: This table is a part of our TSD. Let me see which particular table it is.

MS. HODGE: Right. I understand that, but may we request this in the Excel file form as well?

MR. GUPTA: Yes, yes.

MS. HODGE: It'll help us see the --

HEARING OFFICER FOX: Your specific request, Ms. Hodge, is larger print, more readability? Is -- Am I correct in understanding that?

MS. HODGE: And how the calculations are made as well so we can see the formulas within the tables in the Excel spreadsheets.

HEARING OFFICER FOX: Very good. Thank you for clarifying that.

MR. GUPTA: That should be no problem. We can provide that.

MS. HODGE: Okay. Thank you. And I have

just a question to clarify. Before, when we had talked about how have the emission reductions been included in the model, what emission reductions did you include in the model, Mr. Kaleel? Did you include the reductions shown on these tables or --

MR. KALEEL: We actually had different staff people working on that particular assignment. We'd use the -- whatever the model base year emissions are and then applied the specific emission limit to those generally unit by unit. I don't know if this table was in front of the person on the modeling staff that was doing that at the time, so it's --

MS. HODGE: Could we get that information, please? Could the Agency --

MR. KALEEL: Sure.

MS. HODGE: -- submit that information into this record, please? Okay. I do have one more question. This is kind of in follow-up to the questions that I had before on the categories within this rule for which no such units exist within the non-attainment areas, and I think we talked about cement kilns and then we talked about, you know, one of the aluminum furnaces too. Could the Agency identify for us any other categories or subcategories for which units do not currently exist in

the non-attainment areas?

MR. KALEEL: We'd be happy to look at that. I believe those are the only two categories where there are no units in the non-attainment areas, but we'd be happy to confirm that.

MS. HODGE: Okay. Thank you. Thank you very much. Okay. That completes all of the questions of IERG.

HEARING OFFICER FOX: Thank you, Ms. Hodge. We had -- I think you had indicated that for questions 16 through 21 that you have filed, you had no follow-ups whatsoever?

MS. HODGE: No follow-up.

HEARING OFFICER FOX: Were the IERG questions 16 through 21, actually, I believe, the subject of any clarification or any follow-up that any of the other participants wish to pose? Seeing none, I believe that would bring us to Midwest Gen, Ms. Bassi, if I remember our order of proceeding correctly. You had prefiled questions and the Agency had prefiled answers both for Mr. Kaleel and for Mr. Staudt -- Dr. Staudt, whose questions were 24 to 48, and if you are prepared to begin with 24, I think we've reached that point in our proceedings today.

MS. BASSI: My name is Kathleen Bassi. I'm with the law firm of Schiff Hardin LLP in Chicago. With me today is Thomas Bell, an associate with our firm, and Scott Miller of Midwest Generation, and we are here today representing Midwest Generation. We're beginning with our -- with the responses to the questions that we prefiled for Dr. Staudt, and this begins, as Mr. Fox said, with question number 24, and I did not have a follow-up on 24, and in fact, I did not have a follow-up until number 27.

HEARING OFFICER FOX: Ms. Bassi, why don't I see whether any of the other participants on questions number 24, 25 or 26 filed by Ms. -- Midwest Generation had generated a request for any clarification or follow-up. Are we clear on those and prepared to proceed to question number 27? It appears that we are. Ms. Bassi, that refers to the issue of whether SCR is or is beyond RACT. Did you have a follow-up or clarification? Apparently you do. Please go ahead.

MS. BASSI: Thank you. Yes, this question does concern SCR, and it -- and you state here that you believe, Dr. Staudt, that SCR is likely not to be necessary under the proposed rule, correct? That's in your statement?

DR. STAUDT: Yes, that's --

MS. BASSI: You're sticking with it?

DR. STAUDT: Yes, I'm sticking with it.

MS. BASSI: Okay. Well, for -- in order really for this question -- for my follow-up question here to make sense, I need to go back to question 21, if you don't mind.

HEARING OFFICER FOX: No. If that's what's required to make sense, let's do that.

MS. BASSI: All right. In question 21, question 21 was what is the basis for determining that the 0.9 pounds per million BTU rate in Section 217.344(a) is RACT, and there followed in the Agency's response quite a long and detailed answer. Dr. Staudt, did you prepare that answer for the Agency?

DR. STAUDT: Yes, I did.

MS. BASSI: Okay. So, Mr. Kaleel, do you take no ownership of that answer?

MR. KALEEL: Mr. Staudt -- Dr. Staudt prepared the answer.

MS. BASSI: Okay. Thank you. Some of the -- And again, we've already established, then, that 2002 is the base year. I'm sorry. I'm going through my rules -- my questions. Some of them have already been

answered. In your response, Dr. Staudt, there is a statement that you make that says uncontrolled units would typically have an emissions rate of at least 0.5 pounds per million BTU, but even at uncontrolled NOx levels of 0.4 pounds per million BTU, and you go on and say the cost would be estimated to be about $2500 per ton, and this is in the response shortly under the second reference to 70 Fed Reg 25162. It's --

DR. STAUDT: Well, the document speaks for itself. We can all read it and see that.

MS. BASSI: Okay. The issue that I want to get at here is the notion of uncontrolled levels and what actually exists at sources, and would -- is it your understanding that some of the sources or even many of the sources that would be subject to -- that are coal-fired or fossil fuel-fired units already include a number of the combustion controls that you describe in the TSD?

DR. STAUDT: Yes, many of the -- if you're looking at utility boilers -- I presume you're talking about utility boilers -- that many of them do -- the majority of them do incorporate some combustion controls.

MS. BASSI: Would the combustion controls of low NOx burners and overfire air be necessarily likely to

allow a utility boiler, a coal-fired boiler, to achieve an emission rate of 0.9 -- 0.09 pounds per million BTU?

DR. STAUDT: Just combustion controls and overfire air, that would -- that's not common, although in the 2007 ozone season, Baldwin unit 3, which only has combustion controls, had a season average of 0.088 pounds per million BTU, so -- and that's not the only unit in the entire country, but the -- that's -- but it's true that most -- that's not common, that level. That emissions level is not common.

MS. BASSI: Would achieving that emission level perhaps depend upon the type of coal-fired boiler it is? You describe several types of coal-fired boilers in the TSD. Let me back up a minute. Did you write the TSD?

DR. STAUDT: Yes. I mean, I -- there was input from the Agency, but I had a major -- I was -- I had a major role in writing the TSD.

MS. BASSI: Are there portions of the TSD that you did not draft?

DR. STAUDT: The -- Some of the tables that I think Mr. Gupta put together, but by and large, I wrote virtually all of it.

MS. BASSI: And is it correct that you

incorporated the TSD as part of your testimony?

DR. STAUDT: That is correct.

MS. BASSI: Okay. So then going back to the TSD, in the TSD, I believe you describe several different types of coal-fired boilers.

DR. STAUDT: Yes.

MS. BASSI: I think you said wall-fired and --

DR. STAUDT: Tangentially-fired and cyclone and --

MS. BASSI: Thank you. You can't put that in the -- okay. Would the type of boiler have any impact on whether the boiler was able to achieve a 0.09 rate with just combustion controls?

DR. STAUDT: Yes, it would.

MS. BASSI: Would a rate of 0.13 or so be a common rate with -- or a not unexpected rate with just combustion controls?

DR. STAUDT: It depends. Depends upon the unit. It's actually -- 0.13 is -- you have a lot of boilers in Illinois that fire Powder River Basin coal, and there are a number of units that are already achieving that level or better with just combustion controls.

MS. BASSI: Okay.

DR. STAUDT: But it depends upon the unit and time. Now, bear in mind that according to the rule, utilities subject to the multi-pollutant rules and whatnot, they are -- they have their own -- that applies as RACT. That's my understanding according to the rule.

MS. BASSI: Right. If a unit were already achieving a level of 0.13, would the conclusions that are drawn in the TSD regarding the emission controls that would be necessary to get to a 0.09 be the same? Would you draw the same conclusions? As I understand your responses to the questions and the TSD, this rule is based on an assumption of uncontrolled emission levels and that low NOx burners and overfire air are considered combustion controls that are already achieving part of the reduction that would be necessary to meet the rates that are listed in the rule, and so the question is, since these things preexist the proposal, these control measures preexist the proposal, does that change the analysis at all in terms of the equipment type and the cost of control to get down to the 0.09?

DR. STAUDT: Well, first of all, for utility boilers, the 0.09 only applies to those utility boilers that are not part of a multi-pollutant.

MS. BASSI: Well, there could be some, you know.

DR. STAUDT: Well, I'm not aware of any.

MS. BASSI: And that --

DR. STAUDT: There are some, but there's Kincaid. You've got Kincaid. I don't know if it's covered by that rule.

MR. KALEEL: It's not.

DR. STAUDT: So, you know, we get to the point where we have to look at the rule the way it is, not the way we would like to interpret it down to -- on a particular unit.

MS. BASSI: Well --

DR. STAUDT: The rule says that people who are subject to these multi-pollutant system, which Midwest Generating is, they need to -- that satisfies the RACT requirement.

MS. BASSI: Well, I don't want to get into mincing words that are in the rule with you over the applicability, because that's covered in some earlier questions that are posed to the -- to Mr. Kaleel or whoever that he deems, but the way the applicability section of subpart M reads right now, it appears to me it's based on the applicability of the CAIR, which may

not exist, and if it doesn't exist, then there's a question of what actually -- whether you even get to the CPS and the MPS exemptions, and so that's why we feel it's important to address the 0.9 and the cost figures and whether it is an SNCR or an SCR that might be necessary to achieve those levels if the rule is not amended in the way that has been proposed in these questions.

MR. KALEEL: If I could address that point, I believe there -- and it's in response to a subsequent question from Midwest Generation that gets to the question of applicability with respect to CAIR, and I think there's some language that Midwest Gen proposed, and there's an alternative set of language that the Agency's in agreement with that should address that issue, I believe, so --

MS. BASSI: We agree, but it still has to be adopted.

MR. KALEEL: Understand.

MS. BASSI: So back to my question, what I'm asking is is to achieve a 0.04 additional reduction or -- in emission rate, what you're saying, cost analyses and conclusions about control technology apply.

DR. STAUDT: Potentially we have -- you

could potentially do it through deeper stage, deeper air staging in combination with SNCR, but having said that, if it were not possible to do that, for example, if you had a unit that was -- that could not even get the 0.13 or 0.11 --

BOARD MEMBER JOHNSON: I missed that.

DR. STAUDT: If that were not -- excuse me. If that were not possible, that might change things, but in terms of the way the rule is as I understand it to be, that where -- the people with multi-pollutant facilities with the multi-pollutant standards would -- that would be their RACT. That -- You know, I stand by my --

MS. BASSI: And we're not disputing that.

DR. STAUDT: Good.

MS. BASSI: We -- We're not disputing that. We're not asking that question.

DR. STAUDT: But let me just give you -- just to give you -- if you had a hypothetical situation where to get from 0.13 pound per million BTU to under 0.09, now, I think it potentially could be done with SNCR and a combination of air staging, but there's a chance that it might not. If you had to put in SCR, that cost would -- the cost would likely -- it would be a higher number than using a -- on a dollar per ton basis than

using a baseline of 0.4 or 0.5 million -- pounds per million BTU, so I think -- I wanted to basically create the -- describe that situation, because I think it gets to what you're looking for, if you're looking at marginal cost, the incremental cost of the controls.

MS. BASSI: Excuse me. I'm looking at my numbers. Sorry. I forgot what my numbers meant. Okay. What is the maximum amount of reduction that you would expect to see from an SNCR on a coal-fired boiler?

DR. STAUDT: Well, it depends, you know. It's -- I have seen as much as 60 percent. I would not expect to see it at higher levels, but that's usually at a higher NOx baseline. You could potentially see 20 -- you know, 20, perhaps 30 percent. So what I said is potentially at 0.13, could you get under 0.09? Potentially through a combination of SNCR and deeper air staging, but that's -- but I'll be the first to say that SNCR is the -- utility boiler applications, particularly at low emission rates, are the more challenging type of applications. That's why -- So -- But again, we get back to I don't see -- the reason -- I don't see -- we -- the way the rule as I understand it's supposed to be -- work, we're discussing a moot point, because the utilities would be exempted from this, at least the utilities

subject to the multi-pollutant standard would be exempted from this.

MS. BASSI: Just looking at straight math, a 30 percent reduction, if you -- I believe you said 60 percent when you have higher baseline -- or higher -- deeper NOx reductions that you would be making with the SNCR, but were you starting with the lower baseline in the first place? I don't -- The lower emission rate in the first place, would -- 30 percent would be perhaps the high end? Is that what I heard you say?

DR. STAUDT: Perhaps. It depends, yeah.

MS. BASSI: It depends? So would 30 percent, just looking at straight math, result in a rate of 0.09, do you think?

DR. STAUDT: Well, I could pull out my calculator, but my guess is it would be close, but perhaps not.

MS. BASSI: Would 0.091 be compliant? And maybe that's not a question for you.

DR. STAUDT: My answer before was that through a combination of air staging and SNCR, deeper air staging and SNCR, you could perhaps -- there are units in Illinois that are running at 0.11 pound per million BTU, you know, and it's through air staging, but again, we're

getting back to the way I understand the rule is written, this is kind of a moot point, and that's why --

MS. BASSI: We hope it is too.

DR. STAUDT: Yeah.

MS. BASSI: Okay. Do you know the cost today of an SCR?

DR. STAUDT: What the cost -- I've seen studies on what the costs have been.

MS. BASSI: Can you give us a range?

DR. STAUDT: Oh, in the range of about -- you know, it'll vary anywhere from 100 to as high as maybe 200 dollars a kilowatt, but that's -- you know, the mid range being about 150 dollars a kilowatt.

MS. BASSI: Would you be surprised at --

DR. STAUDT: For utility.

MS. BASSI: Would you be surprised at over $300 a kilowatt?

DR. STAUDT: I would be. I can't rule it out, but I would be -- that would certainly be an outrider. There have been studies that looked at this, and they've -- you know, basically the midpoint is somewhere at, you know -- somewhere in the $150 a kilowatt range.

MS. BASSI: And again, this might be a

question for the Agency as opposed to you because they have the implementation and enforcement decisions. If the cost -- If a source demonstrated that the cost to comply was significantly higher than what the Agency has identified as the RACT range of this rule, would that -- would this rule not be RACT, at least as applied to that source?

MR. KALEEL: I think an argument could be made that if the costs for a particular unit greatly exceed the range that we have in mind for RACT that the unit would qualify or at least we could support an adjusted standard type of a proceeding.

MS. BASSI: Okay. Thank you. All right. Going back to my questions, then, we were on question 27, and I think you've just answered it.

MS. HODGE: Miss Bassi, may we ask a follow-up on your prior question?

MS. BASSI: Yes, absolutely.

MS. HODGE: And we're headed back to the appendices here, and it's Table C-2, "NOx Reduction from the Application of NOx RACT (Reductions By Categories)," and on the -- down near the bottom of the table -- and I'm talking on page 23 and 24 here, because it's a two-pager -- we do have emission reductions from EGU

coal-fired boilers, total, and I just understood that the Agency said that these units are not really covered by this rule, so why are we showing reductions here in the TSD?

MR. KALEEL: I think what our intent is is the multi-pollutant standard satisfies the requirement for RACT. I don't recall if these specific emission reductions are from a straight application of the 0.09 pound per million emission limit or if they reflect the emissions from the multi-pollutant standard. I guess I'd refer to Mr. Gupta for that, but there will be substantial emission reductions from electric generating units in the non-attainment area.

MS. HODGE: You know, could the Agency provide, you know, some more information in this regard? When we look at these tables, we see, you know, the major part of the reductions coming from this rule, the Agency is showing that the major part of the reductions are coming from the units that the Agency says now are not covered by this rule.

MR. KALEEL: What we're saying is that the multi-pollutant standard is a way to comply with this rule.

MS. HODGE: And would you be willing to

provide us some more information on whether these reductions are based upon the multi-pollutant strategy --

MR. KALEEL: Yes, of course.

MS. HODGE: -- or upon these just percentage reductions in this table?

MR. KALEEL: Sure, we'd be happy to provide more information.

MS. HODGE: Okay. I'm sorry --

MS. BASSI: That's okay.

MS. HODGE: -- Miss Bassi. Go ahead. Thank you.

MS. BASSI: To add on to Miss Hodge's question, when you were calculating the reductions from the multi-pollutant standards that are applicable -- that you assume will be applicable to the power plants that are affected by this rule, does that -- is that the state-wide application of that -- of those -- of the MPS and CPS or is it just the non-attainment area applications?

MR. KALEEL: I think what we intend there is that the full system, which may include units within the non-attainment area or not, it's full compliance. It's not compliance just at the units within the boundaries, and it's not just compliance for NOx, but the full

multi-pollutant scenario that's -- that is already part of the Board's rules.

MS. BASSI: So just as an example, I believe Ameren has no units that are located within the non-attainment areas.

MR. KALEEL: I think that's right, yeah.

MS. BASSI: And so Ameren's reductions are included where?

MR. KALEEL: I don't believe that they are, but I need to confirm that.

MS. BASSI: Okay. They're not included. Not included?

MR. GUPTA: Mr. Kaleel, if I could answer that question? Okay. In this table, which is C-2, only the sources in non-attainment area is what is included, EGU sources, not outside non-attainment areas.

MS. BASSI: Looking, then, at the Metro East portion of C-2, for EGU coal-fired boilers, are those tons then totally attributable to Dynegy?

MR. GUPTA: Yes.

MS. BASSI: And two -- only two of Dynegy's plants?

MR. GUPTA: That's correct.

MS. BASSI: Okay.

HEARING OFFICER FOX: I --

MS. BASSI: You ready?

MS. HODGE: Yes.

HEARING OFFICER FOX: Oh, very well. Ms. Bassi, I think that would wrap up your follow-ups on question number 27 specifically. Am I correct in understanding that?

MS. BASSI: That's correct.

HEARING OFFICER FOX: Excellent. Why don't we move on to question number 28. Do you have follow-up on that?

MS. BASSI: No follow-up.

HEARING OFFICER FOX: Does any other participant wish to follow up on the Agency's answer to Midwest Gen question number 28? Seeing no indication that there is, let's proceed, Ms. Bassi, to number 29.

MS. BASSI: No follow-up.

HEARING OFFICER FOX: Follow-ups on the part of anyone else? Yes. It's Mr. Dennis. Did I recall correctly?

MR. DENNIS: Correct.

HEARING OFFICER FOX: Please go ahead.

MR. DENNIS: Just one question with regards to residual oil and particularly low-nitrogen residual

oil. Does anyone from the Agency panel know whether low-nitrogen residual oil is available in significant quantities in Illinois?

DR. STAUDT: Well, I don't know, but we show information that where -- with residual fuel oil, there's information and data in the TSD that describes emissions reductions using combustion controls and overfire air that are able to get emissions down to the level in the TSD, so it may not be low-nitrogen -- we don't know. We don't know whether low-nitrogen residual oil is available or not, but we do believe that combustion controls or combustion controls in combination with SNCR will enable people firing residual fuel oil to get below the level that's in the TSD and the rule.

MR. DENNIS: Nothing more.

HEARING OFFICER FOX: Nothing further, Mr. Dennis? With regard to question number 29, any other follow-ups or clarifications? Ms. Bassi, it looks like we're ready for question number 30, if you have follow-up on that.

MS. BASSI: I do have some follow-ups on 30.

HEARING OFFICER FOX: Please go ahead.

MS. BASSI: Question 30 regards wood-fired boilers, and this kind of is along the same lines as some

questions that Miss Hodge was asking earlier, but if there are no wood-fired boilers currently subject to this rule, why would the rule address wood-fired boilers? And I recognize that the language of the rule does not address wood-fired boilers specifically, but you discuss wood-fired boilers in the TSD.

DR. STAUDT: Yeah. The reason I described wood-fired boilers for that, there's -- I gave it as examples of -- primarily for SNCR, to show how SNCR has been employed on wood-fired boilers and to achieve NOx reductions. Now, again, I state in the TSD that I don't believe that there are -- you know, to my knowledge, there aren't any wood-fired boilers. And there was another question, a prefiled question -- I'm not sure who prefiled it --

MS. BASSI: It was me.

DR. STAUDT: -- what was the relevance of the wood-fired boilers, would you expect the cost to be similar, and it really had to do with relating that you can get NOx reductions with SNCR, and the data on some of these wood-fired boilers in terms of costs is really -- is relevant, okay, and I provide an answer regarding the other question about how information on the cost of SNCR for wood-fired boilers is relevant to other forms, other

types of -- other boilers with different fuels.

MS. BASSI: And this may not, again, be a question specifically for Dr. Staudt, but if there are wood-fired EGU boilers in the non-attainment areas, what subpart do you think they are subject to? M or D? M is the subpart for fossil fuel-fired EGUs. D is the subpart that's apparently applicable to everything else boiler-related.

MR. KALEEL: We don't exclude wood-fired boilers from either definition. I think the definition is for most of the boilers, whether or not it's a solid fuel, and wood would be included within our expectation of what a solid fuel is. Whether it's an EGU I think has to do with how much electricity they sell, and I think it's -- specifically subpart M is greater than 250 -- 25 megawatts. I'm sorry.

MS. BASSI: But does not subpart M say it's a fossil fuel-fired stationary boiler?

MR. KALEEL: Yes.

MS. BASSI: Without saying that it's a -- I think the new language that we are proposing adds that it's an electric generating unit; is that correct?

MR. KALEEL: I think that's right.

MS. BASSI: Okay. And -- But there is no

new definition of fossil fuel-fired proposed, correct?

MR. KALEEL: That's right.

MS. BASSI: Okay. And the definition of fossil fuel-fired I won't get into at the moment, but it requires a certain amount of fossil fuel to be fired, correct?

MR. KALEEL: That's right.

MS. BASSI: That just sounds so repetitious, doesn't it? Is wood considered a fossil fuel?

MR. KALEEL: No.

MS. BASSI: So then back to my question. Would a wood-fired EGU be subject to M or D? It seems to me it would be subject to D, and I just wondered if you concur.

MR. KALEEL: Just a moment. I think our understanding is that it would be considered an industrial boiler.

MS. BASSI: Okay. Thank you. That's all I have on that one.

HEARING OFFICER FOX: Did anyone else have follow-up or clarification with regard to question number 30? Seeing none, Ms. Bassi, that brings us of course to 31 regarding pulverized coal and wall-fired boilers.

MS. BASSI: No questions.

HEARING OFFICER FOX: No questions? Any other follow-up or clarifications? Seeing none, Ms. Bassi, that brings us, of course, to 32.

MS. BASSI: No questions.

HEARING OFFICER FOX: Very well. On any other part? Mr. Dennis, I see you have a question.

MR. DENNIS: Yes. With regard to Table 2-2, I think the point is being made that the proper retrofit performance is reflected by this table, but looking at the table, I believe the first two entries on it -- and I'm going by memory because I don't have it in front of me -- but I believe the first two entries are labeled as retrofit?

DR. STAUDT: Yes.

MR. DENNIS: And the remainder of the entries in that table are not labeled as retrofits.

DR. STAUDT: Well, that's true. It says that.

MR. DENNIS: So may we presume that those are new installations, then?

DR. STAUDT: I can't state that they necessarily are or not new installations. I'd have to look back at the original document this came from. The original document has more information on it.

MR. DENNIS: Also the last category there, I believe less than 20 ppm?

DR. STAUDT: Yes.

MR. DENNIS: And looking at that, are two of those installations actually recording levels higher than 20 ppm?

DR. STAUDT: Yes, but again, our rule that the rule has proposed is, like, 0.08 pound per million BTU, which is well above that, so the point being that the technology that can get you 0.08 is probably on the order of about 60 ppm, and so the technology is there to get you below 60 ppm.

MR. DENNIS: If those -- If the entries on that table, the ones that are not labeled as retrofits, if those are all in fact new installations, do they demonstrate anything about retrofit performance capability?

DR. STAUDT: Well, yes, in terms of -- you know, they reaffirm that these emissions levels are possible, the fact that you got -- the fact that you've got, you know, retrofits there that are, you know, 4 to 7 ppm, and I don't know that the other ones are not retrofits.

MR. DENNIS: But if they were new

installations, would they not demonstrate the capability of that level of performance on a new installation but not necessarily for the retrofit?

DR. STAUDT: Just if you'll bear with us, we're getting some more information. I think a question came up as well I think in some of the prefiled questions relating to this table, and I want to go back. There are -- If you go to the original source document, there are more than -- a lot more than two retrofits here. I'm not sure why on that table I only show two, but this is an attachment here that has, you know, on the first page one, two --

MS. ROCCAFORTE: I'd like to clarify, Dr. Staudt. It's attachment number 8 listed on attachment A that was with the initial filing.

HEARING OFFICER FOX: It was specifically an attachment to the TSD, Ms. Roccaforte?

MS. ROCCAFORTE: Correct.

HEARING OFFICER FOX: Thank you.

DR. STAUDT: I've already counted nine retrofits, ten, eleven, twelve. I mean, there are quite a number of retrofits here listed on this attachment to the TSD, so, you know, as I pointed out, it's -- you know, it's something that -- even though the other ones

don't say retrofit, I have -- I don't have here -- I'm not going to cross -- I don't know if you want me to cross-check how many of these lists on Table 2-2 are listed here as retrofits or not, but there are a lot of other retrofits in this document.

MR. DENNIS: I think it's a significant point that whether a new unit is achieving this level of performance versus a retrofit, because I think the rule that's -- the proposed rule is really aimed at requiring retrofit control on sources and not -- it's -- I don't think it's a question here what that new source is going to achieve a very low level of NOx. I think the real question is what can be achieved on a retrofit at different sources throughout the state, some of which might be 70 years old.

DR. STAUDT: Well, I think as we discussed earlier, in fact some of the older boilers, frankly, in general they would -- because of the size of the furnaces, in general they would more likely be easier to attain low emissions levels, because the newer furnace -- newer boilers tend to be made more compact to minimize the cost, and one of the factors in designing a low NOx burner, you have to consider basically the volumetric heat release, so you've got -- putting in the same amount

of heat in a smaller space, it makes it tougher to control the NOx. If you're retrofitting an older unit, you know, where there are challenges are you basically have to remove the old burner, put in a new one, you may have to change the refractory, but what these -- this data shows is that these emissions levels are being achieved on retrofit units. It's not --

MR. DENNIS: On at least two units.

DR. STAUDT: Well, I count, though, of the ones here, one, two, three --

HEARING OFFICER FOX: Dr. Staudt, for the record, again, you're referring to the attachment 8 to the TSD.

DR. STAUDT: I'm referring to the TSD.

MS. HODGE: Could we -- May I clarify? Attachment A?

MS. ROCCAFORTE: 8. Number 8.

MS. HODGE: Attachment 8.

DR. STAUDT: Attachment 8, yes.

HEARING OFFICER FOX: Ms. Roccaforte, do you have copies of that that we could in effect readmit as a hearing exhibit since there appear to be some questions about it?

MS. ROCCAFORTE: We can make copies.

HEARING OFFICER FOX: Very good. Would --

MS. HODGE: Is that in the copy of the TSD that was filed with the Board?

MS. ROCCAFORTE: I don't believe all of the attachments were electronically available.

MS. HODGE: Oh, okay.

HEARING OFFICER FOX: That would be as a matter of volume, but what I will certainly pledge to do, Ms. Hodge, during the break is speak with our clerk and at least ask him to specifically scan to the Board's Web page the attachment 8 -- I'm sorry. It's attachment 8 --

MS. HODGE: 8.

HEARING OFFICER FOX: -- appendix A to the TSD.

MS. ROCCAFORTE: In the motion for waiver of copy requirements, at the end of that motion is a list of all of the attachments to the TSD. The first one is the Clean Air Act and the second one's the Environmental Protection Act, which we asked that we not have to submit that, so --

HEARING OFFICER FOX: Correct.

MS. ROCCAFORTE: -- beginning with 3 through 68, those are all of the attachments to the TSD, and we are specifically talking about number 8, which is the

letter to Mr. Regulator, New Hampshire Division of Environmental Services, and it's dated May 19, 2006.

HEARING OFFICER FOX: And the motion for waiver of file requirements was the waiver of the requirement to file nine original -- nine copies, and I believe the Board granted your motion to the extent of allowing filing of four, so they are certainly part of the record, and because of the volume of the 64 exhibits, I believe, that you referred to, they may not, Ms. Hodge, candidly, all be posted at the Board's Web site, but I can certainly make sure based on the questions about that single document that we get that on sooner rather than later.

MS. HODGE: Okay. I would appreciate that very much. Thank you.

HEARING OFFICER FOX: Sure.

MS. HODGE: And also I would ask the Agency, could you make all of those attachments available for us to come review?

MS. ROCCAFORTE: Sure.

MS. HODGE: Okay. Thank you.

HEARING OFFICER FOX: Sure. Mr. Dennis, I believe we were on you, if you had another -- it looks as if you have another question.

MR. DENNIS: One further question. This response here also references Table 2-3 in the TSD, and that table lists two boilers, two very small boilers, one 20.9 million BTU per hour and one 6 million BTU per hour, and I was just wondering, the data that -- there's a column for flow rate in dry standard cubic feet per minute, and on the smaller unit, the numbers there look quite a bit out of line. I just wonder if there's some -- if these results have been somehow confused with other test results from maybe another unit. Particularly, I think the flow rates look to be about two to three times what you would expect from a unit of that size.

DR. STAUDT: Yeah, I noticed that. That's something -- I'm not sure -- I'm looking here at the Patton State Hospital. That's the one, Patton State Hospital, boiler number 3?

MR. KALEEL: That's one of them, yeah.

DR. STAUDT: Yeah. See's Candies. Those are the numbers that are in this document, so I can't speak to, you know, why those numbers are what they are, so those are the numbers that are in this -- that are reported in this document. Whether or not they're a typo from originally put in by Cleaver-Brooks, I can't say as

far as those flow rates are concerned.

MR. DENNIS: Nothing further.

HEARING OFFICER FOX: Thank you, Mr. Dennis. Ms. Bassi, I believe we were -- and forgive me if I'm mistaken -- addressing follow-ups on question number 32; is that correct?

MS. BASSI: That is correct.

HEARING OFFICER FOX: Did you have any further follow-ups on your answers to your own questions?

MS. BASSI: No.

HEARING OFFICER FOX: Any other participants? Why don't we proceed to number 33, Ms. Bassi, if you're --

MS. BASSI: No questions.

HEARING OFFICER FOX: No questions at all? Any other participants with questions on -- follow-ups on that answer? Ms. Bassi, number 34. There's --

MS. BASSI: No questions.

HEARING OFFICER FOX: Any other participants? Mr. Dennis on question number 34.

MR. DENNIS: I believe the answer's incorrect on 34. The range of 100 to 600 boiler horsepower should be somewhere in the -- should be something close to a range of 4 to 20 million BTU per

hour, I believe.

HEARING OFFICER FOX: Mr. Dennis, do you have a question based on that observation for the Agency?

MR. DENNIS: Well, no, except that I think that this -- it would deserve a correction, a corrected response, I think.

HEARING OFFICER FOX: What -- You need to pose a question to the Agency, Mr. Dennis.

MR. DENNIS: I'm sorry. With a range of 100 to 600 horsepower, would the Agency agree that that would be roughly equivalent to a more than 20 million BTU per hour heat input capacity?

DR. STAUDT: That's something I'll look at.

MR. DENNIS: Thank you.

HEARING OFFICER FOX: Thank you, Mr. Dennis. Did you have further questions?

MR. DENNIS: Nothing further.

HEARING OFFICER FOX: Any other participant with regard to Midwest Gen's question number 34, follow-ups or clarifications? Ms. Bassi, that brings us naturally to number 35, if you have a --

MS. BASSI: I do have some questions about 35, and again, I'm not sure Dr. Staudt -- I would imagine that you provided some of this information to the Agency,

but you may not be the appropriate person to answer, but I guess you all can figure it out.

DR. STAUDT: I'll do my best.

MS. BASSI: What makes the trainers on a combustion tuning training course certified or capable of providing such training? In other words, is there some certifier of the trainers, a national organization or something that does this, or is it at a college? And I went onto this Web site that you --

DR. STAUDT: ABMA?

MS. BASSI: Yeah.

DR. STAUDT: Yes.

MS. BASSI: But what makes -- why would they be the ones?

DR. STAUDT: Well, the ABMA is the American Boiler Manufacturers Association, and they're the guys who build the boilers. They are an association of companies, such as Cleaver-Brooks, but other boiler manufacturers as well, and most of the people who supply these burners and these boilers have their own courses that they provide to a -- they provide to the -- to people who operate these boilers, so in terms of training, these are people who are typically employees and experts from the actual boiler company who understand

their equipment. Is there a larger certifying agency? I'm not sure about that.

MS. BASSI: So then basically, the rule is requiring that sources go back to an outfit like the ABMA or go online to find out where they can get these certified training courses; is that correct?

MR. KALEEL: That's my understanding.

MS. BASSI: Would --

DR. STAUDT: I think the intent of the rule is really to make sure -- I'm just -- and this really applies to combustion tuning. They want to make sure that it's done by somebody who is knowledgeable and competent, and it's -- and it would be up to the Agency to determine if there's some other way to do that, to verify that somebody is knowledgeable and competent, but obviously I think you'd want the combustion tuning done by somebody who knew what they were doing.

MS. BASSI: Would the Agency be -- Would the Agency accept some form of on-the-job training or on-the-job certification?

MR. KALEEL: I think we'd be open to discussing that. Again, I guess I concur with Dr. Staudt's observation about the intent, is that people that are maintaining the boilers and performing the

tuning have some qualification to do that.

MS. BASSI: How would this be implemented? Is there a -- Would there be -- I see the question in your face. Would there be a permit requirement and the permit would provide some detail, or the permit just says you have to have combustion tuning and then everybody kind of guesses?

DR. STAUDT: Could I -- Every -- It's my understanding that any place where you have boilers, you actually have a licensed boiler operator. He's got to be licensed either by the State or somebody, somebody who -- you know, you can't -- so that's my understanding, and I know at least in Massachusetts, you know, the companies, they have to have somebody who's got a license there, and perhaps it has -- perhaps if there's such a thing -- such a person in Illinois, at facilities in Illinois, that might be the person under whose direction that might be done.

MS. BASSI: Do you guys at the Agency know if that's a requirement in Illinois?

MR. KALEEL: We don't know if that's a requirement. I think the way the rule reads is that the operator take a class and maintain a record that says they have taken a class. It's not -- In my opinion, it's

not an overly burdensome thing, and I guess maybe I'm speculating here a little bit, but I would guess that most companies would want to have the guy that's operating their boiler know what he's doing, so -- and I don't think it's asking much more than that.

MS. BASSI: I suspect the companies don't disagree with what you're telling them, but the concern seems to be with where one gets the class. If they have to fly to Alaska to get the class, is that outrageous? That's, I think, the issue. We'll go on. We're done.

HEARING OFFICER FOX: Any other questions on number 35 regarding the training? Ms. Bassi, why don't we go ahead to number 36, if you --

MS. BASSI: No questions.

HEARING OFFICER FOX: No questions from Midwest Generation. Mr. Dennis on number 36.

MR. DENNIS: Just one quick one. How does one make sure that the injection ports or nozzles are placed in the proper zones?

DR. STAUDT: Normally what's done in these -- in the design of these systems -- and I can, you know, speak from experience because I used to be in the business of designing and selling and starting these things up -- what happens is initially you usually do

some -- in designing these systems, you do some testing to get -- to measure the temperatures in the furnace. There is computer modeling typically done. They model the furnace on a computer and then they simulate, you know, putting injectors at different locations to get good distribution, and they do that under different conditions, and that's how these systems are typically designed. That's how the injection points are determined. Of course after you start the system up, you then verify the performance of the system by measuring the performance in terms of NOx levels and ammonia slip.

MR. DENNIS: Would that -- Is that what's known as I believe a computational fluid dynamic study, a CFD?

DR. STAUDT: Yes. Typically, yeah, that's what you might call it.

MR. DENNIS: And for an industrial-sized stoker boiler, how -- what would the -- a study, a CFD study, cost for a boiler of that size?

DR. STAUDT: Well, typically it would be part of your -- if you were going to put one of these systems in, it would be part of the contract. It would be a relatively small part of the total contract, so, you know, might be -- the study might be 20, 30 thousand

dollars, but, you know, if you're just going to spend half a million dollars on a piece of equipment or more, that's -- it's basically a portion of the engineering. It's really a portion of the engineering of the system.

MR. DENNIS: Thank you. Nothing more.

HEARING OFFICER FOX: Nothing further? We've been at it for quite a little while and I'm sure people would appreciate a chance to take a break. Why don't we do so and resume right at three o'clock where we've left off with question number 37 of yours, Ms. Bassi. Thanks, everyone.

(Brief recess taken.)

HEARING OFFICER FOX: Ms. Bassi, I had marked that we had gotten to Midwest Generation's question number 37. Why don't we dive right in and see if whether you have a follow-up on that one.

MS. BASSI: 37, I have no questions.

HEARING OFFICER FOX: Very good. Any other participants with a question about 37? Mr. Dennis, please go ahead.

MR. DENNIS: One quick one. If -- In designing SNCR for an industrial boiler, if there are multiple fuels used in the boiler, does that complicate the task and perhaps increase the cost and complexity of

the project?

DR. STAUDT: You know, it would have a slight increase to the cost. I mean, what you might have to do is have some additional injectors or something like that. You would have -- You might want to have some control logic that if one day you're burning coal and the other day you're burning wood, you might have a, you know, different set of controls programmed in, you know, so when you're firing coal versus firing wood, but it's -- it can -- it's something that can be accommodated in these systems.

MR. DENNIS: Okay. Thank you.

HEARING OFFICER FOX: Anything further, Mr. Dennis?

MR. DENNIS: No.

HEARING OFFICER FOX: Any other participant follow-up? Ms. Hodge?

MS. HODGE: May I just follow up on that? What about if you're using a combination of these different fuels? Would that affect your answer?

DR. STAUDT: Oh, it wouldn't affect my answer. I mean, you could -- you know, in many cases people coal fire -- make -- you know, for example, you know, if we're talking about stoker-fired units, they can

burn anything that can be burned pretty much, so they may put in coal, they may mix in some wood, you know, wood material, and that's -- it's not unusual to sometimes change it, change what is being done, fired, and it's, you know, something that's routinely done with these systems. You can design for it, you can accommodate it. You know, you just need to think it, you know, when you design the system. You -- As I said, you may put it -- you know, you may locate the injectors in a sightly different location depending upon, you know, your expected temperature, where the temperature is in the furnace, but it might slightly change the design, but it's not going to make it dramatically more or less expensive.

MS. HODGE: Okay. Even if that combination is changing perhaps on a frequent basis?

DR. STAUDT: Oh, yeah.

MS. HODGE: Your answer would be the same?

DR. STAUDT: Yeah, because what happens is -- you know, these systems have been designed for lots of applications where -- I mean, this does come up. I mean, there are literally hundreds of these systems in use, so you have to believe that this has come up, and I know it's come up in many applications, and there are

ways to design for it, okay? It's not something that means the technology can't be used. There are just ways you design the system to accommodate them, you know.

MS. HODGE: Thank you.

HEARING OFFICER FOX: Anything further, Ms. Hodge? Any other questions with regard to number 38?

MS. BASSI: No.

HEARING OFFICER FOX: Seeing none, Ms. Bassi, let's move on to -- I'm sorry. That was 37. We're now moving on to 38. I believe that was my mistake.

MS. BASSI: None on 38.

HEARING OFFICER FOX: None on 38? On the part of any other participant, follow-ups or clarifications on 38? Ms. Bassi, number 39.

MS. BASSI: 39, I have just a couple of quick ones. Does your response here mean -- and we were talking about this a little bit earlier. Does your response here mean that the cost for wood-fired EGUs is about $15 per kilowatt? I think that's what it says.

DR. STAUDT: Well, it says --

MS. BASSI: This is your response to number 39.

DR. STAUDT: Well, I think the -- my

question -- your question says, "Page 30 of the TSD states, 'For EGUs SNCR capital cost is in the range of about $15 per kilowatt, and in most cases NOx reductions in the range of about 30 percent are possible.' How does this translate to dollars per ton of NOx removed?" What I did is I referred back to Figures -- my answer, Figures 2-14 and 2-14b, okay, of the TSD, if I can find where that page is.

MS. BASSI: And I would also --

DR. STAUDT: Page 32.

MS. BASSI: -- note that my follow-up question is following on a couple of questions that previously were talking about wood-fired boilers, so it's not, like, out of the blue in the transcript.

DR. STAUDT: Oh, no, that's all right. So, I mean, if you're looking specifically -- I -- the answer that's here is really -- you know, I -- what I understood you to mean, how do you translate the capital -- the estimated capital cost for an EGU would be $15 per kilowatt, in that range, and what you can do is you can see what cost effectiveness is. If you want to look at calculated cost effectiveness, look at Figure 2-14a. This is cost effectiveness for ICI boilers, and they took 50 of them and they plotted it, but for an EGU, since

your question in question -- your question here dealt with -- 39, dealt with EGUs, you go to the far right, okay, because that's at the high end of it where these lines kind of flatten out, and you can see for an EGU for annual operations, you might expect -- you know, for a large boiler, annual operations, you might see something in the range of $1500 per ton of NOx removed.

MS. BASSI: Okay. So does -- So I think the answer to my question was yes.

DR. STAUDT: I'm not sure what -- well, I'm looking at the answer to question 39.

MS. BASSI: Right.

DR. STAUDT: The answer to 39 is --

MS. BASSI: And then my follow-up was, does this statement mean that the cost for wood-fired EGUs is $15 per kilowatt?

DR. STAUDT: Oh, no, no, because it depends upon the size, as I talked about, for a specific -- for a smaller -- as you -- if you look at that figure of 2-14a, as you can notice, as the unit size gets smaller, it starts to curve up, starts to get higher and higher, and that's because the normalized -- what I will call normalized cost say on a dollar per million BTU basis -- and that's shown in Figure 2-14b -- that tends to get

higher as it gets smaller, so what it does on the cost effectiveness, the dollars per ton of NOx removed, that tends to make it get more expensive as you get to smaller and smaller units, all right, so if you had a wood-fired boiler that was, you know, 145, 200 million BTUs per hour, you might expect a cost effectiveness of in the range of maybe around $2,000 per ton of NOx versus the 1500 I discussed earlier.

MS. BASSI: Thank you.

DR. STAUDT: Sure.

HEARING OFFICER FOX: Anything further, Ms. Bassi? Any other questions regarding Midwest Generation's question number 39 and the answer to it? Ms. Bassi, let's move on to number 40, if you have a follow-up.

MS. BASSI: Yes, I do have. With respect to your answer to number 40, is the argument or statement that the higher baseline NOx -- that the higher the baseline NOx and therefore the more NOx to be removed, the lower the cost per ton in an SCR application, is that what this is saying effectively?

DR. STAUDT: No. This is question 40, right?

MS. BASSI: Yeah.

DR. STAUDT: Okay. No, what I did there -- and let's just go to the TSD. I don't know if people have it in front of them. I think you're talking about these Figures 2-17 versus 2-18, and what I talk about is, you know, the -- in Figure -- in question 40 you ask about do I think dollar per million BTU is a better measure than -- better measure for RACT than dollars per ton, and I say no, because, you know, I'm not suggesting that. The reason I put that information in there on the dollars per million BTU, it's the same reason that why for an electric utility might be -- from an electric utility perspective, you might be interested in what's the impact on your generating cost, right, and from an industrial boiler who -- they may use steam to produce power, they may produce the steam to -- for process. You really -- The best way to normalize it is on a dollar per million BTU basis, and it's really -- you know, that may be relevant to an industrial boiler operator. That's really why I put it in there. But it's not to argue that it should be -- that that's a better measure for RACT.

MS. BASSI: No, I -- and that's --

DR. STAUDT: It's just --

MS. BASSI: I'm not quibbling with your response at all.

DR. STAUDT: Okay.

MS. BASSI: My question is is that if the -- if you have a higher baseline of NOx and therefore you have more NOx to remove, would the cost per whatever metric you're using be lower as a result if you're applying an SCR? So if you apply an SCR, if you have a lot of NOx to remove, your cost per metric to remove that NOx is going to be lower; is that correct?

DR. STAUDT: Yeah.

MS. BASSI: That's your point.

DR. STAUDT: The lower initial NOx level, you know, if you're starting at a lower initial NOx level -- let's look at Figure 2-17, because that basically gets to that point.

MS. BASSI: Okay.

DR. STAUDT: You've got three data points here. One is 0.4, the other's 0.5, the other's 0.6. And bear in mind, I mainly developed this with the interest of industrial boilers that have, you know, maybe a 0.13 pound per million BTU already. As the NOx level gets lower, you can see that -- compare the 0.4 line to the 0.6 line for baseline NOx level. You can see it's more expensive for the 0.4 line, which is the -- I think the point you're trying to make, is that as the starting

point gets lower, the baseline level gets lower. As you -- The way you do the calculations, the actual -- the cost in dollars per ton of NOx removed gets bigger because the dollar part on the top goes down but doesn't go down very much because you're using less ammonia, but the denominator gets much smaller, so the -- you know, the result of the arithmetic of the numerator times the -- over the denominator is that it gets higher.

MS. BASSI: Okay. Thank you.

HEARING OFFICER FOX: Anything else, Ms. Bassi, on number 40?

MS. BASSI: Actually, I do have one other thing. The rule provides for the use of averaging plans within a source, and so if you're using an average of -- if you use an averaging plan, is it not the case that you're looking at the total amount of NOx removed among all the units that are part of the averaging plan, and how would that impact your cost analysis? With an averaging plan, you have more -- you're just lumping it all together. Does that have an impact on your NOx -- on your cost analysis, and what is that impact?

DR. STAUDT: Well, what would happen on an averaging plan, an averaging plan is sort of like operating -- almost like operating over a system-wide

cap. If you're looking at -- If you know what your heat input's going to be, it's really a -- like having a cap, so what that enables you to do -- it actually is very helpful, because what it enables you to do is put control with -- if you have one big source, you can put -- invest the money on, say, an SCR on the big source and then you don't have to do as much on the small sources, so that can affect -- if you look at how you get to the end point, it would actually end up helping you.

MS. BASSI: So it could help to reduce costs.

DR. STAUDT: It could help to --

MS. BASSI: At least in this type of metric, or any type of metric, perhaps.

DR. STAUDT: Well, it would -- you know, it's certainly helpful in terms of reducing your overall costs versus if you impose the equivalent emission rate for every unit. I mean, it would be more expensive to have one emission rate on each and every unit and impose that on every unit typically than if you have a -- the equivalent of a system-wide cap.

MS. BASSI: Okay. That's all.

HEARING OFFICER FOX: Very well. Any other questions on the basis of number 40, the other

participants? Ms. Bassi, to number 41. There's a one-word answer for you to respond to if you'd like.

MS. BASSI: Why would retrofit issues be greater for EGUs than for industrial boilers? And again, this refers to page 36 of the TSD.

DR. STAUDT: If you could help me and just point me to where on that page.

MS. BASSI: Well, I would love to. I think what I'm referring to is at the end, the last couple of sentences of the first paragraph that begins with "as a result."

DR. STAUDT: It's 36?

MS. BASSI: On page 36. I don't know why I have 36 written down at the moment. Let me ask it a different way. Are retrofit issues more problematic for EGUs than they are for industrial boilers?

DR. STAUDT: Well, you know, each facility is going to have its own unique, you know, issues, so --

MS. BASSI: So there's not a generalization?

DR. STAUDT: Well, it, you know, depends upon the technology, it depends upon the facility you're talking about, so, you know, frankly, it will depend.

MS. BASSI: Okay.

DR. STAUDT: Yeah.

MS. BASSI: We'll let it go. No further on 41.

HEARING OFFICER FOX: Any other questions on 41? Mr. Dennis?

MR. DENNIS: Yes. In the -- Considering a -- perhaps a worst-case example of an industrial boiler retrofit for an SCR, in the -- this example, the boiler room is very crowded. The boiler house is surrounded by other process buildings. The overhead space is taken up with pipe racks. There's no lay-down area immediately adjacent to the plant and there are infrastructure issues, meaning that any electrical system requirements are going to prompt an upgrade. Would it be reasonable in a situation like this to ratio -- to expect an increased project cost of perhaps two to three times the -- what a normal cost would be?

DR. STAUDT: Well, let's -- your question had to do with SCR, and as I stated, based upon the emission limits that are in the rule, I don't see why someone -- I don't see why an industrial boiler owner would install SCR. Be that as it may, if someone chose to install SCR, even though I feel confident that there are other technologies that can get you to below these limits for less money, sure, if you have a very

constrained boiler, it's going to cost more money to install something like SCR where that takes up some space. But as I say, I don't -- you know, the limits here for the industrial boilers should not force people to put -- install SCR, and that was -- you know, frankly, that was something that I was hoping to -- you know, when we developed the rule, I didn't think it was -- you know, we'd be doing that. I didn't think we'd be pushing people towards SCR.

MR. DENNIS: Thank you. Nothing.

HEARING OFFICER FOX: Nothing further?

MR. DENNIS: Nothing further.

HEARING OFFICER FOX: Any other questions based on number 41? Seeing none, Ms. Bassi, that brings us, of course, to number 42 if you have a follow-up.

MS. BASSI: Yeah. I believe the Agency's response to question 7, if you can look back to my question 7 quickly, is that the RACT range is 2500 to 3,000 dollars per ton as a cost effectiveness number; is that correct?

MR. KALEEL: That's correct.

MS. BASSI: Could you tell us in what year dollars that 2500 to 3,000 dollars per ton is, and whoever was doing all that --

MR. KALEEL: Yeah, it's current dollars.

MS. BASSI: 2008 dollars?

MR. KALEEL: Yes.

MS. BASSI: Oh, okay. Do 2008 dollar values fluctuate from day to day? That's a rhetorical question.

DR. STAUDT: Last week they did.

MS. BASSI: Last week, not this week? That's it.

HEARING OFFICER FOX: So noted on the rhetorical nature of the question.

DR. STAUDT: Yeah, yesterday they went back up.

HEARING OFFICER FOX: Any other -- Ms. Bassi, either you or any other participants with additional follow-up on number 42? Seeing none, that, of course, Ms. Bassi, brings us to number 43.

MS. BASSI: No questions.

HEARING OFFICER FOX: Any other participants with a follow-up on 43? 44, Ms. Bassi, if you have a follow-up.

MS. BASSI: No questions.

HEARING OFFICER FOX: None there. Any other participants to follow up on 44? Moving ahead to number 45 with regard to point sources. Ms. Bassi, a follow-up?

MS. BASSI: Actually, I don't have any more questions for the rest of this.

HEARING OFFICER FOX: Very good.

MS. BASSI: I do have one on 19 that I would like to go back with Dr. Staudt.

HEARING OFFICER FOX: Why don't -- Perhaps I can put to rest numbers 45, 46, 47 and 48? Would any of the other participants aside from Ms. Bassi have specific follow-ups or clarifications with regard to those four questions? Seeing none, Ms. Bassi, you mentioned number 19, I believe.

MS. BASSI: Number 19 I would like to go back to. Again, I suspect this is a Dr. Staudt question. The answer that you gave to our question here for gas-fired boilers is to see the page -- the Table 2-17a on page 43 of the TSD, and perhaps we were missing something in this, but we don't -- we were unable to draw conclusions on -- based on this table. The table sets forth a bunch of data, but it doesn't tell us how you established 0.08 pounds per million BTU as RACT for the gas-fired boilers.

DR. STAUDT: I'm not sure that I answered that. Did I?

MS. BASSI: I wondered if you could --

MR. KALEEL: I think what we're pointing back to on Table 2-17 is that there are a range of control options to meet 0.08 at cost ranges that fit in with our idea of what RACT is, so there isn't a specific number there, 0.08, but I think rather what you're seeing is for a range of different boiler sizes that there are a number of control options that could get controlled emissions in the range of 0.08 or less.

MS. BASSI: And among those, it appears that SCR is an acceptable RACT technology. Is that so?

MR. KALEEL: SCR is an option.

DR. STAUDT: Let me add, first of all, you want to look -- notice here that you see some of these are reference 1, and you see low NOx burner partway down there, unit capacity of 50 million BTUs per hour, low NOx burners, 0.08, 0.09. This is reference 1. Reference 1 is a 1994 ACT document where this data was just kind of incorporated from the ACT document just so to maybe give -- to kind of put that in there, but recognize that 1994 ACT document does not reflect current capabilities for low NOx burners, so there's -- you know, the information in there is informative in some respect, but keep in mind, whatever emission rate you see there, it is -- current low NOx burner technology is capable of

achieving 0.08, you know, pound per million BTU on gas. In fact, if you put in flue gas or circulation, you'll be well below that, so -- and combustion controls are widely regarded as reasonable in cost, so for gas-fired applications, 0.08 is well within the capabilities of state-wide combustion controls, and we provided some more information on what burners can do and -- as part of this, so 0.08 is well within the capabilities of current combustion control technology.

MS. BASSI: So then are you saying SCR is not RACT?

DR. STAUDT: Well, RACT -- we're establishing emissions limitations for the basis of RACT. If someone chooses to install SCR to achieve that limit, you know, that's up to them, okay? It -- I don't think the Agency's going to tell you you can't install SCR to do that. The Agency -- The proposed rule is to achieve under 0.08 pound per million BTU, and if someone chooses to install SCR, which is more costly, than to install low NOx burners, that's up to them, but most people would install the less expensive approach, I would assume, which is combustion controls.

MS. BASSI: All right. Well, let me put this a little -- let me ask a more specific question. If

you look on Table 2-17a, and in the portion of the table that says natural gas-fired watertube field-erected multiple burner as opposed to single burner, and on the fifth one down, it is a 500 million BTU unit. It says SCR, 70 to 90 percent reduction, and the cost range is 24 -- effectively 2400 to 7100 or 7200 dollars per ton, so if it got up into that upper ranges, past 3,000 dollars per ton, it kind of goes back to a question that I had asked before, is that no longer RACT. So an SCR -- if SCR was the only technology available to reach 0.08 and it was going to push this source or unit up into the over 3,000 dollar a ton cost effectiveness range, which is within what you've provided here, then would that no longer be RACT under this rule?

DR. STAUDT: Well, let's -- maybe there's a misunderstanding here. Table 2-17a is not intended to say that these are all RACT technologies. It's really just there as background information to show what other people have arrived at in terms of cost effectiveness. It's not saying that these are specifically prescriptions for RACT. What is proposed in this rule is an emissions rate that is believed to be achievable at costs that are within the boundaries for RACT. Now, as I stated repeatedly, I would not expect anyone with a gas-fired

boiler who needed to get under 0.08 pound per million BTU to install SCR. I would be astounded if that were -- somebody determined that to be necessary. More than likely they would use combustion controls.

MS. BASSI: Okay. That's it.

HEARING OFFICER FOX: Any --

MS. BASSI: On 19.

HEARING OFFICER FOX: On number 19? Any -- We've gotten to the end of the questions specifically directed to Mr. -- Dr. Staudt. Ms. Hodge, did you have a follow-up?

MS. HODGE: Perhaps. I would like to ask a question in follow-up to Ms. Bassi's, and it's very close to her question but I'm not sure we got an answer. What if an industrial boiler must install SCR to meet the 0.08?

DR. STAUDT: Well, I don't --

MS. HODGE: Would it be your opinion that SCR would be RACT in that circumstance?

DR. STAUDT: I would -- Well, what I would like to do is see how -- why it's necessary. I would be very surprised if that -- it would be a unique -- very, very unique situation if that were necessary.

MS. HODGE: Let's assume that was the

situation.

DR. STAUDT: You know, how the Agency or how the Pollution Control Board chose to address that, that's up to them. All I can say is that if somebody told me that I have a gas-fired boiler and the only way I can get to 0.08 pound per million BTU is by installing SCR, I would -- I'd be very surprised. I would say this is an extremely unusual situation and I would need to see some information to persuade me that it was truly necessary, but if that's the case, they -- there may be a way to address it. I --

MS. HODGE: So is it possible that it could be outside of the range of what would be determined to be RACT, the cost would be outside of the range?

DR. STAUDT: It depends upon what the baseline NOx levels are, okay? You know, we talked earlier about if you're starting at one pound per million BTU with a gas-fired boiler, which is pretty unusual, and you need to put an SCR on to get down to that level, since we're talking about things that I believe are kind of, you know, really, really remote or unusual and kind of at the tail of the normal distribution curve, let's say that you had something that has a very high NOx level and for some reason you have to put SCR in. In that

case, what happens is the denominator, that dollar per ton of NOx, those tons of NOx get to be very big, and so the math actually may bring you well under $3,000 per ton.

MS. HODGE: But if the cost were over 3,000, do you think that --

DR. STAUDT: Well, that -- you know, it depends upon -- I don't know if from the Agency's perspective they've established a bright line in terms of what RACT is, and they've -- my understanding is that they have not, that there isn't going to be a case-by-case RACT. It's not --

MS. HODGE: Thank you. Mr. Kaleel, has the Agency established a bright line?

MR. KALEEL: We don't have a specific bright line test. The concept of RACT has been around for a long time, and there have been cases in the case of VOCs where certain companies have argued that the costs are very unreasonable and they have sought some site-specific adjustment to a board proceeding, and I think the same kind of a thing could happen here if costs are really, really unique, really above and beyond -- greatly above and beyond what we've indicated here what we think is appropriate, and then some sort of site-specific action

might be needed, but --

MS. HODGE: Okay. And then would the Agency prefer to address that on a case-by-case basis in the context of this rulemaking or would you prefer industries that may find themself -- you know, sources in that position to come to the Agency for assistance?

MR. KALEEL: I think we're willing to talk while the rulemaking is going on to the extent that we can, and if we need to adjust something later, we'd be happy to look at that as well.

MS. HODGE: Okay. Thank you. That's all I have. Thank you.

HEARING OFFICER FOX: Surely, surely, Ms. Hodge. Ms. Bassi, that brings us to the extent of questions directed specifically to Dr. Staudt to the end of Midwest Generation's questions for now. I think we'd established that we would return to those that are directed to Mr. Kaleel, and that brings us to the point in our proceedings, as we discussed this morning, to the questions from ExxonMobil and the answers supplied by the Agency to those, and while those were filed by -- Mr. Hinske was the original filer of those questions. I believe, Mr. Elvert, you are here to request any follow-ups or clarifications. I wonder if -- Is that

correct, that you were going to --

MR. ELVERT: Yeah.

HEARING OFFICER FOX: I wonder if I could impose on you for the benefit both of the Agency and the Board and for the court reporter, would you be available to move up a little closer --

MR. ELVERT: Sure.

HEARING OFFICER FOX: -- so that you could be a little more audible?

MR. ELVERT: Yes.

HEARING OFFICER FOX: That would be great. There's an entire table there and there's certainly room for any notes or papers you might have. And I appreciate it. I think that will help simplify things.

MR. ELVERT: This'll be real fast.

HEARING OFFICER FOX: Great. I will -- Why don't we plan to proceed just as we have with the other entities that have had questions. We'll just go one by one through the total of 28 that you had posed, and if you have no follow-ups or believe that it may have been answered by some of the give and take earlier, Mr. Elvert, we can certainly just move ahead.

MR. ELVERT: Yeah. In fact, really all I have is one. All the other ones have been answered

earlier.

HEARING OFFICER FOX: Very well. If you would specify which question that is, we can have the Agency provide the follow-up that you're seeking.

MR. ELVERT: All right. First, just off the bat, again, my name is Robert Elvert. I'm the midwest state regulatory issues advisor for ExxonMobil, and again, I apologize -- or Mr. Hinske apologizes for not being able to be here. Most of our questions have been already answered either through the original responses or today's hearings. Really the only question we have left is number 16 that we'd like to seek further clarification.

HEARING OFFICER FOX: And that question, Mr. Elvert, deals with the Agency's consideration of extending the compliance date; am I correct?

MR. ELVERT: Yes, it is.

HEARING OFFICER FOX: Very well. Please go ahead.

MR. ELVERT: The Agency responded there are considered proposals for a couple of the industrial sectors, and really our question is basically what is the status of those considerations.

MR. KALEEL: I mean, we have considered

perhaps some unique circumstances with the two industries that are represented in our response, petroleum refineries and glass melting furnaces. They're -- We don't want to treat them the same. Obviously the industries are different, but in regards to petroleum refineries, we understand that -- you know, the nature of their industry and the impact on the local economy, the need to plan shutdowns on a regular cycle, and we've talked about that with not just ExxonMobil but also Citgo and ConocoPhillips, and I think we need to have some more discussions. We need to understand better what kind of schedules that they're proposing and -- but we are amenable to finding some sort of a relief that allows much of the work that's needed to comply with the rule to occur on normal planned shutdown cycles.

HEARING OFFICER FOX: Anything further, Mr. Elvert?

MR. ELVERT: That is fine. Thank you very much.

HEARING OFFICER FOX: Were any of the other participants wishing to ask -- Ms. Bassi.

MS. BASSI: I have a couple of questions about -- I have questions about a couple of them. Number -- The first one is number 12.

HEARING OFFICER FOX: I'm sorry. Number 12, Ms. Bassi?

MS. BASSI: Yes.

HEARING OFFICER FOX: Sorry to interrupt.

MS. BASSI: That's all right. Number 12 is talking about construction permitting, and in this -- in the Agency's response to the question -- let's see. The question was whether the Agency had planned for any expedited preconstruction permitting efforts, and the Agency replied that they have the statute that limits them to 90 days and that things are taking 50 and 60 days to get a permit and that -- and the Agency says that if companies seeking such construction permits can help to ensure quick turnaround by keeping their applications focused only on the controls necessary to comply. My question is, will the Agency keep the construction permits similarly focused?

MR. KALEEL: I think that's our intent. I don't know if there's specific examples in mind where it got screwed up, but I think -- again, I think we're averaging right now 50 to 60 days on minor source permits.

MS. BASSI: Okay. And my other -- that was all I had on that one, and my other question was on

number 14, wherein the response -- we've talked about this a little bit already today, but we didn't talk much about bump-up. I just wondered, is there a likelihood of a bump-up? There can be a bump-up in both ozone or the PM classifications; is that correct?

MR. KALEEL: There certainly can be a bump-up in the case of ozone. The ozone in the both Chicago and Metro East areas are classified as moderate and the Clean Air Act provides specific bump-up provisions. I don't think there's a similar provision for PM2.5. Within a non-attainment designation, USEPA hasn't classified areas as moderate or serious or severe.

MS. BASSI: Okay. Never mind, then. That's it.

HEARING OFFICER FOX: The Agency had responded to a number of ExxonMobil's questions. Did any of them generate any requests for clarification on the part of any of the other participants? Mr. Elvert, you were right. You were very quick, and of course we appreciate that, and --

MR. ELVERT: You're welcome.

HEARING OFFICER FOX: -- Ms. Bassi, we're back to you. We're at -- to the point in the proceedings where we had agreed to turn to the responses to Midwest

Generation's questions that were directed specifically to Mr. Kaleel, and I think we had touched upon -- at least touched upon a couple of those, but certainly as we can -- as we proceed, we can see if some of those have already been answered at least in part, but why don't we begin, of course, with number 1 if you're ready to go.

MS. BASSI: No questions.

HEARING OFFICER FOX: No questions? Did anyone else have any follow-up on the basis of the Agency's response to question number 1? Seeing none, Ms. Bassi, of course number 2.

MS. BASSI: No questions.

HEARING OFFICER FOX: None? Any other participants with follow-up questions on number 2? That brings us, of course, to number 3, Ms. Bassi.

MS. BASSI: No questions.

HEARING OFFICER FOX: On the part of any other participants, number 3? Number 4, Ms. Bassi.

MS. BASSI: Number 4 is about averaging plans, and we do have some questions about averaging plans. Currently, as the rule is proposed, averaging plans are allowed, but they are allowed only within a source as opposed to within a system; is that correct?

MR. KALEEL: That's correct.

MS. BASSI: And the rule provides that a source or a unit can be included in only one averaging plan. Does -- What does that mean? Does that mean that a source that's subject to subpart D cannot be in -- or subpart M is probably more like it -- cannot be in a subpart V, as in Victor, averaging plan?

MR. KALEEL: I guess I'd like to distinguish between your use of the word source and maybe the -- what our intent is in terms of emission units.

MS. BASSI: Okay.

MR. KALEEL: Within a source, a company at one location, they could have multiple averaging plans. I think we envisioned that. But each individual emission unit could only be included in one of those, one seasonal and one annual.

MS. BASSI: So what I'm trying to get at, though, is does participation of a unit in an averaging plan under one of the subparts that's being created in this rulemaking preclude its participation in an averaging plan under another existing subpart, like subpart V? I mean, yes, that's sources, but the units at the sources or the CPS or -- which is essentially an averaging plan that it goes outside the non-attainment areas. Acid rain has averaging plans that are

unit-specific.

MR. KALEEL: I think what we're talking about in terms of averaging plans are in the concept of this NOx RACT rulemaking.

MS. BASSI: Just within this?

MR. KALEEL: But within this rulemaking, a boiler with a process heater, that would be allowed.

MS. BASSI: I think there's -- okay. There is -- In Section 217.390(a)(1), which is not part of this rulemaking, 217.390(a)(1) is the -- is part of the Board's docket at R07-19, which is the rulemaking for engines. Do you -- Did you participate in that rulemaking?

MR. KALEEL: Yes, I did.

MS. BASSI: Do you recall the averaging provisions in that rule?

MR. KALEEL: Somewhat, yes.

MS. BASSI: Is it the case that the averaging provisions of that rule are system-wide within the non-attainment area as opposed to source-wide within the non-attainment area?

MR. KALEEL: The -- I think that is the case. I think what was envisioned there was in the case of a particular company who operates various compressor

stations along a pipeline, and in some cases those pipeline compressors would be located outside of the non-attainment area, so that that was a concession, if you will, on our part in the context of the compressor stations given kind of the unique characteristics that they have. Within a particular company, one operating company, they might have various compressor stations located in multiple counties along a pipeline.

MS. BASSI: I think you're confusing that with the NOx SIP call one. There were two engine rules, and I think the other one allowed that, but the second one allowed only within the non-attainment area.

MR. KALEEL: Okay. I apologize. I prefaced my remark that I only generally remembered the first --

MS. BASSI: Right. Is there a reason why the Agency chose to limit the averaging plans in this rule to just sources as opposed to systems within the non-attainment area?

MR. KALEEL: I think in general it's probably easier to conceive of an implementation of a rulemaking as source-specific. I'm not aware of too many circumstances beyond electric utilities, who already have an averaging scheme under the multi-pollutant standard, where that's even an issue.

MS. BASSI: So no -- none of the other sources or companies affected by this rule would have multiple sites within a non-attainment area?

MR. KALEEL: I don't believe I said none, but I think it would be pretty unusual. I think for the most part they're individual operators.

MS. BASSI: Well, given our discussion earlier about the exemption for sources that are subject to the MPS or the CPS, the multi-pollutant standards, and again assuming that the Board would adopt those -- but who knows, maybe they wouldn't for some reason -- would the Agency be open to considering a system-wide averaging within the non-attainment area as opposed to just limiting it to source-wide averaging?

MR. KALEEL: I guess we'd want to take a look at the proposal. We're certainly open to discussing any aspects of the rule, and if it makes sense to do that, I think we're open to talk about it.

MS. BASSI: That's all I had on 4.

HEARING OFFICER FOX: And did any other participant have a follow-up with regard to number 4? Seeing none, Ms. Bassi, number 5, if you have a follow-up.

MS. BASSI: Yes, I do. Oh, this is

establishing that the annual emission reports serve as the basis for determining the applicability of a unit as an affected source, and in its response, the Agency used the phrase "in general." This implies that there are other means of determining whether a unit's emissions exceed the thresholds of the rule, and I wondered if you could give us some clues as to what those might be other than annual emission reports.

MR. KALEEL: Well, I think the rule also provides for a company to obtain a FESOP that would limit their emissions to less than 15 tons, and that's obviously the preferred way to do this, but to allow maybe a little less paperwork, we intend to review the annual emission reports. We have a review process to receive annual emission reports and do some quality assurance, and to the extent that we believe that emissions are misreported, we might not solely rely on those reported emissions. I think that's probably what we had in mind there.

MS. BASSI: Okay. But you will -- will you confirm, though, that the second tier of applicability -- in other words, the unit level of applicability of the rule -- is based not on PTE or potential to emit, but it is based on actual emissions?

MR. KALEEL: Yes.

MS. BASSI: Okay. And if it's based on actual emissions, is a FESOP -- which is a federally enforceable state operating permit -- necessary at all? I mean, you could have a source -- you could have a unit that has a potential to emit a gazillion tons, but if it emits only two, a FESOP isn't going to have any meaning.

MR. KALEEL: I don't think we require that you get a FESOP to take advantage of this.

MS. BASSI: When would a new unit become subject to the rule?

MR. KALEEL: I believe the first year they're operating.

MS. BASSI: Would -- Okay. So if you have a unit that's operating and it emits only 13 tons in -- annually, then it would not be subject to this rule; is that correct?

MR. KALEEL: That's right.

MS. BASSI: Okay. That's it.

HEARING OFFICER FOX: Very well. Any other follow-ups on question number 5? Seeing none, moving on --

BOARD MEMBER JOHNSON: I'm seeing one.

HEARING OFFICER FOX: I'm sorry. I

missed --

MS. HODGE: I have a quick follow-up.

HEARING OFFICER FOX: My apologies, Ms. Hodge, to you.

MS. HODGE: And if you would -- this is in follow-up to Miss Bassi's comments, and this has to do -- if we look in the Agency's notice of proposed amendment, it shows the existing Section 217.121 for new fuel combustion emission sources as being repealed here, and so then we have just the new subpart B, which was the old subpart C, existing fuel combustion emissions, so I'm not sure, how does that interplay, you know, with the existing new?

MR. KALEEL: Well, a new unit has other requirements that they would be permitted under their new source performance standards. There's other new source review requirements, so, I mean, they would get picked up, but --

MS. HODGE: Okay. But they would not be subject to this rule, though, under the proposal right here; is that --

MR. KALEEL: I think once they're operating, they would be subject to this rule as well.

MS. HODGE: And where does it say that here

in the proposed regulatory language?

MR. KALEEL: I think in a number of cases we -- in our applicability we use words like "all" or "any," and there are -- there's nothing in there that distinguishes a specific date of construction with the exception of the averaging plan provision. I don't see anything in here that would exclude them.

MS. HODGE: Then what does the term "existing" mean?

MS. BASSI: In -- You mean in 217.141?

MS. HODGE: Correct.

MR. RAO: Mr. Kaleel?

MR. KALEEL: Yes.

MR. RAO: While I was checking that, I just wanted to point out that Section 217.154, performance testing, there you have two subsections, ones that deal with units constructed on or before December 1, 2009, and for units constructed or modified after December 1, 2009. Does that apply to new units, the subsection B, which applies to units constructed or modified after 2009?

MR. KALEEL: This would include all units constructed after 2009, including some that we don't even know about, so that would include new units.

MR. RAO: But similar language is not

proposed in the applicability section. Would it make the rules clearer if you have some language which sets forth that new units are subject to these rules?

MR. KALEEL: Perhaps -- I guess just given the nature of the questions here, maybe it isn't clear, so --

MS. BASSI: Let me follow up on this a bit. Is Section 217-141 necessary anymore if this rule is adopted?

MR. KALEEL: I think we'd want to respond to that in writing. I --

MS. BASSI: Okay. Think about that?

MR. KALEEL: Yeah. I don't want to make a blanket statement at this point.

MS. BASSI: And so then -- okay. Never mind.

HEARING OFFICER FOX: Anything further, Ms. Hodge, on that issue?

MS. HODGE: No. I'm done. Thank you.

HEARING OFFICER FOX: All done. For Ms. Bassi?

MS. BASSI: Not on 5.

HEARING OFFICER FOX: Very well. Any other participants with questions regarding number 5? I'm

seeing none. On to number 6, Ms. Bassi.

MS. BASSI: Number 6, in what way does the Agency not agree with the underlying premise of the question? And this question -- just for the record, this question goes to the applicability of subpart M being based upon the efficacy of the CAIR, which is in doubt.

MR. KALEEL: Well, I think you hit upon the issue there. There's a statement in there that CAIR has been overturned, thus invalidating the Illinois CAIR rule.

MS. BASSI: But qualified by the parens.

MR. KALEEL: Assuming there is a mandate, I -- and I'd probably want to defer to the lawyers, but my understanding is the Illinois CAIR rule is a state rule that's been adopted by the Board, and unless there's some subsequent action, it would still stand.

MS. BASSI: It would stand independent of the federal CAIR?

MR. KALEEL: Again, I'd want to consult lawyers, but it -- unless there was some other action taken to invalidate the rule, and I think that's the language that we had issue with.

MS. BASSI: Okay.

MR. KALEEL: Having said that, that really

doesn't get to the point of the question, which we did try to answer, so --

MS. BASSI: Well, no, that -- you've answered the question that I had, my follow-up question, and --

MR. KALEEL: Okay.

MS. BASSI: -- it raises other issues. If the Illinois CAIR stands -- Assuming the total vacatur of the federal CAIR, if the Illinois CAIR stands as an independent rule, how would it be implemented when the Illinois CAIR assumes the administration of USEPA of the trading system?

MR. KALEEL: I think we appreciate the problems when there isn't a national trading program. I think, again, the -- I think the way we interpreted your question is there's an automatic invalidation of the state adopted rule, and I guess we don't see it as an automatic invalidation. We know that USEPA is trying very hard to reestablish CAIR, so right now this is kind of hypothetical, but --

MS. BASSI: Thank you.

MR. KIM: Can I also add for the record that I don't think this particular line of questioning in this context is really where the Agency's going to make any

official position as to what the current status is of the Illinois CAIR rule, because I think that at this point, until the dust settles, it's -- from a legal standpoint we're not making any statement one way or the other, and I think Mr. Kaleel's position, that that's not really what the point of it was, and I -- in terms of our concern, and then our answer, notwithstanding that, should be sufficient for the purposes of this hearing.

MS. BASSI: I -- Thank you very much, and I agree with that, but with the proposed changes in language -- and I don't know where those come from, where those are in here, but --

HEARING OFFICER FOX: I think that's your question number 20.

MS. BASSI: In number 20, right. So -- okay. I'm done with 6.

HEARING OFFICER FOX: Very well. That -- And were there any other follow-up questions on number 6? Ms. Bassi, that brings us to number 7. I think we had at least touched upon that earlier, if not addressed it fully.

MS. BASSI: Number 7?

HEARING OFFICER FOX: Number 7, yes.

MS. BASSI: Yes, we're done with that.

HEARING OFFICER FOX: Very well. Anyone else who wish -- requests any follow-up on number 7? Seeing none, that of course brings us to number 8. Ms. Bassi?

MS. BASSI: No questions.

HEARING OFFICER FOX: Any follow-ups with regard to the load shaving unit issue with number 8? Seeing none, that brings us to number 9, Ms. Bassi.

MS. BASSI: No questions.

HEARING OFFICER FOX: Any other follow-up or clarification sought from the Agency here? None. Number 10?

MS. BASSI: No questions, I don't think. No questions.

HEARING OFFICER FOX: On number 10?

BOARD MEMBER JOHNSON: Auctioneer.

MS. HODGE: Yeah.

MS. BASSI: Going --

HEARING OFFICER FOX: Any other participants with follow-up questions on the Agency's answer to number 10? Seeing none, there's that one-word answer to your question, Ms. Bassi, in number 11.

MS. BASSI: Yeah, and I have a bigger question than the one word.

HEARING OFFICER FOX: Please go ahead.

MS. BASSI: Does the Agency's answer to that with respect to the Metro East non-attainment area, where you do not have coterminous non-attainment areas for ozone and PM2.5, amount to an expanded applicability of this rule? It's expanding the applicability of the entire rule beyond the non -- the respective non-attainment areas for ozone and PM2.5?

MR. KALEEL: I guess I don't see how it's expanding the applicability.

MS. BASSI: Well, is Baldwin Township in Randolph County non-attainment for ozone?

MR. KALEEL: No, it's not, but it is for PM2.5.

MS. BASSI: Do the ozone -- the seasonal requirements of this rule apply in Randolph Township, or Randolph -- or Baldwin Township in Randolph County?

MR. KALEEL: The way the rule is written, it does, yes.

MS. BASSI: Okay. And likewise, is Jersey County non-attainment for PM2.5?

MR. KALEEL: No, it's not.

MS. BASSI: And do the annual requirements of this rule apply in Jersey County?

MR. KALEEL: Yes.

MS. BASSI: So is that not an expansion beyond the respective non-attainment areas of the rule?

MR. KALEEL: The way the rule is written, those counties would have to comply with both, so I --

MS. BASSI: So you have --

MR. KALEEL: I don't know that it's an expansion. Those boundaries have been established for three or four years now.

MS. BASSI: But you have an area that is attainment for ozone having to comply with the seasonal limit; is that correct?

MR. KALEEL: I understand, yes.

MS. BASSI: Okay. That's it.

MR. KALEEL: I also don't believe there are any sources to which the rule applies in Jersey County.

MS. BASSI: No cows, huh?

HEARING OFFICER FOX: Ms. Bassi, you said that was it with regard to number 11?

MS. BASSI: That's it with number 11.

HEARING OFFICER FOX: Very good. Any other questions following up on number 11? That brings us to number 12, of course, Ms. Bassi.

MS. BASSI: No questions.

HEARING OFFICER FOX: No questions there. On the part of anyone else? To number 13, Ms. Bassi.

MS. BASSI: I do have a follow-up in number 13. This question goes to the fact that there is a statement in the Section -- Section 217.152(b) is I believe establishing the compliance date; is that correct? I think it's establishing the compliance date, and there's a statement in there that the owner/operator of an emission unit that is subject to these subparts must operate the unit consistent with good air pollution -- is this a substantive requirement? This statement, is that statement a substantive requirement that is enforceable?

MR. KALEEL: I'm not sure what the context of an enforcement action would constitute. I think we're just asking for good operating practices to be used in the operation of the units.

MS. BASSI: So then basically, you do not anticipate that an inspector could go to a source, look at this unit, say, you're not using good operating practices, and then have this moved through the system to be an enforcement case on the basis of this language.

MR. KALEEL: It'd be hard to conceive of a situation like that, but I guess I couldn't rule it out.

MS. BASSI: Oh, you could not rule it out?

MR. KALEEL: I don't think I would rule it out.

MS. BASSI: Okay.

MS. ROCCAFORTE: Can I ask a follow-up question on that?

HEARING OFFICER FOX: Please go ahead, Ms. Roccaforte.

MS. ROCCAFORTE: Just to clarify? Mr. Kaleel, to your best knowledge, do you know if statements like this are incorporated in Title V permits?

MR. KALEEL: My understanding is there are -- is language like that in many Title V permits.

MS. ROCCAFORTE: Thank you.

HEARING OFFICER FOX: Thank you, Ms. Roccaforte. Any follow-ups, Ms. Bassi?

MS. BASSI: No.

HEARING OFFICER FOX: Very well. With regard --

MR. RAO: May I?

HEARING OFFICER FOX: Yes, go ahead.

MR. RAO: Mr. Kaleel, with this --

MR. KALEEL: I'm sorry.

MR. RAO: Getting back to the same

provision, that language, could you just explain why you put that provision in the compliance dates? Would it be more appropriate to move that provision under applicability sections of different subparts?

MR. KALEEL: It might be appropriate in another location, yes.

MR. RAO: Okay.

MR. KALEEL: It doesn't have a direct relation to compliance dates.

MR. RAO: Thank you.

HEARING OFFICER FOX: Any further questions with regard to the Agency's response to number 13? Seeing none, that brings us to 14, regarding record-keeping, Ms. Bassi.

MS. BASSI: Nope.

HEARING OFFICER FOX: No questions? Any other questions on that issue or the response to number 14? Seeing none, to number 15, Ms. Bassi.

MS. BASSI: No further questions.

HEARING OFFICER FOX: On the part of any of the other participants? I'm seeing no indication of a question. That takes us to question 16, of course, regarding Section 217.156(k), Ms. Bassi.

MS. BASSI: No questions.

HEARING OFFICER FOX: Any other interest in following up with those issues? Seeing none, again, a one-word response to your question, Ms. Bassi. Any follow-up?

MS. BASSI: No follow-up.

HEARING OFFICER FOX: No follow-up to that? Any other clarifications sought by any of the other participants? None apparently. Number 18, Ms. Bassi.

MS. BASSI: No questions.

HEARING OFFICER FOX: Did anyone else wish to pose a follow-up? None? Ms. Bassi, I think we had talked about number 19 already.

MS. BASSI: That's correct.

HEARING OFFICER FOX: Satisfactorily answered for you?

MS. BASSI: Yes.

HEARING OFFICER FOX: Very good. Any other follow-up questions on that one? That takes us, of course, to number 20. I'm betting that you do have some follow-ups on that proposed alternative language.

MS. BASSI: Actually, very short.

HEARING OFFICER FOX: Very good. Please go ahead.

MS. BASSI: I -- Question 20 presents a

proposal for amending language that we viewed as better effectuating the perceived intent of the rule, and we discussed this with the Agency and they provided a response, and the follow-up here is that the Agency's language is acceptable to Midwest Generation and Midwest Generation will so state in either testimony or comments.

HEARING OFFICER FOX: Very good. That's certainly on the record on the basis of your testimony here, Ms. Bassi, and --

MS. BASSI: I can't testify.

HEARING OFFICER FOX: You cannot. That's correct. Thank you for reminding me of that.

MS. BASSI: I've been reminded several times.

HEARING OFFICER FOX: And once again today, apparently, but if that's suitable for a post-hearing comment or for prefiled testimony for the second hearing, those certainly would be two avenues very suitable for making that position known. But did you have any further follow-up questions or anything further to say?

MS. BASSI: No.

HEARING OFFICER FOX: Did any of the other participants with regard to that proposed alternative language? I'm seeing no interest in follow-ups, so that

brings us to question number 21, Ms. Bassi.

MS. BASSI: And we have already addressed question 21.

HEARING OFFICER FOX: We did in fact. You're right. Thank you for reminding me. Anyone else have follow-ups of their own that they wish to pose? Very well. Number 22, Ms. Bassi, regarding the --

MS. BASSI: No, I have no questions, and no questions on 23.

HEARING OFFICER FOX: On either 22 or 23, does anyone seek any clarification or follow-up? Seeing none whatsoever, that brings us to the end of the questions that Midwest Generation had posed for Mr. Kaleel, and I'm to the end of all of the questions prefiled -- I'm sorry -- responses filed by the Agency to the questions that were prefiled by the three entities who have been here today. I recall, checking the sign-in sheet that was placed at the door seeking the names of anyone who wished to testify, Mr. Gupta, I think you had placed your name on that, but of course you have been sworn in and testifying on behalf of the Agency, so we have run through all of the prefiled testimony that the Agency had filed and have no one else indicating in writing that they had wished to provide any testimony.

Is there anyone -- there are only a few of you left -- who did wish to provide any sworn testimony at this hearing? I'm seeing no indication that that is the case, and that would bring us to the point at which we can discuss some procedural issues regarding the second hearing, and it would be best probably to go off the record briefly to talk about those.

MS. ROCCAFORTE: Mr. Fox?

HEARING OFFICER FOX: Yes.

MS. ROCCAFORTE: I have attachment 8 to the TSD.

HEARING OFFICER FOX: Thank you for jogging my memory, but if you wouldn't mind distributing it, once we're back on the record, I could easily just entertain a specific motion. I apologize that I overlooked that after asking, but I appreciate you recalling that.

(Discussion held off the record.)

HEARING OFFICER FOX: The participants went off the record for a moment or two to address some procedural issues relating to filing of various documents that were both referred to in the course of the hearing today and the prefiling of documents -- various documents for the second hearing that is now on the calendar to take place on Tuesday, December 9.

There are specific spreadsheets that were the subject of a number of questions in the course of the hearing today, and the Agency has committed to make those available to the Board by Tuesday, October 21, 2008, so that the Board through its clerk's office may make available an Excel version of those spreadsheets to the participants who had sought that version of those documents.

The -- There were other questions raised in the course of hearing for which the Agency would like to wait for the availability of the transcript to assure that they are responding to the specific questions that were raised. Because we expect the transcript by Friday, October 24, the Agency has committed to file a written response to those specific questions reflected in the transcript of this hearing by Wednesday, November 5, 2008, and the participants who wish to prefile testimony for the second hearing, that as I mentioned is now scheduled to take place on December 9, will have a deadline of Tuesday, November 25, 2008. Because that's two weeks before the hearing and there is an intervening holiday weekend, a lengthy one, I would ask -- although I did not address this in going off the record -- that the mailbox rule not apply so that it's available with a full

two weeks for the Agency to review and prepare its questions and there won't be any delay with the mail delivery. Ms. Bassi?

MS. BASSI: I have a question about that. Is -- Electronic delivery to the Agency, does that satisfy the mailbox rule?

HEARING OFFICER FOX: The Board does need to receive it so it can be made part of its record and posted to COOL, but as a practical matter, electric delivery to the Agency and to the Board could happen simultaneously, I think, with the typing of just one more e-mail address, Ms. Bassi, if that's helpful.

MS. BASSI: And that's acceptable to the Agency?

MS. ROCCAFORTE: Yes.

MS. BASSI: Thank you.

HEARING OFFICER FOX: Any further questions? Very good. Any questions about the dates that I had just recited tediously? Any other procedural issues at all that people wanted to raise? Let me read my canned remarks that of course anyone may file written public comments in this rulemaking with the clerk of the board. Those may be made electronically through the clerk's office online, with which I think you are all quite

familiar, but our clerk's office has generally proven to be very helpful in walking people through that procedure. Those filings with the Board, whether paper or electronic, do need to be served on the Hearing Officer and the persons on the service list, and I would strongly recommend that you consult with the clerk to determine that your own service list is the most current one.

As I mentioned, copies of today's transcript, the transcript of today's hearing, should be available to the Board by Friday, October 24, and very soon after that the transcript should be posted at the Board's Web site, from which of course it can be read, copied and downloaded.

The second hearing will proceed as scheduled on Tuesday, December 9, beginning at 11 a.m. in Chicago with that November 25 deadline for prefiling testimony. My e-mail address and direct telephone number are posted on the Board's Web site so that you may always reach me with any procedural questions at least. Any further questions, then, before we adjourn?

MS. ROCCAFORTE: Attachment 8.

HEARING OFFICER FOX: You've had to remind me twice and I'm very embarrassed. We can take a moment to distribute those and entertain a quick motion.

MS. ROCCAFORTE: I'd like to move that

attachment 8 to the technical support document be admitted as an exhibit.

HEARING OFFICER FOX: And this of course was filed with part of the Agency's original filing back in May, if I'm not mistaken.

MS. ROCCAFORTE: Correct.

HEARING OFFICER FOX: Very good. I'll rush ahead since I suspect that there would not be any objection to the admission, marking that as Exhibit No. 4 and admitting that into the record of this proceeding, and having neither seen nor heard any objection to marking or admitting that, it is marked and admitted into the record as Exhibit No. 4 in this proceeding. And thank you again for reminding me. It was the end of a long day, I'm afraid, and I'm just forgetful.

If there is no other business to take place today, I want to thank certainly the Agency for submitting its written answers to the questions. I think that certainly helped things move expeditiously today. I thank all of the other participants as well for their questions and their participation, and with that, I'm sure I speak for the board members and board staff in again expressing our thanks, and we're adjourned.

(Hearing adjourned at 4:28 p.m.)

STATE OF ILLINOIS)
) SS
COUNTY OF BOND)

I, KAREN WAUGH, a Notary Public and Certified Shorthand Reporter in and for the County of Bond, State of Illinois, DO HEREBY CERTIFY that I was present at Illinois Pollution Control Board, Springfield, Illinois, on October 14, 2008, and did record the aforesaid Hearing; that same was taken down in shorthand by me and afterwards transcribed, and that the above and foregoing is a true and correct transcript of said Hearing.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my Notarial Seal this 24th day of October, 2008.

_____

Notary Public--CSR

#084-003688