1   BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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7   IN THE MATTER OF:)

     NITROGEN OXIDES EMISSIONS   )

8   FROM VARIOUS SOURCE   ) R08-19

     CATEGORIES:) (Rulemaking - Air)

9   AMENDMENTS TO 35 ILL. ADM.   )

     CODE PARTS 211 and 217.   )

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                         Hearing

13   Taken February 3, 2009

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1   WHEREUPON, THE FOLLOWING PROCEEDINGS WERE MADE OF

2   RECORD:

3   MR. FOX: Good morning, everyone and welcome

4   to this Illinois Pollution Control Board hearing.

5   My name is Tim Fox. And I'm the hearing

6   officer in this proceeding it is entitled Nitrogen

7   Oxides Emissions From Various Source Categories:

8   Amendments to 35 Illinois Administrative Code Parts 211

9   and 217. The board docket number for this rule making

10   is R08-19.

11   The Illinois Environmental Protection

12   Agency filed this rule making proposal on May 9th of

13   2008 and The Board accepted it for hearing in an order

14   dated June 5th of 2008.

15   We are, of course, holding today the third

16   hearing in this rule making. The first hearing took

17   place on October 14th, 2008 in Springfield and the

18   second took place over two days on December 9th and

19   December 10th, 2008 in Chicago.

20   I want to take just a moment to introduce

21   the other people who are present here from the board

22   with me today. To my immediate left is board member

23   Andrea Moore, who is the lead board member assigned to

24   this rule making, to her left is board member

1   Thomas E. Johnson and to my right is Dr. Anand Rao. We

2   also refer to him -- refer to you that way, apparently,

3   it's Mr. Anand Rao, who of course is known to many of

4   you from the board technical and scientific staff.

5   This proceeding, as is all other rule

6   making hearings, is governed by The Board, its

7   procedural rules and applicable information that is

8   relevant and that is not repetitious or privileged will

9   be admitted into the record of this hearing.

10   Please note that any questions that are

11   posed either by the board members or the staff are

12   intended solely to develop a complete and clear record

13   of this proceeding and do not reflect any prejudgment or

14   any conclusions regarding the merits of the agency's

15   proposal or any of the testimony offered on it.

16   The Board did receive pre-filed testimony

17   for the second hearing from the Illinois EPA on, I

18   believe, January 20th of 2009, specifically the

19   testimony of Mr. Robert Kaleel, Mr. Michael Koerber and

20   Dr. James Staudt.

21   And in speaking about procedural matters

22   with Ms. Roccaforte before hearing I believe she

23   intended to offer those three witnesses in that order.

24   And I see her agreeing that that is correct.

1   In addition to the testimony, pre-filed

2   testimony, from the three witnesses on behalf of the

3   Environmental Protection Agency The Board did receive on

4   Monday, February 2nd a pre-filed testimony from

5   Mr. Blake Stapper on behalf of United States Steel. And

6   the hearing officer order setting this hearing date and

7   the order for hearings did contemplate that we would

8   follow the pre-filed testimony with the testimony of any

9   other witnesses who wish to testify, including those who

10   did not pre-file at all. So, it's my intention at the

11   conclusion of The Agency's testimony by it's three

12   witnesses and all of the questions based upon that to

13   proceed to Mr. Stapper's testimony and any questions

14   that the other participants may have on that testimony.

15   In addition, the board also received

16   post-hearing comments from the Illinois Environmental

17   Regulatory Group or IERG. And I understand from Ms.

18   Hodge that IERG did not wish to offer any testimony

19   today on the basis of those post-hearing comments from

20   the second hearing.

21   MS. HODGE: That's correct, but IERG's

22   counsel, Alec Davis, and executive director probably

23   have some questions for the agency.

24   MR. FOX: Very good. Thank you.

1   Ms. Hodge, we also received post-hearing

2   comments from Saint-Gobain from Mr. Smith.

3   And it was my understanding, Mr. Smith,

4   that you did not wish to offer testimony either, but

5   were here perhaps to ask some questions or perhaps

6   solely to monitor the course of that proceeding.

7   Does that sound correct?

8   MR. SMITH: No. Actually, I'd like to

9   testify, but very, very brief.

10   MR. FOX: Very good. Perhaps what we can

11   do is have you do so after Mr. Stapper and then we can

12   proceed to you as soon as he's complete and the

13   questions are wrapped up.

14   MR. SMITH: Thank you.

15   MR. FOX: Surely.

16   And we also received post-hearing comments

17   from ConocoPhillips. And I believe that there was,

18   while no intent to testify on their part, their

19   representatives may have some questions that they wish

20   to pose of The Agency and the other witnesses; is that

21   correct, Ms. Hodge?

22   MS. HODGE: That's correct.

23   MR. FOX: Very good.

24   And finally, we also received some

1   supporting materials in response to questions from

2   The Board and The Agency, those materials from

3   United States Steel, which I believe were filed on

4   Friday the 30th, as well as I wanted to reflect that

5   those were part of The Board's records.

6   MS. HODGE: Thank you.

7   MR. FOX: If -- if any other participants

8   do wish to testify and doesn't need be right away, it

9   certainly can be at a break, which we probably will take

10   mid morning, there is a sign up sheet, it will be here

11   on the counter next to the court reporter. If you would

12   like to offer testimony and did not pre-file it or if

13   you would like to offer a comment at the conclusion of

14   the testimony, please, do so just as a housekeeping

15   matter so we can keep track of what we need to expect to

16   allow time for and how long this hearing may run.

17   At the conclusion of the testimony,

18   pre-filed and otherwise, we will, as time allows,

19   provide an opportunity for people to offer comments

20   those, of course, are not sworn but we will make

21   every -- make every effort to include an opportunity --

22   opportunity for people to offer those. I am aware of at

23   least one person who would like to offer a comment.

24   For the benefit of the court reporter,

1   finally, who's transcribing our hearing today, please,

2   make an effort to speak clearly. We can, as I said,

3   activate the public address system if that's helpful.

4   And, please, avoid talking at the same time as any other

5   person I know that will simplify her task and help us

6   have a clearest possible transcript.

7   I do want to take care of just one or two

8   quick housekeeping matters.

9   In looking over the transcript of our --

10 our last hearing on December 10th we had in the course

11 of that hearing effectively reserved Exhibit Numbers 15

12 and 16 for two USEPA charts that related to Midwest

13 Generations Boiler Number 3 and Joliet Number 71 Boiler

14 respectively. Ms. Bassi, at that hearing indicated that

15 she would submit those into the docket. I believe that

16 there was an issue of both the number of copies, the

17 quality of the copies and the availability of another

18 copy that did have the USEPA web page on the document

19 all of which would help make it a little clearer and a

20 little more useful for the record. Ms. Bassi had

21 indicated that she would submit those to the board that,

22 quote, improved copy, which she promptly did in a file

23 on December 19th and that she would then propose

24 admission formally into the record under the exhibit

7

1   numbers that we had set aside.

2   And Ms. Bassi, that sort of sets you up for

3   any motion that you may wish to offer.

4   MS. BASSI: Thank you.

5   I would move to offer Exhibit Number 15

6   titled Baldwin 3 and Exhibit Number 16 titled Joliet 71

7   Boiler into the record as exhibits.

8   And I would like to show Baldwin 3 to

9   Mr. Philbright here, who is from Baldwin.

10   MR. FOX: Mr. Philbright from --

11   MS. BASSI: Who is from Dynegy.

12   MR. FOX: And I should have noted in

13   speaking earlier that Ms. Bassi not only had served

14   those on The Board, but on the service list.

15   MS. BASSI: That's correct.

16   MR. FOX: And at this point I'll ask I

17   can't recall, Ms. Bassi, I'm sorry if you had formally

18   moved to -- those into the record.

19   Was there any objection to the admission of

20   those documents as Exhibits Number 15 and 16?

21   (No response.)

22   MR. FOX: Neither seeing nor hearing any,

23   Ms. Bassi, they will be admitted under those docket

24   numbers we had reserve on the hearing on December 10th.

1   MS. BASSI: Thank you.

2   MR. FOX: Secondly, I did want to note also

3   I'm sure all of you are aware Friday, January 30th, 2009

4   the Illinois Environmental Protection Agency did file a

5   motion to amend it's rule making proposal.   That motion

6   is directed to The Board.   And the 14-day response

7   period has not yet run.   However, that motion to amend

8   is in the record in these proceedings and we can deal

9   today with any questions or comments that may arise on

10   the substance of this motion.   Certainly, The Board will

11   take that up at very quick opportunity to address the

12   merits of that motion.

13   Any questions about our procedures or any

14   procedural issues that anyone wishes to address before

15   we get under way?

16   MS. ROCCAFORTE: I would.

17   MR. FOX: Ms. Roccaforte?

18   MS. ROCCAFORTE: Good morning.

19   My name is Gina Roccaforte, assistant

20   counsel one behalf of the Environmental Protection

21   Agency.   And with me today are Dana Vetterhoffer,

22   assistant counsel; Shannon Bilbrook, legal specialist;

23   Robert Kaleel, Manager of the Air Quality Planning

24   Section Division of Air Pollution Control Bureau of Air;

1   Mike Koerber, Executive Director Lake Michigan Air

2   Directors Consortium; and Dr. James Staudt, President

3   Andover Technologies Partners; also two engineers in the

4   Bureau of Air Vera Hoopta and Hojin Maji.

5   I'd just like to note for the record that

6   the agency objects to the pre-filed testimony of

7   Blake Stapper on behalf of United States Steel

8   Corporation.

9   As you indicated pre-filing deadline for

10   this testimony was January 20th, 20009 and Mr. Stapper's

11   testimony was filed yesterday and we haven't had

12   adequate time to prepare for this hearing.

13   And I'd also like to note for the record

14   that at the December 10th hearing information was

15   requested of United States Steel Corporation and

16   U.S. Steel submitted these supporting materials last

17   Friday, which hasn't given us much time to prepare, but

18   we will do our best.

19   Thank you.

20   MR. FOX: Very good. Thank you,

21   Ms. Roccaforte.

22   Any -- any further comments before we get

23   under way with the substantive testimony and questions?

24   (No response.)

1   MR. FOX: Very good

2   Ms. Roccaforte, you had indicated that it

3 made the most sense to proceed from Mr. Kaleel, to

4 Mr. Koerber, to Mr. Staudt. Does it make the most sense

5 to swear them all in at once and simply take care of

6 that before the agency begins?

7   MS. ROCCAFORTE: That would be fine.

8   MR. FOX: Excellent.

9 WHEREUPON, ROBERT J. KALEEL, DR. JAMES E. STAUDT AND

10 MICHAEL KOERBER WERE FIRST DULY SWORN AND THEN TESTIFIED

11 AS FOLLOWS:

12   MS. ROCCAFORTE: Forgive me, did you enter

13 the testimony --

14   MR. FOX: Yes. I'm sorry, I will make that

15 clear that under The Board's procedural rules the

16 provision is, I believe it's in Section 102424 F of

17 The Board's procedural rules the pre-filed testimony

18 will be entered as if read.

19   And Ms. Roccaforte, if you wish to begin

20 with a brief summary or any other introduction, please,

21 feel free to do that.

22   MS. ROCCAFORTE: I have introduced my

23 witnesses and I believe they may have statements -- I've

24 introduced them and I believe they will each make a

1   brief statement.

2   MR. FOX: Very well.

3   Mr. Kaleel, it looks like we're ready for

4   you if you're set to begin.

5   MR. KALEEL: Thank you.

6   I appreciate The Boards's attention to this

7   matter having this third hearing. We -- we hope that

8   we're able to clarify the record about this ongoing rule

9   making.

10   The purpose of my pre-filed testimony -- at

11   least one of the purposes was to explain the contents of

12   the amendment that was recently filed with The Board.

13   At the time that I wrote that testimony we were still

14   working on an amendment. And in fact, we're continuing

15   to work with affected industries and anticipate a future

16   amendment as well.

17   There are a couple of things that I'd like

18   to clarify about my testimony with respect to what

19   either was included in the amendment or not and also,

20   some additional efforts that we have with the group of

21   stakeholders.

22   First off, I think my testimony had

23   mentioned on page one that the Illinois EPA was

24   recommending a compliance date for refineries to

1   coincide with already planned maintenance turnarounds.

2   That language was, in fact, not included in the

3   amendment, so I just wanted to note that, that we

4   anticipated we'd be able to include language in our

5   amendment and we -- we've not been able to finalize that

6   yet. I would note that we are still working on this and

7   we have every expectation that we'll be able to work out

8   this issue with the affected industries, but that

9   amendment is not -- that language is not included in the

10   amendment that's now before The Board.

11   Also in my testimony we anticipated

12   continuing to work with two companies, Saint-Gobain

13   Containers and also Midwest Generation. And at the time

14   that I wrote the testimony we didn't really have those

15   discussions completed. I'm pleased to report to

16   The Board that we have completed discussions with these

17   companies. I guess at least from The Agency's

18   perspective the amendments that are now before The Board

19   resolve the outstanding issues or comments provided by

20   both of those companies.

21   So, I think -- I think those -- those

22   issues are resolved by this amendment.

23   I think that concludes my opening

24   statement.

1   MR. FOX: Very good. Thank you, Mr.

2 Kaleel.

3   Were there any questions that any of the

4 participants had for Mr. Kaleel on the basis of his

5 statement or his provided testimony here today?

6   Ms. Bassi, I'm sorry, through the glare I

7 didn't see you right away.

8   MS. BASSI: Am I out of the glare?

9   Thank you.

10   Do you -- how would you like us to do this?

11 Would you like us to file a reply to this testimony?

12   I'm speaking on behalf of Midwest

13 Generation.

14   Would you like us to file a response to

15 this motion to amend or would you like us to just

16 express our response today?

17   MR. FOX: If there was a response that you,

18 on behalf of your clients, wish to make either opposed

19 to or in favor of the motion you certainly would be free

20 to do that. The 14-day deadline would not run until

21 Friday the 13th of February that certainly would be

22 in -- in order, Ms. Bassi, if that answers your

23 question.

24   MS. BASSI: My client is not here today,

1   but we have reviewed this motion and we do accept the

2   motion as far as it applies to Midwest Generation. And

3   we would waive any further time for The Board to address

4   the motion at least as far as Midwest Generation goes.

5   MR. FOX: So noted, Ms. Bassi. Thank you.

6   MS. BASSI: Thank you.

7   MR. FOX: I think there was one other --

8   very good. Thank you.

9   Ms. Hirner.

10   MS. HIRNER: Thank you very much.

11   Deirdre Hirner, Executive Director.

12   I'd like to say I think the IERG and it's

13   members are reviewing the motion that was submitted by

14   The Agency. We think it's -- we appreciate The Agency's

15   efforts to work with the impacted regulated community.

16   And we think it's a good step in the right direction,

17   but we're still reviewing it for particular impacts.

18   With that I do have some questions for

19   Mr. Kaleel.

20   MR. FOX: Please proceed, Ms. Hirner.

21   MS. HIRNER: I'm going to kind of tie these

22   together these references, the bottom of pages two and

23   the bottom of page three of your pre-filed testimony.

24   We have some specific questions that we may follow up

1   on, but in light of some of the proposed changes that

2   we've seen in the motion just a couple just to clarify a

3   bit of confusion that we have about the purpose of this

4   proposed rule.

5   So, as we look at the language of the rule

6   and some of the other issues that have been addressed in

7   separate regulatory actions by the agency, more

8   specifically those that deal with the ozone designation

9   and maintenance plan. So, the question I'm going to ask

10   goes to the purpose of the proposed rule. Is this rule

11   before us intended by The Agency to be a NOx RACT rule

12   designed to achieve a 1997 ozone standard and the old

13   PM 2.5 standard or is the purpose of this rule now to be

14   a NOx control rule that's designed to meet some yet

15   uncertain emissions levels that will need to be achieved

16   to address the 2006 PM 2.5 24-hour standard and the 2008

17   ozone standard?

18   MR. KALEEL: That's quite a question.

19   Maybe I'll try to break this down.

20   I think there's been testimony filed by me

21   and also answered numerous questions on this in terms of

22   the purpose of the rule making. I think -- I think

23   we've been clear on the record that -- that this rule is

24   intended to address the requirements for NOx RACT

1   reasonably available control technology for our ozone

2   and PM 2.5 non-attainment areas and we believe that this

3   requirement will do that.

4   The RACT requirement is tied to the 1997

5   ozone standard and also tied to the 1997 PM 2.5

6   standard. It isn't the same question that we are

7   relying upon these reductions to attain those standards.

8   The whole purpose of a control program, of

9   course, is to reduce emissions, in this case of nitrogen

10   oxides, that will achieve or is intended to achieve

11   improvements in air quality both in the non-attainment

12   area and downwind of the non-attainment area.

13   It is true that the Chicago area is

14   attaining the 1997 ozone standard based on the three

15   most recent years of ozone data and that that was at

16   least one of the purposes of the public hearing

17   sponsored by the agency in December in Chicago was to

18   present the maintenance plan as required by USEPA to

19   support the re-designation petition for the 1997

20   standard.

21   Metro East area does not attain the 1997

22   standard for ozone or PM 2.5. There are areas, and I

23   think Mike Koerber will address this in his testimony as

24   well, there are areas directly downwind of Chicago that

1   are impacted by Chicago that have not yet attained the

2   1997 standard and certainly have not attained the new

3   recent revised ozone standards.

4   So, the purpose of the rule is to achieve

5   improved air quality, but it also is intended to address

6   the NOx RACT requirement. We don't and have never

7   characterized NOx RACT as being the only program that

8   will bring us into attainment of any of these standards.

9   It's one element of a very complex suite of control

10 measures that the agency is relying on to address

11 attainment of both of those standards.

12   MR. DAVIS: Alec Davis, also on behalf the

13 IERG.

14   Mr. Kaleel, you described the new standards

15 both for ozone and you described the new ozone and

16 PM 2.3 standard both in your testimony and in your

17 response just now.

18   When will the Illinois EPA be able to make

19 a determination regarding NOx RACT requirements for

20 these new standards?

21   MR. KALEEL: Obviously, we're just now

22 beginning on the process to address the new standards.

23 As I mentioned in my testimony USEPA just in December of

24 2008 had established the boundaries for PM 2.5 the

1   24-hour standard, so that that's, obviously, very recent

2   development ozone standard that was revised last year.

3   We still haven't even made a recommendation to USEPA.

4   The USEPA has not acted yet establishing non-attainment

5   boundaries. We do know that the Metro East area and the

6   Chicago area will not be attaining or are not attaining

7   the new ozone standard. We expect that USEPA will act

8   to finalize the non-attainment boundaries some time in

9   2010. If they do that we would be required to provide a

10   SIP provision, State Implementation Plan, revision three

11   years after that. So, that would be some time in 2013.

12   I don't know exactly when a RACT demonstration will be

13   required for that new standard. We know that there will

14   be a requirement to address RACT for the new standard.

15   The RACT requirement is -- is hardwired

16   into the Clean Air Act, so we know that there will be a

17   RACT requirement for these non-attainment areas for the

18   new standards, obviously, with a -- with a later date

19   than as required by the 1997 standard.

20   I add to that we fully expect that the NOx

21   RACT limits that we are proposing today would be

22   adequate and we would support this before USEPA would be

23   adequate to address the NOx RACT requirement for the

24   future standards. So, as long as they are implemented

1   in time The Board is -- has finalized those

2   requirements, we believe that this would address those

3   requirements at least for those areas and those sources

4   that are affected by this proposal.

5   MS. HIRNER: So, if I could please, just to

6   clarify, you said this NOx RACT rule will satisfy NOx

7   RACT for the future rule, the new standard, I'm sorry,

8   for the new standards?

9   MR. KALEEL: I don't think I said it quite

10   like that, but that would be our contention. If

11   there's -- if there's a breakthrough in technology

12   between now and the time that we have to address the

13   eight-hour standard that makes a different control level

14   reasonably available it's possible that we would need to

15   amend this proposal, but we believe given the short

16   amount of time that we have that this requirement would

17   satisfy NOx RACT for the future standards for the areas

18   and for the sources that are affected by this proposal.

19   MR. DAVIS: Thank you.

20   I'd like to know has the Illinois EPA

21   drafted a draft NOx RACT -- NOx RACT SIP for these

22   current standards?

23   MR. KALEEL: I guess I'm not quite certain

24   the nature of this question.

1   This -- this proposal when it -- when it's

2   adopted by The Board, presuming it is adopted by

3   The Board, would be part of our overall attainment

4   demonstration SIP. We would -- we would submit these --

5   these rules when finalized along with other supporting

6   documentation to USEPA with a statement. And I guess

7   this is what you're asking whether the statement is in

8   a -- the form of a letter saying we've adopted NOx RACT

9   and this constitutes our submittal. I mean, it could be

10   just, I don't mean to be flippant, but it could be that

11   our indication USEPA is just that simple, here's --

12   here's the proposed rule or here's the final rule,

13   here's -- here's the evidence that we have all the

14   technical support that we relied upon, here's the

15   evidence of hearing I mean, these are the kinds of

16   things that USEPA would require in a submittal. So, I

17   think -- I think this rule making constitutes NOx RACT.

18   I don't know if I exactly answered your

19   question.

20   MS. HIRNER: Just again to clarify, so when

21   this is submitted, and we're thinking about this in the

22   context of the -- the federal sanctions, so will this

23   meet a deadline to prevent possible federal sanctions?

24   MR. KALEEL: I guess -- I guess we hope so.

1   Obviously, we -- we don't -- we don't set The Board's

2   calendar. We can't predict when The Board will take

3   action on this.. They -- I mean, they certainly are

4   aware of the sanctions issue we've -- we've highlighted

5   that in our statement of reasons. So -- so, we -- we

6   hope it does. And to the extent that the -- the rule

7   making is still pending at the point that the sanctions

8   kick in I think at that point we'd have some discussions

9   with USEPA to see if they're satisfied that we made

10   enough progress to avoid the sanctions. I -- I -- I

11   guess it's -- given that it's statutory I -- I -- I

12   don't know whether a pending rule would be sufficient to

13   avoid the sanctions.

14   MR. DAVIS: Okay. Thank you.

15   My last question I'd like to ask just a few

16   really quick clarifications regarding the CAIR Rule

17   Program that you described on page three of your

18   testimony.

19   You state that the Illinois EPA will be

20   developing a regulatory proposal to incorporate non-EGUs

21   in the CAIR Program for the purpose of non-EGUs meeting

22   their emission budget obligations under the Federal NOx

23   SIP program.

24   Would you say that's a correct

1 characterization of your testimony?

2 　　　　　　　MR. KALEEL:　Trying to go back and find the

3 specific language in my testimony.　Excuse me.

4 　　　　　　　MR. DAVIS:　It's the first paragraph on

5 page three.

6 　　　　　　　MR. KALEEL:　I think the way you phrased

7 the question is the Illinois EPA working on a proposal

8 to include the non-EGUs in the trading program.　That

9 isn't what my testimony says.

10 　　　　　　　What I intended to say is that the NOx SIP

11 Call budget that was established for the non-EGUs that

12 that budget still applies under CAIR.　There is an

13 obligation upon the State of Illinois to -- to -- to

14 address how it intends to ensure that that budget is

15 being maintained in Illinois given that the NOx SIP Call

16 rules will soon be sunset as a result of the CAIR Rule

17 making we -- we know that we need to address that both

18 sunsetting the CAIR Rule for EGUs and to address in some

19 fashion the budget or the emission cap for non-EGUs.

20 That isn't the same thing as saying that the non-EGUs

21 will be included in the trade.

22 　　　　　　　MR. DAVIS:　What is the current

23 compliance -- compliance status affected units that are

24 subject to the non-EGU NOx SIP Call Program provided for

1   in sub part U that is, excuse me, are affected units

2   required to hold allowances for the 2009 compliance year

3   even though they have not been given the allowances

4   specified by sub part U?

5   MR. KALEEL: Well, I guess I would note

6   that this rule -- this rule making before us right now

7   is not a sub part U rule making. My -- my understanding

8   and I did not look at this specifically, but my -- my

9   understanding is that -- that the rule would work in the

10   manner that -- that you described and we understand

11   that -- that, because the non-EGUs are not in CAIR, they

12   will not be receiving allocations under the SIP

13   programs. We recognize the problem.

14   MR. DAVIS: Okay. Thank you.

15   That's all from us.

16   MR. FOX: Thank you.

17   Any further questions at this point from

18   any participant for Mr. Kaleel?

19   Mrs. Hodge?

20   MS. HODGE: Yes. Okay. I have just a

21   couple questions.

22   I don't think this is working.. Can you

23   hear me?

24   MR. FOX: You're quite clear. Yes.

1   MS. HODGE: Okay.   Mr. Kaleel, when I read

2   through the pre-filed testimony of The Agency for

3   today's hearing I noted that The Agency's witness,

4   Dr. Staudt, indicated that ConocoPhillips has not made

5   available it's information to support the cost

6   associated with recent ultra Low-NOx burn projects at

7   the Wood River Refinery.

8   Are you aware that ConocoPhillips submitted

9   cost information to the agency in January of 2008?

10   MR. KALEEL: Yes, I am aware of that.

11   MS. HODGE: Has the agency reviewed this

12   information?

13   MR. KALEEL: We -- we have reviewed it,

14   yes.

15   MS. HODGE: Has the agency made it

16   available to Dr. Staudt for review?

17   MR. KALEEL: We have not made it available

18   to date.

19   We noted in that the information was

20   provided to the agency with a claim of confidentiality

21   and we -- we -- we've respected that.   We've not shared

22   it with Dr. Staudt.

23   We have requested through -- through you

24   and ConocoPhillips that Dr. Staudt be allowed to review

1   this information, but to date he has not. We've not

2   received it, any assurance from you or ConocoPhillips

3   that that would not be a problem.

4   MS. HODGE: And when did the agency make

5   this request?

6   MR. KALEEL: We made the request after the

7   December 9th hearing. I don't remember the specific

8   date.

9   We also weren't aware before the

10 December 9th hearing that ConocoPhillips would be filing

11 that information to The Board or making this information

12 available to The Board, so we didn't really see a need

13 to share that information with Dr. Staudt prior to the

14 December 9th hearing.

15   We -- we fully anticipated and still

16 anticipate continuing dialogue with ConocoPhillips about

17 that information and about their specific concerns with

18 the rule. We weren't aware that they were going to

19 actually file.

20   MS. HODGE: Do you think it was on or about

21 January the 19th of 2009 when The Agency made that

22 request?

23   MR. KALEEL: I -- I don't recall the

24 specific date, but yeah, it was in January.

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

2   Thank you.

3   MR. FOX: Thank you, Ms. Hodge.

4   Any -- any further questions for Mr. Kaleel

5   this morning?

6   (No response.)

7   MR. FOX: Seeing -- seeing none,

8   Ms. Roccaforte, it looks like it's an appropriate time

9   to go to Mr. Koerber if he had a brief statement or

10   summary he would like to offer it appears to come to

11   that time.

12   Mr. Koerber, please go ahead.

13   MR. KOERBER: I wish to emphasize two

14   points in my pre-filed testimony. Number one: My

15   testimony summarizes the air quality analyses performed

16   by LADCO and it's contractors, it supports data and

17   implementation plans for ozone fine particles and K's in

18   the states of Illinois, Indiana, Michigan, Ohio and

19   Wisconsin. The variety of technical analyses provide a

20   weight of evidence approach for the states attainment

21   demonstration.

22   Number two, current ozone air quality

23   monitoring data in our model projections show that one

24   location in the Lake Michigan area is not attaining 1997

1   version of the eight-hour ozone standard namely Holland,

2   Michigan on the west coast of Michigan. Pursuant to the

3   Energy Policy Act of '05 EPA is required to address the

4   Western Michigan ozone problem. My written testimony

5   anticipated the release of EPA's Western Michigan ozone

6   study report that did happen on January 21st. And I

7   brought paper copies of it to The Board today. I want

8   to hand those out. I don't know how that happens.

9   The report is available electronically on

10 EPA Region five's web site.

11   Two key findings in EPA's report are number

12 one, Holland, Michigan does not now nor will by it's

13 attainment date meet the 1997 version of the eight-hour

14 ozone standard.

15   And number two, shoreline areas in Western

16 Michigan like Holland are dominated by ozone transport,

17 for example, the technical analyses show that

18 one-quarter, 25 percent, of the ozone on high

19 concentration days at Holland is from Northeastern

20 Illinois.

21   Thank you. That concludes my summary of my

22 testimony.

23   MS. ROCCAFORTE: I have some questions for

24 Mr. Koerber.

1   MR. FOX: Please, go ahead, Ms. Roccaforte.

2   MS. ROCCAFORTE: Has LADCO conducted any

3   sensitivity analyses using the air quality model to

4   determine whether NOx emissions reduction improved ozone

5   in 2.5 air quality?

6   MR. KOERBER: Yes.   The weight of evidence

7   approach, as I indicated, includes a variety of

8   technical analyses.   One of the technical analyses was

9   to look at the sensitivity reducing ozone precursors

10   such as VOCs, organic compounds or oxidized nitro NOx.

11   The technical analyses did show that reduction in VOC,

12   reduction in NOx, would improve ozone concentration in

13   downwind areas.

14   MS. ROCCAFORTE: In general would you say

15   that additional NOx reductions yield additional air

16   quality benefits?

17   MR. KOERBER: Sensitivity analyses did show

18   that more emission reduction resulted in more

19   improvement in air quality.

20   MS. ROCCAFORTE: Do you know if the

21   St. Louis Metropolitan area attained the 1997 ozone

22   standard?

23   MR. KOERBER: Based on the 2006 to 2008

24   monitoring data it has not.   I believe there's at least

1   one location that is out of compliance with the 1997

2   version of the standard.

3   MS. ROCCAFORTE: And isn't it true that

4   USEPA tightened the ozone standards in 2008?

5   MR. KOERBER: In March of 2008 Rob Kaleel

6   did indicate the EPA lowered ozone standards from 85

7   parts billion to 75 parts per billion.

8   MS. ROCCAFORTE: Is the Chicago area

9   attaining that standard?

10   MR. KOERBER: The new lower standard?

11   MS. ROCCAFORTE: Yes.

12   MR. KOERBER: It is not attaining the new

13   75 EPA standard.

14   MS. ROCCAFORTE: Do you know if the

15   St. Louis area is attaining that standard?

16   MR. KOERBER: It is not. And again, that's

17   based upon monitoring data, real world measurements,

18   collected by this agency.

19   MS. ROCCAFORTE: Last question: Was

20   Illinois's NOx RACT proposal included in the 2012 model

21   run that demonstrated attainment of the 1997 ozone

22   standard in Holland, Michigan?

23   MR. KOERBER: The NOx RACT emission

24   reductions were included along with a number of other

1   control measures there are a bundle of control measures

2   this were included in this modeling in order to show

3   what the future air quality would be.

4   MS. ROCCAFORTE: Thank you.

5   MR. FOX: That's it?

6   Any further questions for Mr. Koerber this

7   morning?

8   Ms. Hirner or Mr. Davis, I see both of you

9   indicating.

10   MR. DAVIS: Thank you.

11   Mr. Koerber, I'd like to ask you a few

12   questions about the role that base year choice and

13   meteorology played in the model results.

14   You state that meteorology similar to 2002

15   will make it less likely that the ozone standard will be

16   attained, this is referring to bottom of page five and

17   top of page six of your testimony.

18   Is that an accurate statement?

19   MR. KOERBER: Ozone is very sensitive to

20   two primary parameters, the emissions, the ozone

21   precursor emissions and meteorology. So, hotter summers

22   result in higher ozone concentrations. So our latest

23   modeling analysis was included in our technical support

24   document relying on 2005 meteorology we found to be

1   above normal based on statistical analyses, but not as

2   severe in 2002. 2002 was very extreme meteorology and

3   resulted in much higher ozone concentrations.

4   MR. DAVIS: Thank you.

5   Could you elaborate perhaps a little bit on

6   the role that emissions reductions would play in -- in

7   those base year differences?

8   MR. KOERBER: Emissions reductions would

9   result in lower estimates of future year air quality,

10   but with 2002 meteorology the models projecting somewhat

11   higher future year air quality levels compared to 2005

12   meteorology.

13   MR. DAVIS: It's my understanding that a

14   model run was performed using 2002 base year with future

15   years emissions reduction included and it did not show

16   attainment for ozone. Is that accurate?

17   MR. KOERBER: As I indicated, the

18   attainment demonstration was based upon a weight of

19   evidence approach where we considered a number of

20   modeling analyses, a number of emissions analyses and

21   analysis of ambient monitoring data. And it was the

22   collective review of that information that provided the

23   foundation for the state's attainment demonstration

24   not -- not one single model.

1   MR. DAVIS: I see.

2   Is -- is it also true that an important

3   component of modeling protocol, one that improves the

4   model accuracy, is to use what is known as relative

5   reduction factors to apply against actual ozone data

6   measured in base year to predict future levels?

7   MR. KOERBER: Yes, that is how we actually

8   use the mathematical computer model in our technical

9   analysis. We use the relative change in air quality in

10   combination with observed monitoring data, estimate the

11   future air quality. So, you're absolutely right as to

12   relative change that is important in terms of model.

13   MR. DAVIS: Did the modeling based on the

14   2005 base year, essentially, predict the ozone

15   attainment levels that have now been measured in the

16   Chicago area and elsewhere and isn't it these modeling

17   results that are being used to support the Illinois EPA

18   rule request to designate Chicago as a non-attainer?

19   MR. KOERBER: Yes, our model projections

20   using the 2005 meteorology due tend to agree with the

21   most current monitoring data and that is not surprising

22   given that meteorology is somewhat similar to what we've

23   observed over the past couple of summers it was not as

24   severe as what we saw in 2002.

1   MR. DAVIS: Thank you.

2   Have you evaluated the PM 2.5 air quality

3   data through 2008 to determine the status of attainment

4   of PM 2.5 standard?

5   MR. KOERBER: I do not believe states have

6   certified 2008 monitoring data, so no, I've not reviewed

7   2008 final data submitted by the states.

8   MR. DAVIS: Thank you.

9   What about based on the '06 and '07 data.

10   MR. KOERBER: Question again, based on 2006

11   or 2005 to 2007?

12   MR. DAVIS: Whether you have been able to

13   determine status of attainment with the PM 2.5 standard.

14   MR. KOERBER: There are a number of sites

15   that are not in compliance based on 2005 to 2007 data.

16   MR. DAVIS: Last series of questions: At

17   the bottom of page five and top of page six of your

18   testimony, again, you state that the 2006 PM 2.5

19   standard and 2008 ozone standard were not obtained in

20   several sites in the Lake Michigan area. Is this

21   conclusion based on using '05 base year in the actual

22   PM 2.5 ozone design values from '05?

23   MR. KOERBER: It is based on the modeling

24   using the 2005 base year condition, correct.

1   MR. DAVIS: What base year do you believe

2   will be used for the PM 2.5 and ozone modeling for these

3   new standards?

4   MR. KOERBER: That question is currently

5   being discussed by the states and no decision has been

6   made.

7   MR.. DAVIS: Do you believe that a more

8   current base year and more current air monitoring data

9   would make a difference in your conclusions?

10   MR. KOERBER: With regard to the 1997

11   standards or the 2006 version?

12   MR. DAVIS: The new standards.

13   MR. KOERBER: Really don't know the answer

14   to that.

15   Certainly, in putting together our protocol

16   for the next round of state implementation analyses we

17   will look at the most current air quality -- air quality

18   information we want to use the most up to date

19   information.

20   MR. DAVIS: Thank you very much.

21   That's all I have.

22   MR. FOX: Very good. Thank you, Mr. Davis.

23   Any further questions for Mr. Koerber?

24   Ms. Hodge, I see your hand.

1   MS. HODGE: Thank you. I have just a few

2   questions..

3   Katherine Hodge.

4   Mr. Koerber, did LADCO evaluate the amount

5   of NOx reductions needed to meet the standards?

6   MR. KOERBER: We did not use the modeling

7   to set emission reduction targets or percent control,

8   rather we evaluated the bundle of control measures that

9   were required of each of the states and that the states

10 collectively agreed to implement in order to improve air

11 quality in the region.

12   MS. HODGE: Thank you.

13   Do -- do the LADCO models reflect any

14 recent emission controls in reduction and by recent I

15 mean 2005 by various industrial categories, for example,

16 such as petroleum refineries?

17   MR. KOERBER: With respect to petroleum

18 refineries we are aware there were a number of federal

19 consent decrees that were incorporated in our emission

20 inventories. In addition to NOx RACT there are number

21 of other control measures, both state and federal, that

22 are included for non-EGU point sources, but really all

23 sectors of the inventory have control included.

24   MS. HODGE: Okay. Just to clarify, so your

1   model did consider the post '05 reductions at petroleum

2   refineries?

3   MR. KOERBER: The -- the inventory -- when

4   we project future year air quality we start with the

5   base year inventories, in this case '05. We apply

6   various growth factors by sector for mobile sources,

7   point sources, utilities, etc. And then on top of that

8   we apply all of the control programs, quantify those

9   emission reductions and that's the future year emission

10   estimate that we have available. That's the inventory

11   we plug in the model statement, the future air quality.

12   MS. HODGE: Okay. So, would the -- the

13   petroleum refinery consent decree reductions be a factor

14   into --

15   MR. KOERBER: Yes.

16   MS. HODGE -- the controls. Yes?

17   MR. KOERBER: Yes.

18   And we have a contract report that

19   discusses those particular consent decrees, as well as

20   other consent decrees that were included in our emission

21   inventory.

22   MS. HODGE: Thank you.

23   Could you tell us a little bit about how

24   you consider the contribution of mobile sources in doing

1   this model?

2   MR. KOERBER: We actually undertook a very

3   rigorous approach for the mobile sector. We worked with

4   the transportation agencies, formally CATS, in the

5   Chicago area with link base, so segments of roadway got

6   information on the amount of traffic, the speed of

7   traffic, over each -- much of those links as a function

8   of day of week, time of day. So, highly detailed

9   emissions inventory for on-road mobile sources based

10   upon our consultation with metropolitan planning

11   organizations and used EPA's mobile six model to

12   estimate the amount of emission reduction that we would

13   expect as a result of a number of different federal

14   control programs both tailpipe and fuel programs.

15   MS. HODGE: Okay. Thank you.

16   I have to take just a quick break, please.

17   WHEREUPON, THERE WAS A SHORT PAUSE IN PROCEEDINGS;

18   SUBSEQUENT TO WHICH THE FOLLOWING PROCEEDINGS WERE MADE

19   OF RECORD:

20   MS. HODGE: That's all I have for

21   Mr. Koerber. Thank you.

22   MR. FOX: Thank you, Ms. Hodge.

23   Any -- any further questions by any of the

24   participants for Mr. Koerber?

1   MS. ROCCAFORTE: I have a few follow up.

2   Mr. Koerber, do you know if the St. Louis

3   area has attained the 1997 PM 2.5 standard?

4   MR. KOERBER: I do not believe it has.

5   MS. ROCCAFORTE: Do you know if it will

6   attain the standard by the applicable attainment date?

7   MR. KOERBER: It will not according to our

8   model projections.   So, my understanding is based on the

9   most current air quality monitoring data based on our

10   model projections it will not meet the PM 2.5 standard

11   by it's by the applicable attainment..

12   MS. ROCCAFORTE: Thank you.

13   I have nothing further.

14   MR. FOX: Any more questions?

15   (No response.)

16   MR. FOX: I understand Mr. Rao has a

17   question for Mr. Koerber.

18   MR. RAO: One question.

19   Mr. Koerber, on page four of your pre-filed

20   testimony you have noted that you did not include

21   midwest ozone groups modeling as part of the weight of

22   the evidence that you stated that several reductions

23   were made by midwestern group modeling were counter to

24   USEPA guidance.   Could you, please, elaborate on what

1   those were?

2   MR. KOERBER: Right.

3   One of the assumptions that were counter to

4   EPA guidance is the use of ambient monitoring data that

5   EPA specifies procedure for averaging ambient monitoring

6   data with the modeling as part of the attainment

7   demonstration. The approach that they use was not

8   consistent with EPA's procedure for using monitoring

9   data. Given that this attainment demonstration must

10 meet EPA guidelines in order to be approved by EPA we

11 were not able to include that analysis in our weight of

12 evidence demonstration. We nevertheless did meet with

13 the company. We did discuss their information and

14 pointed out our concerns.

15   MR. RAO: Okay. Thank you.

16   MR. FOX: Ms. Hirner? Yes.

17   MS. HIRNER: Deirdre Hirner with Illinois

18 Environmental Regulatory Group.

19   May I ask a follow up though to clarify?

20   The -- the conclusions reached by the

21 modeling and the LADCO modeling after the two groups met

22 it's my understanding, and could you clarify, ended up

23 in kind of the same place?

24   MR. KOERBER: The -- their conclusions was

1   that all sites would be in compliance with the ozone

2   standard.

3   Our conclusion was that we still had

4   residual non-attainment problems in western Michigan.

5   MS. HIRNER: Okay. Thank you.

6   MR. FOX: Any further questions for

7   Mr. Koerber?

8   MS. ROCCAFORTE: I'd like to move that the

9   Western Michigan ozone study draft report be entered as

10   an exhibit. I forgot to do so before.

11   MR. FOX: My -- my next question: The

12   agency had kindly circulated copies of the Western

13   Michigan ozone study draft report dated January 21st,

14   2009. Is that the correct date, Ms. Roccaforte?

15   MS. ROCCAFORTE: Correct.

16   MR. FOX: Great.

17   And move that that be admitted into the

18   record of proceeding as Exhibit Number 19. Was there

19   any objection to that motion?

20   (No response.)

21   MR. FOX: Neither seeing nor hearing any it

22   will be marked, Ms. Roccaforte, as Exhibit Number 19.

23   Thank you.

24   MS. ROCCAFORTE: Thank you.

1   MR. FOX: Once again, any further questions

2   for Mr. Koerber on the basis of his testimony or his

3   answers today?

4   (No response.)

5   MR. FOX: Then, Ms. Roccaforte, it appears

6   we've come to the time for Mr. Staudt and his pre-filed

7   testimony and questions if he's prepared to offer a

8   brief introduction or summary it appears that would be

9   in order right how.

10   MS. ROCCAFORTE: Before he does that I

11   would like to move to enter four exhibits -- four or

12   five.

13   I don't know I recall the number.

14   MR. FOX: We can take a second. That's

15   just fine.

16   WHEREUPON, THERE WAS A SHORT PAUSE IN PROCEEDINGS;

17   SUBSEQUENT TO WHICH THE FOLLOWING PROCEEDINGS WERE MADE

18   OF RECORD:

19   MS. ROCCAFORTE: Five tables to be

20   incorporated into his pre-filed testimony.

21   MR. FOX: Do you have -- does the agency

22   have copies of those?

23   MS. ROCCAFORTE: We -- we do.

24   MR. FOX: Very good. Thank you very much.

1   With that number of exhibits,

2   Ms. Roccaforte, without proceeding to any motion to

3   admit, why don't we preliminarily at least give them

4   some exhibit numbers so that it's at least as clear as

5   possible to folks exactly which ones we would be talking

6   about.

7   Do you have in front of you one that you

8   might name as the next Exhibit Number 20?

9   MS. ROCCAFORTE: Calculation of available

10 COG, which stands for coke oven gas after consumption

11 and reheat furnaces.

12   MR. FOX: Is there a date or any source

13 that might help distinguish that?

14   MS. ROCCAFORTE: No.

15   MR. FOX: That should be just fine. No

16 worries.

17   And that again, would be number 20.

18   Preliminarily would there be a next exhibit

19 that we would want tentatively to assign as Number 21?

20   MS. ROCCAFORTE: Entitled boiler analysis.

21 I need to clarify that one from the other ones. This

22 one is boiler analysis calculation of Siebenberger

23 Exhibit A information COG burn and reheat furnaces per

24 Siebenberger's December testimony.

1   The next one is a chart titled total boiler

2   COG usage.

3   MR. FOX: Again, COG, coke oven gas.

4   MS. ROCCAFORTE: Correct.

5   MR. FOX: Thank you.

6   And that would be, of course, 22

7   tentatively.

8   MS. ROCCAFORTE: Thank you.

9   The next one is boiler analysis calculation

10   of Siebenberger Exhibit A information with 2008 COG rate

11   35-day scrubber maintenance.

12   And the final one?

13   MR. FOX: Sorry to interrupt that

14   proceeding one, Number 23; and this one Number 24.

15   Sorry to state the obvious.

16   MS. ROCCAFORTE: Thank you.

17   This one is boiler analysis calculation of

18   Siebenberger Exhibit A information with 2008 COG rate no

19   COG scrubber maintenance.

20   MR. FOX: Thank you for bearing with us

21   while we try to minimize any risk of misunderstanding or

22   mislabeling.

23   The Agency is passing these out. They

24   should be in your hands fairly shortly then we can

1 proceed.

2   Ms. Roccaforte, thank you for your

3 patience.

4   MS. ROCCAFORTE: That's all I have.

5   MR. FOX: Thank you once again to The

6 Agency for making these copies available. It looks like

7 they are or are very nearly distributed to the parties

8 here today.

9   You, I can't recall, Ms.. Roccaforte, if you

10 made a motion. Something I always seem to forget.

11   MS. ROCCAFORTE: I believe I did, but I can

12 do so again.

13   I move that these tables be entered as

14 exhibits and incorporated into our Dr. Staudt's

15 pre-filed testimony.

16   MR. FOX: Thank you very much for the

17 repetition..

18   Ms. Roccaforte has, of course, moved that

19 these exhibits as described earlier as we assigned

20 preliminary exhibit numbers to them, Numbers 20, 21, 22,

21 23 and 24 be admitted into the record as she had

22 described.

23   Is there any objection?

24   MS. HODGE: Mr. Fox, Katherine Hodge,

1   United States Steel Company Corporation.

2   I -- I don't have a firm objection right

3   now, but I would ask you to wait to rule on her motion

4   until we do have an opportunity to review those perhaps

5   at the next break.

6   MR.. FOX: That seems fair under the

7   circumstances.

8   Dr. Staudt is, of course, here and is, I

9   believe, perhaps to offer his testimony.

10   MS. HODGE: I understand that.

11   MR. FOX: Make himself available for

12   questions. I'll make a note. We can address that.

13   In the meantime they are, of course, in

14   front of you for your review.

15   MS. HODGE: Thank you.

16   MR. FOX: With that, Ms. Roccaforte, I

17   think we have come to the time for any summary or

18   introduction that Dr. Staudt would want to offer, unless

19   you have something else you wish to address?

20   MS. ROCCAFORTE: No. I will turn it over to

21   Dr. Staudt.

22   MR. FOX: Dr. Staudt, good morning. Thank

23   you for waiting.

24   DR. STAUDT: Thank you.

1   My name is James Staudt. Thank you for

2   giving me the opportunity to come here to speak before

3   this board again.

4   And just to -- I have been engaged by the

5   Illinois EPA to rule making as since the last hearing.

6   I did pre-file testimony. Very briefly summarize it.

7   MR. FOX: Dr. Staudt, before you do that if

8   you could pull the microphone just a little closer to

9   your face. I'm getting the sign that some people are

10 having a hard time hearing. I apologize. Thank you for

11 that.

12   DR. STAUDT: Okay. Thank you.

13   Just briefly summarize my pre-filed

14 testimony. At the last hearing U.S. Steel presented

15 arguments for why they felt the emissions rates proposed

16 in the rules to be increased by my pre-filed testimony

17 for this hearing stated that I found their argument

18 unconvincing and in general under two grounds. One is

19 that my opinion was that there was, based upon some of

20 the conclusions and assertions that they made, there was

21 inadequate supporting information. Second, I -- I found

22 some -- I found what appears to be some errors in the

23 calculations for emission estimates.

24   Some things have happened since my

1   pre-filed testimony as already has been discussed.

2   Friday night we received information from U.S. Steel

3   that we requested that included the report by URS that

4   was revised on January 19th, 2009. It was a proposal

5   from Bloom Engineering, a burner supplier, that is dated

6   January 22nd, 2009. And there was also some information

7   on coke oven gas usage, historical coke oven gas usage

8   at the boilers at the Granite City site.

9   In addition to that I received last night a

10   copy of Mr. Stapper's testimony. I'd like to impress

11   upon you I appreciate this information. It will give us

12   the opportunity to take a close look at it. We --

13   having had a short time to look at it I don't know that

14   I've been able to fully review it, but there are a few

15   pieces of information that I would like to present here

16   that are related to some of the information I have been

17   provided.

18   First, I would like -- like to draw your

19   attention to Exhibit 20. It's the table. Exhibit 20

20   bears very similar resemblance to table five of my

21   pre-filed testimony. Just as a matter of introduction,

22   because coke oven gas has significant amounts of fuel

23   bound nitrogen is the amount of fuel -- amount of coke

24   oven gas that is fired at either the boilers or at slab

1   reheat furnaces is significant with respect to the

2   amount of NOx that we generate.

3   And what we show here on Exhibit 20 there's

4   information that was taken from Mr. Siebenberger's

5   pre-filed testimony, Exhibit B, which is total heat

6   input. Mr. Siebenberger provided us in the last hearing

7   a breakdown of their assumed percent of coke oven gas

8   that was used in each reheat furnace and that that is --

9   these percentages are used to estimate the amount of

10   coke oven gas used in his assumptions for each reheat

11   furnace.

12   In my pre-filed testimony I referred to

13   information provided by Mr. Siebenberger to Mr. Kaleel

14   regarding the total available coke oven gas and that is

15   shown, see line total available coke oven gas of three

16   million 830,400 million BTUs per year. That is based

17   upon information provided by Mr. Siebenberger and

18   Mr. Kaleel. Of course, if you have the amount of coke

19   oven gasses you can't burn more coke oven gas than is

20   available. So if, assuming, based upon the amount of

21   heat that Mr. Siebenberger, coke oven gas that is used

22   in reheat furnaces you can develop total amount of coke

23   oven gas that is used in those reheat furnaces, compare

24   that to the available coke oven gas and find out well,

1   how much is actually available to the boilers, Boilers

2   11 and 12. And you can find that balance available to

3   the boilers is 36,180 million BTUs per year.

4   Now, if you -- if you compare that to the

5   amount of coke oven gas that is estimated to be used as

6   part inherent to Mr. Siebenberger's Exhibit A his

7   pre-filed testimony now this, of course, is something

8   that I had to calculate and it is shown in my pre-filed

9   testimony how I arrive at these. You can see the total

10   whether, coke oven gas input, you see it's, whether you

11   assume 60 percent usage when the blast furnace is down

12   or 40 percent with the blast furnace gas down either way

13   you're been 1.4 million Btu, which is over a trillion.

14   So, in essence, you have a short fall. You can't use

15   the amount of coke oven -- there isn't enough coke oven

16   gas available to satisfy all of the assumptions that

17   Mr. Siebenberger uses in his estimates of emissions.

18   Exhibit 21 actually is -- is very similar

19   to a number of tables that are in my pre-filed

20   testimony. It, essentially, uses the same -- many of

21   same assumptions that U.S. Steel used in order to come

22   up with their emissions estimates. And I won't review

23   the tables that are -- that are in my -- my pre-filed

24   testimony, but what -- what with this spread sheet

1   you're able to compare what -- determine what the annual

2   emission rate would be. And if you use assume that the

3   amounts of coke oven gas that Mr. Siebenberger testified

4   to are being used in the reheat furnaces and therefore,

5   only about 36,000 million Btu's are available to the

6   boilers you come up with a -- an annual NOx emission..

7   It's using the very same emission rates per each gas as

8   provided by U.S. Steel and it's consultants come up with

9   annual emission rate of 0.05, which is under the -- the

10   limit that is proposed for the rule.

11   Now, the numbers Mr. Siebenberger assumed

12   in his -- in his testimony for it's usage in the reheat

13   furnace -- reheat furnaces is as he said he wanted to

14   assume the maximum both reheat furnaces and for the --

15   for the boilers. They don't. They made -- may

16   historically -- they have -- perhaps they haven't used

17   quite as much as is shown there, but if you go to

18   Exhibit 22 based upon information that was provided

19   Friday night it showed a trend of coke oven gas usage in

20   the boilers. And if you go back to -- if you can see

21   based upon Exhibit A if you go back to exhibit or excuse

22   me, Exhibit 20, the assumptions for Mr. Siebenberger's

23   emission estimates from Boilers 11 and 12 or U.S. Steel

24   emission is based on about 1.4 million -- million Btu's

1   per year. And as you can see there has not been that

2   much -- we have not seen that much usage since at least

3   back 2001.

4   So, it's the trend over the last -- since

5   2001 has generally been downward. As you can see

6   they've been using less and less. And this is the total

7   using for all boilers one through 10, 11 and 12

8   recognizing that once boilers one through 10 are

9   decommissioned coke oven gas that would have been burned

10   and boiled in one through 10 would therefore be burned

11   in Boilers 11 and 12.

12   So, historically we see the general trend

13   downward in -- in the level of coke oven gas that is

14   used in -- in the boilers. And what that suggests that

15   is most likely being used in the reheat -- increasingly

16   being used in repeat furnaces.

17   The -- 2008 was roughly 450 thousand

18   million Btu's were actually used in the coke oven to

19   coke oven. And the coke oven gas was actually used in

20   the -- in the boilers. If you use that the two -- the

21   2008 coke oven gas usage consumption that is provided --

22   that was provided to us as Attachment C of -- on Friday

23   of U.S. Steel's submission what you'll see is that,

24   again, using the emission rates assumed by -- for -- for

1   firing gas the NOx emission rates firing associated with

2   the firing coke oven gasses that -- that are -- you

3   estimate in U.S. Steel you end up with, if you look down

4   at the bottom you will see NOx rate under annual NOx

5   rate 0.083 pounds per billion Btu's, again, very close

6   to the proposed emission.

7   Finally, if you perform that calculation

8   again and leave out -- leave out the -- the -- the time

9   for the increased emissions due to scrubber maintenance

10   you would see that, again, going down to what that NOx

11   emission record would be it comes to 0.074 parts per

12   billion Btu's under the emission rate proposed in the

13   rule.

14   And again, I want to reaffirm that these

15   are -- this is using the same NOx emission rates that

16   URS has provided us in air analysis. So, the difference

17   is we're -- we're looking at the actual coke oven gas

18   usage as used by U.S. Steel.

19   So, as I've shown here our calculations

20   show that it is possible for U.S. Steel to achieve the

21   proposed emission rate for Boilers 11 and 12.

22   MR.. FOX: Does that wrap up your --

23   DR. STAUDT: Thank you.

24   MR. FOX: Didn't mean to rush you. I'm

1   sorry..

2   Are there any questions for Dr. Staudt on

3   the basis of his pre-filed testimony and comments? Is

4   there anyone who wishes to pose a question at this time

5   for Dr. Staudt? Ms. Hirner?

6   MS. HIRNER: Thank you, Mr. Fox.

7   Dr. Staudt, just a couple of -- couple of

8   questions.

9   And the first one is with regard to the

10   technical support document on page five, the technical

11   support document with reference to industrial boilers.

12   MR. FOX: Ms. Hirner, just for

13   clarification, that's the technical support document

14   originally filed by The Agency with it's proposal in

15   this hearing?

16   MS. HIRNER: Yes, it is.

17   MR. FOX: Thank you. Sorry to interrupt

18   you.

19   MS. HIRNER: Thank you.

20   Second paragraph referencing combustion

21   modification techniques: These techniques are often

22   less expensive than most combustion techniques such as

23   SCR and SNCR. However, a combination of combustion and

24   post-combustion control can sometimes be the most

1   effective approach.

2   So, should I read that statement to say

3   that SNCR is appropriate as an appropriate control for

4   purposes of achieving NOx RACT?

5   DR. STAUDT: Well, it is my opinion it has

6   been used for NOx RACT. So, I think that that pretty

7   much states that it is appropriate and that's not just

8   my opinion it's the opinion of the number of companies

9   that have selected SNCR for NOx RACT compliance.

10   MS. HIRNER: Then as a follow up to that,

11   same page five, third full paragraph, second sentence:

12   To economically control NOx RACT or NOx emissions from

13   such boilers the -- it may be necessary to use fuel that

14   is low in nitrogen content and choose combustion

15   conditions that generate lower amounts of NOx during

16   combustion.

17   Should I read that to say that you believe

18   mandatory fuel switching is an appropriate means of

19   control to achieve NOx RACT?

20   DR. STAUDT: No. My opinion is that I

21   think you're -- you're reading something into that that

22   is not intended. Just generalized this section points

23   are that for every situation you're going to have a

24   unique set of circumstances that need to be evaluated.

1   And in some cases someone may choose combustion control.

2   In some cases someone may choose combustion control and

3   post-combustion controls. In other cases if someone has

4   the ability to easily switch fuels they may go to a

5   lower -- they go may to lower nitrogen fuel. So that

6   this is not to state that any specific approach should

7   be defined as RACT. As we've discussed, testified

8   couple of times, RACT is really an emission rate that is

9   achievable at a reasonable cost that we have discussed,

10   not a specific technology.

11   MS. HIRNER: So, have you done any specific

12   evaluation of those alternative techniques?

13   DR. STAUDT: I'm not sure what you're

14   talking about specific to a particular facility?

15   MS. HIRNER: Or emissions, yeah, facility.

16   DR. STAUDT: Well, I've done -- I've done

17   it for other -- other clients, but not -- not specific

18   to this other than what you see -- other than what you

19   see in the mechanical support document that that --

20   that's what was provided. I'm not sure if you are

21   looking for a specific facility's --

22   MS. HIRNER: The subject facility's --

23   specific to the facilities that are subject.

24   DR. STAUDT: No. As I testified before we

1   did not provide -- we did not do analysis for each and

2   every facility in Illinois.

3   MS. HIRNER: Did you do it for any of the

4   facilities in Illinois?

5   DR. STAUDT: Well, we've been taking a look

6   at Boilers 11 and 12 lately based upon some -- some of

7   the information from U.S. Steel, but -- but other than

8   that we have -- we have not been examining it, not been

9   doing unit by unit type of analysis.

10   MS. HIRNER: May I ask another question?

11   MR. FOX: Please, go ahead, Ms. Hirner.

12   MS. HIRNER: The pages 43 and 44 of this

13   same original technical support document you offer a

14   description of a range of numbers, a range of control

15   levels. And I'm uncertain whether this question is --

16   actually can be answered by Dr. Staudt or it may take

17   combination of Dr. Staudt and the agency asking: The

18   control levels that were selected for this particular

19   rule making fall -- tend to fall at the more stringent

20   end of the range. Now, did The Agency or how did

21   The Agency working with Dr. Staudt or did Dr. Staudt

22   recommend which number within the range to choose?

23   DR. STAUDT: Well, first of all,

24   comments -- it comments to these tables and what's in

1 these tables. And perhaps maybe, you know, in terms of

2 how the emissions was developed we can talk about that

3 further with The Agency.

4   This table is actually just citing data

5 sources. Now, you'll see a number of these reference

6 one reference four, etc., lot of them are reference

7 within which actually is the -- the ICI Boiler -- EPA's

8 alternative control techniques document, which I believe

9 was dated in 1994, which is pretty -- for the most part

10 is dated in some respects. So, while it's useful to

11 cite this I think it's useful to cite it to show that in

12 1994 these emissions levels were being achieved with

13 these technologies. And these were the estimated cost

14 effectiveness. It's the range -- the ranges are because

15 in some cases rather than having reach one of those --

16 those -- those data points a table with multiple data

17 points, because sometimes they -- they showed different

18 usage rates for or capacity levels, what have you.

19   What happened is we condense, just to be

20 able to cover the full range of -- of cost effectiveness

21 shown in that reference and of course, the reference is

22 cited there. People can go to see the reference table

23 with the information.

24   MS. HIRNER: On Exhibit 1 to Dave Colaz's

1   pre-filed testimony submitted November 25th, 2008 we

2   offered -- IERG offered a comparison IEPA emission list

3   and IERG's proposed emissions limits. IERG's limits

4   falling within the range -- range -- ranges shown on

5   page 43 and 44.

6   Then if I look on page six of that same

7   technical support document, which references EGUs low

8   emissions unit, can you point to some place in the

9   technical support document that would demonstrate a

10 similar level of detail for industrial boilers that

11 would demonstrate that the numbers selected by the

12 Illinois EPA are better than the limits proposed by

13 IERG, those numbers falling within the range?

14   DR. STAUDT: Well, I guess -- I guess you

15 have to, first of all, define what you mean by better.

16   I think your -- perhaps you're -- what you

17 think is better might be different from what I think is

18 better, but these -- these emission rates were -- were

19 developed through discussions -- through discussions

20 with -- between -- with -- among IEPA people and myself.

21 And they were -- they were developed based upon what

22 we -- what we knew current technology was capable of

23 doing, not necessarily reflected in 1994 EPA control

24 techniques document, but other supporting information

1   that is provided in here. We discuss different types of

2   combustion technologies and other kinds of controls.

3   So, whether or not -- whether or not you feel that

4   that -- I'm sure that you believe that your -- your

5   table here is better, but I don't know of a -- I'm not

6   aware of analysis -- there's no analysis that I

7   performed that compared these numbers to what other

8   states are doing.

9   MS. HIRNER: Just to follow up on that, on

10 the page six table, 21 A, on the emission requirements

11 of proposed industrial and small EGU boiler RACT, since

12 this is in this type of support document would it be

13 correct that -- that you proposed those emission limits

14 and if so, what did you base --

15   DR. STAUDT: No, I do not propose emission

16 levels. I don't have that authority and I certainly

17 wouldn't want them.

18   I was consulted. These are The Agency's

19 proposed emission limits or what -- what I can say is

20 they consulted on -- with me on these. These are not --

21 you know, I don't have the authority to -- to propose

22 emission levels.

23   MS. HIRNER: So, what would have been the

24 technical support on which those were based?

1   DR. STAUDT: Well, you -- you've got it in

2   front of you that this is -- this is the document.

3   MS. HIRNER: Okay. If -- the document

4   proposes a range. So, maybe I guess the question would

5   be better directed to Mr. Kaleel as to why they would

6   have recommended those numbers.

7   MR. FOX: Perhaps Mr. Kaleel would

8   appreciate a repetition or rephrasing of your question.

9   MS. HIRNER: On the emissions requirements

10   of the proposed industrial small EGU boiler RACT on page

11   six there are proposed emissions limits. And then on

12   pages 43 and 44 there are a range of NOx control levels.

13   And my question would be what was the -- what was the

14   basis for The Agency's selection of the limits it chose

15   for this proposed rule?

16   MR. KALEEL: Well, I guess I would agree

17   with Dr. Staudt's characterization that -- that these --

18   these two pages, and there may be other information

19   that's supportive of this summary, but that these two

20   pages provide, I guess, our -- our review of the

21   available literature as to the performance of various

22   control options for various boiler types and various

23   boiler sizes. And we did cite a number of -- of

24   references that are -- that are available in literature

1   and we also tried to summarize the cost effectiveness

2   numbers that have been published in those references.

3   The selection of the specific emission

4   limit, I won't say it's subjective, but I do appreciate

5   that there are different control levels in the

6   literature that are cited. I'm, just as an example, on

7   page 43 the first grouping of boilers that are listed

8   are the natural gas fired water tube single burner

9   boilers and there are numbers listed for a number of

10   different unit capacities. We did not generally look at

11   control options that would require SCR, for example,

12   generally believe that SCR were going to be too

13   expensive. Although, I would -- would note that at

14   least for this particular category of boilers the --

15   even the SCR costs that are cited there are generally

16   less than $3,000 a ton and in some cases significantly

17   less then that.

18   But looking at the performance of these

19   boilers for this category I see a number of boilers

20   that -- with Low-NOx burners, plus flue gas

21   recirculation are meeting levels of, you know .07, maybe

22   in some cases .08.

23   Need to refresh my memory what these

24   acronyms mean in terms of -- excuse me for just a

1   minute.

2   WHEREUPON, THERE WAS A SHORT PAUSE IN PROCEEDINGS;

3   SUBSEQUENT TO WHICH THE FOLLOWING PROCEEDINGS WERE MADE

4   OF RECORD:

5   MR. KALEEL: I need to refresh my memory on

6   what some of these acronyms mean. Just a moment.

7   WHEREUPON, THERE WAS A SHORT PAUSE IN PROCEEDINGS;

8   SUBSEQUENT TO WHICH THE FOLLOWING PROCEEDINGS WERE MADE

9   OF RECORD:

10   MR. KALEEL: All right. I apologize.

11   I think the WI refers to water injection.

12   OT is oxygen trim.

13   The performance of these particular boilers

14   using, for example, is it looks to be well below the .08

15   that the agency recommended as it's emission limit. So

16   just looking at the information on this table it looks

17   like there's a number of control options that are easily

18   within the control cost that we've used in our analysis

19   that could meet the .08 emission limit.

20   The number that IERG had recommended for

21   this particular source category is .12 pounds per

22   million Btu. That, obviously, is at the upper end of

23   the range. In fact, it -- it doesn't even appear on

24   this table. I mean, certainly, it's -- in some cases

1   it's double the performance of -- of what these control

2   technologies would achieve, so I --

3   DR. STAUDT: If -- I'd like to add,

4   these -- these tables are really to show cost

5   effectiveness estimates of certain technologies. And in

6   the balance of the document they are discussions of use

7   in reference citing to the use of these technologies

8   that have -- that are more current, that have some more

9   current information that may show lower emission limits.

10   May recall one of the hearings it was

11   discussion about some of the -- some of the gas fired

12   boilers and in many -- but in those cases the published

13   information did not include cost effectiveness

14   calculation. Well, they're using somewhat the same

15   technology as cited here just that it's, you know, is

16   more technical information that those -- that

17   information as far as determining emission rates is not

18   just facts that helped us determine the appropriate

19   emission rates. It's not just found on those tables.

20   It's found throughout this document.

21   What this -- these tables do is just give

22   us -- give us some ranges, cost effectiveness in large

23   variety of sources. And that's what this, in my

24   opinion, fairly compelling about some of these

1   calculations.   Some of these estimates is that you find

2   large variety of sources coming up with for a particular

3   control technology pretty -- very similar cost

4   effectiveness ranges.   So, we have another source where

5   they show it for a particular technology emission rate.

6   We have a sense of what that cost effectiveness would

7   be.

8   MS. HIRNER: Would you agree that there

9   are, within your tables for demonstration purposes,

10   nearly an equal amount of units that are at the high end

11   as are at the low end of the range?

12   DR. STAUDT: I'm not sure what you mean by

13   the high end versus the low end.   High end of what?

14   MS. HIRNER: Say, for example, that you

15   have natural gas fired boiler at -- with an ignition

16   rate of 1.5 versus .06.

17   DR. STAUDT: Where?   You're talking about

18   that Low-NOx burner .15 down there?

19   MS. HIRNER: Yes.

20   DR. STAUDT: Reference one.   And reference

21   one is also the -- the '93 or '94 ACT document, so --

22   MS. HIRNER: .06 -- isn't the .06 also

23   included in reference one?

24   DR. STAUDT: Yes.   So, I'm not sure what

1   your point is.

2   I mean, the reference one had had a variety

3   of different -- different pieces of information there

4   and not every facility is going to be, you know, exactly

5   the same and that's why, that's as Mr. Kaleel stated, we

6   had to use a certain amount of judgment in coming up

7   with the proposed emission rates.

8   MS. HIRNER: Okay. Thank you.

9   I don't have any further questions.

10   MR. FOX: Thank you, Ms. Hirner.

11   Any further questions for Mr. Kaleel -- I'm

12   sorry -- for Dr. Staudt? My mistake.

13   Ms. Hodge?

14   MS. HODGE: Yes, I have a few questions.

15   Katherine Hodge.

16   MR. FOX: Please, go ahead.

17   MS. HODGE: And I am, first off, on behalf

18   of United States Steel.

19   And the testimony of Dr. Staudt gave today

20   on these new exhibits, Exhibit 20 through 24, as I said

21   we really need a few minutes to take a look to fully

22   understand what this is, so I don't have any questions

23   right now.

24   Mr. Larry Siebenberger would like to offer

1   a brief statement today regarding, you know, his initial

2   thoughts on these and -- and we would ask the hearing

3   officer that we be allowed to do that at or about the

4   same time that Mr. Stapper offers testimony today.

5   MR. FOX: Very good.

6   MS. HODGE: Now, I do have just some more

7   general questions for Dr. Staudt specifically on behalf

8   of U.S. Steel.

9   MR. FOX: We have been at it for nearly two

10 hours. Mr. Johnson has a wise suggestion, why don't we

11 take a break, come back at five after 12 and we will --

12 I'm sorry, my mistake. You'd think I could read a

13 clock. We'll come back at five after 11 and resume for

14 some time before we take a break for lunch.

15   MS. HODGE: That's sounds great.

16   MR. FOX: Thank very much.

17 WHEREUPON, THE PARTIES TOOK A SHORT BREAK; SUBSEQUENT TO

18 WHICH THE FOLLOWING PROCEEDINGS WERE MADE OF RECORD:

19   MR. FOX: And when we broke approximately

20 20 minutes ago for a break I think, Ms. Hodge, we were

21 at the point where you were preparing to begin some

22 questions of Dr. Staudt and if that matches everyone's

23 recollection, why don't we just get right into that.

24   MS. HODGE: That's correct. Thank you very

1   much.

2   Dr. Staudt, in your pre-filed testimony you

3   indicated that some of the vendors that you talked with

4   said that system's economically available. Did you get

5   any guarantees or warranties from these vendors on

6   performance?

7   DR. STAUDT: The vendors as -- as, in fact,

8   Mr. Stapper points out in his testimony is not possible

9   to provide a guarantee based upon what -- what limited

10   information I had access to and was able to provide

11   them.

12   The main purpose of my exercise was to --

13   was to determine if some of these burner suppliers did

14   have experience with some of these -- with firing

15   multiple -- multiple fuels, including low Btu fuels with

16   those Low-NOx burners, because Mr. Stapper's testimony

17   suggested that -- that that wasn't -- that wasn't

18   available. With more detailed information on the

19   boilers it would be able to provide guarantees.

20   MS. HODGE: Okay. So, you would agree then

21   that the vendors' guarantees on performance that would

22   be dependent on site specific factors for a particular

23   unit?

24   DR. STAUDT: Yes, I would agree with that.

1   MS. HODGE: Thank you.

2   Did any of the reported studies that were

3   included in the TSC for industrial boilers involve

4   boilers burning refinery fuel gas?

5   DR. STAUDT: This, again, refinery fuel

6   gas, yes, there were the -- there was a LADCO study that

7   included the study of boilers burning refinery fuel gas.

8   MS. HODGE: Could you show me where that is

9   in the TSC?

10   DR. STAUDT: There is actually a typo in

11   the TSC.

12   These are actually gas fired here on

13   tables.

14   MS. HODGE: I am speaking with industrial

15   burner.

16   DR. STAUDT: Oh, industrial boiler --

17   industrial burners firing refinery -- well, that

18   would -- that would be burning refinery fuel gas.

19   There was also a study -- we have natural

20   gas fired boilers. Believe that was probably back in --

21   do you recall such -- recall such information?

22   I do recall seeing it. I can't find it at

23   this point, so...

24   MS. HODGE: And I had a hard time locating

1   it too, but that's a question that we would like an

2   answer to, you know, after hearing that would be fine.

3   DR. STAUDT: Yeah.

4   MS. HODGE: Isn't it true that it's well

5   recognized that refinery fuel gas emits more NOx than

6   natural gas would burn in the same unit?

7   DR. STAUDT: Well, I guess it depends upon

8   the exact constituents within the refinery fuel gas.

9   My -- but whether or not it is higher or -- or not

10   depends upon the exact constituents. And you can see if

11   you -- it was a paper that was included in the filing by

12   Wibell, have to do with burner use -- use in -- in this

13   case for -- for refineries by John Zink. And you can

14   see that -- go to table, see -- you would see natural

15   gas. You can see a range of different fuels used there.

16   Some cases the NOx is higher. In some cases it's about

17   the same as natural gas. So, it will depend upon what

18   the -- what the specific makeup of the gas is.

19   MS. HODGE: Okay. Okay. Thank you.

20   So, is -- is it accurate to say though that

21   the TSC's analysis of industrial boilers for -- for the

22   most part focus on the gas fired, focused on burning

23   natural gas?

24   DR. STAUDT: Well, with regard to -- there

1   was probably more emphasis on gas fired boilers, because

2   that's what most gas fired -- gas fired boilers fire

3   natural gas, because that's what most of them do fire.

4   MS. HODGE: Most of them fire natural gas?

5   DR. STAUDT: Most of them fire natural gas.

6   MS. HODGE: Okay. Thank you.

7   Are you aware that most petroleum

8   refineries consume the treated refinery fuel gas on site

9   in facility heaters and boiler?

10   DR. STAUDT: Yes, I do.

11   MS. HODGE: If a refinery cannot consume

12   the refinery fuel gas what impact would that have on the

13   energy efficiency of the refinery?

14   DR. STAUDT: Well, I -- I presume that you

15   want to use that gas on site, because -- because you

16   would otherwise have to -- have to purchase fuel

17   otherwise.

18   MS. HODGE: Thank you.

19   And again, if they didn't burn the refinery

20   fuel gas in facility heaters and boilers what would your

21   thoughts be about how the refinery fuel gas should be

22   disposed of?

23   DR. STAUDT: I -- I -- my personal view is

24   that it makes sense to -- to burn it in a way that

1   utilizes energy efficiency.

2   MS. HODGE: Okay.

3   And I have just a few questions too on your

4   testimony about comments on some of the cost information

5   that was provided by ConocoPhillips.

6   And you state that, this is on page three

7   of your pre-filed testimony, that the assumptions that

8   capital cost amortization that cost to actually capital

9   charge was -- assumes initial versus the final and

10   that's -- and so forth.

11   Is it possible to arrive at a wide range of

12   cost per ton per given project? Would you agree that

13   that's the case?

14   DR. STAUDT: It depends, as I pointed out,

15   depends on the assumptions you use. You're able to --

16   if you make assumptions about very rapid amortization of

17   capital or you make assumptions about very high indirect

18   costs these -- these all will increase cost. Of course,

19   if you -- if you use longer amortization capital that

20   that cost effectiveness will go down. Point being that

21   when -- when you prepare the -- the cost estimates that

22   were provided just -- just the values that were

23   provided, because I haven't seen the estimates, there

24   are so much higher than what has been published by a

1   wide number of different sources that my point is that

2   there has to be something very different or unique about

3   the way that estimate was crafted, because it's 15 to 20

4   times what a wide range of other -- other sources have

5   arrived at, so -- and that is why it's important to

6   examine the assumptions of that cost effectiveness

7   estimate.

8   MS. HODGE: Okay. Thank you..

9   And in the studies that you reviewed and

10   included in the technical support document, do you know

11   whether the cost associated that let's say for Low-NOx

12   burner, for example, is that the cost for the burner and

13   it's installation or would that have been the total

14   project cost?

15   DR. STAUDT: These -- these would be the

16   total cost associated with -- with -- with the -- I'm

17   not sure what you mean by the total project cost, but

18   they would be the total cost of the burner and the

19   installation and specific costs that are associated with

20   that project.

21   There may be -- there may be inhouse

22   engineering costs, things like that. But typically it

23   would include all of those things. It would include

24   amortization of capital taxes and other things

1   associated with the program.

2   MS. HODGE: Okay. Has USEPA prepared any

3   kind of methodology that it points people to in

4   calculating?

5   DR. STAUDT: Yeah, that's used. They do

6   have methodology in their cost estimated.

7   MS. HODGE: And would that be the USEPA Air

8   Pollution Control Cost Manual?

9   DR. STAUDT: That would. The information

10   should be in there, yes.

11   MS. HODGE: Okay. So, if a facility used

12   the methodology there you would be comfortable with

13   that?

14   DR. STAUDT: Well, you know, there's -- the

15   cost estimating document also allows a fair amount of

16   latitude in some things. So, the -- it would depend,

17   again, I'd have to examine the specific estimate and to

18   really get myself some confidence that -- of how it was

19   being done.

20   MS. HODGE: Okay.

21   And -- and I believe that this control cost

22   manual has been updated several times. Are you aware of

23   the most recent version?

24   DR. STAUDT: I the link I provide in my

1   testimony I presume is the link to the most recent

2   version on the EPA's web site.

3   MS. HODGE: Okay. Thank you.

4   You stated earlier today that NOx RACT is

5   not a specific technology, but the term does refer to

6   technology, reasonably available technology, and not to

7   an emission rate. And maybe this is appropriate for

8   The Agency, as well as Dr. Staudt. What technology is

9   reasonable assuming, you know, economic as well for

10   certain applications? And did you look at any specific

11   technologies and attempt to make that assessment?

12   DR. STAUDT: As far as what, you know, the

13   way my understanding of how we're -- we're looking at

14   RACT is -- is technology that can be -- achieve NOx

15   reduction within a -- here's an economic threshold and

16   talking about is 3,000 -- as high as 3,000 maybe 3500 a

17   ton, somewhere in that range.

18   When you look at some of the TSD that shows

19   various technology that have been used you can see that

20   large, for the most part, combustion control fall in

21   that range, that would be Low-NOx burners who fire air

22   from gas or circulation. That doesn't mean that these

23   are -- these are specifically technology for any and

24   every application, they might, but there are appropriate

1   where they have been used.

2   As SCNR has been shown to fall into that

3   range and even under some circumstances, but not all

4   I -- I -- if -- if you're starting at a low emission

5   grade SCR would not -- would probably be above that

6   threshold, but we have seen SCRs installed that that's

7   been documented that provide emission reductions in the

8   ranges of hundreds of dollars per ton that NOx reduce

9   and that that's been, but those coal fire units higher

10   emission rate.

11   So, if you want to define RACT from the

12   perspective of -- I'm not a -- I'm not a regulator. So,

13   I'm more of a technology guy. So, my understanding of

14   the way we're approaching RACT is can it be done at a

15   reasonable cost, reasonably available, achievable at a

16   reasonable cost. If there's, you know, there's another

17   reason, there's another definition some place within

18   the, you know, the CFR document or something like that

19   I'm not sure about that. That's what we've been working

20   on.

21   MS. HODGE: Did you make any specific

22   recommendations to the agency as to technologies

23   involving RACT?

24   DR. STAUDT: It's not -- it doesn't -- no,

1   not specifically, because what we needed to do and you

2   can -- there -- there are some things that you could see

3   from my original pre-filed testimony from the October

4   hearing. And I commented on the type of technology that

5   I envisioned potentially being used for different types

6   of sources. But it's not -- it's not for -- the

7   objective was not to dictate a specific technology for

8   each source. The objective was to set emission limits

9   that technologies have been demonstrated to achieve

10   within the cost -- within the cost range that we've been

11   looking at and that will -- that will differ from one

12   application to another.

13   MS. HODGE: Okay. Thank you. Thank you.

14   And again, this question I think is to

15   The Agency, as well as Dr. Staudt: Did The Agency and

16   Dr. Staudt in preparing the TSD consider higher emission

17   limits than those proposed in the rule or lower limits?

18   And can you share what factors were

19   considered in the selection of -- of the proposed limits

20   here?

21   DR. STAUDT: Well, you know, we -- we did

22   discuss different limits and what we looked at -- limits

23   were discussed. And in some cases the feeling was in

24   some cases it may have been, you know, too low and it

1   may sense to increase it, because we didn't feel that

2   the limit would be achievable without -- without using

3   something that would likely be more costly than what we

4   envisioned. You know, when my -- my -- my -- my

5   involvement mainly, you know, involved getting my

6   opinion on some of these emission levels. And in some

7   cases we -- we -- I've provided input that they -- they

8   needed to be adjusted and those, generally, they were

9   adjusted and in other cases they said that they were

10   fine. The emissions levels that are in the new proposed

11   rules are emissions rules that I do feel comfortable

12   with at this point.

13   MS. HODGE: Thank you.

14   Mr. Kaleel?

15   MR. KALEEL: I'm not sure that I can add

16   too much to the -- to the comments that Mr. Staudt had

17   just provided.

18   We, you know, our process, you know, it's

19   been described already on the record was to identify the

20   types of emissions sources within our non-attainment

21   areas that were NOx emissions, emission units that

22   existed at a -- at a major source within the

23   non-attainment area, look at the population of the

24   units, whether there are -- whether they're boilers,

1   whether they're process heaters, whether they're blast

2   plants, whether they're steel furnaces, what -- what are

3   the emission units that exist in Illinois for those

4   emission units. We -- we viewed the literature in terms

5   of proven control technologies for a wide range of

6   applications and what were their associated costs. And

7   we did arrive from that analysis I think -- I think the

8   example that Deirdre K. Hirner was pointing us to a

9   moment ago was an example of that was you look at the

10   technologies that are available, again, for a wide range

11   of sources and see if -- if they're cost effective.

12   And emission limits were -- were based on a

13   review of that information. I would point out that I

14   don't perceive it to be the agency's job to establish an

15   emission limit that works for every unit in the State of

16   Illinois, that there's hundreds of NOx emission limits.

17   And I think it would be inappropriate for us to

18   establish a limit that is at the high range to wherever

19   any unit in the state can easily comply. I don't think

20   we would achieve any emission reduction or very little

21   emission reduction at all.

22   I think the job is to try to establish an

23   emission limit that we think is cost effective for most

24   of the units in the state and through this process both

1   our own outreach process and the regulatory process

2   before The Board to identify the outliners. And I think

3   this process has accomplished that. We've heard from

4   individual industries that have pointed out in unique

5   circumstances. Certainly, U.S. Steel is here today as a

6   unique circumstance. My understanding they're the only

7   unit within the State of Illinois that burns coke oven

8   gas and natural gas and various combinations. That is a

9   unique circumstance.. And we envision a dialogue to try

10   to address those specific circumstances, but the rules

11   intend to provide a -- a cost effective approach that

12   works for most industries. And again, I think we've --

13   I think what we've proposed does that.

14   MS. HODGE: Thank you.

15   You -- you said that in doing this that

16   The Agency identified the subject units in the State of

17   Illinois. And let's just take a look at industrial

18   boiler and process heaters. And then in then evaluating

19   RACT was there any consideration of alternative fuels in

20   setting the proposed limits here for gas fired

21   industrial boilers and for process heaters?

22   MR. KALEEL: Well, certainly in the case of

23   industrial boilers our -- our technical support document

24   and the emission limits that we've proposed envision a

1   variety of fuels. There's emission limits proposed for

2   natural gas, for fuel oil, for solid fuels. So, I think

3   we did look at that. I understand the process heaters

4   perhaps as smaller population of affected units, but

5   we -- we envision that these will apply for the most

6   part to refineries. And we're certainly aware that

7   refineries just process gasses for those fuels. And we

8   believe we've identified cost effective control options

9   and established emission limits that will work with the

10   types of fuels that are used at refineries.

11   We -- we have every confidence that

12   we've -- if we've overshot the mark that we're going to

13   hear from those stakeholders and, in fact, we have. And

14   we've talked about ways to be more flexible in the

15   application of -- of these requirements. We've -- the

16   average plant is an example that flexibility where a

17   company would have the option of perhaps controlling

18   first those units that are easiest and most cost

19   effective to achieve reductions with the idea that

20   perhaps other units that might be more difficult perhaps

21   don't need to be controlled at all or would be

22   controlled as a lesser level as long as the average

23   works out. And I think that would satisfy the

24   requirements and the rules that we've -- we have tried

1   to be flexible in the approach.

2   MS. HODGE: And I acknowledge and -- and

3   I'll tell you I think regulate does appreciate that, but

4   again, I just want to clarify in -- in setting the

5   proposed limit here .08 for gas fired industrial boilers

6   did The Agency consider the use of alternative fuels

7   such as refinery fuel gas setting that limit of .08?

8   MR. KALEEL: We -- I think we have

9   considered whether refinery fuel gas is being used. And

10   I believe that we have seen information provided to us

11   by the refineries that -- that the technologies that we

12   envision within RACT will achieve the .08 limit that is

13   contained in the rule. We understand there are some

14   unique circumstances and we -- we have always been

15   willing to talk about those and remain to be willing to

16   talk about those, but we think in general the .08 limit

17   works quite well for processors.

18   MS. HODGE: So, The Agency continues to be

19   open to consideration of the case by case RACT?

20   MR. KALEEL: Absolutely. I don't know case

21   by case, that's a different -- different concept, but

22   we're -- certainly are willing to continue working with

23   stakeholders that -- to develop an approach and perhaps

24   pursue an amendment to this proposal that is a better

1   fit for unique circumstances.

2   MS. HODGE: Okay. Thank you.

3   I think that's all my questions.

4   May I have just a moment?

5   MR. FOX: Yes, that's fine, Ms. Hodge.

6   WHEREUPON, THERE WAS A SHORT PAUSE IN PROCEEDINGS;

7   SUBSEQUENT TO WHICH THE FOLLOWING PROCEEDINGS WERE MADE

8   OF RECORD:

9   MS. HODGE: I'm -- I don't have any more

10   questions.

11   MR. FOX: Very good. Thank you, Ms. Hodge.

12   Was there any other participant that had

13   questions for Dr. Staudt on the basis of his pre-filed

14   testimony at this point?

15   (No response.)

16   Seeing that there's no indication of any

17   follow up questions for Dr. Staudt, Dr. Staudt, thank

18   you for your testimony and your responses to questions

19   That brings us to Ms. Roccaforte's standing

20   motion to admit hearing Exhibits 20 through 24, which

21   were, as I recall, offered as attachments or supplements

22   to his pre-filed testimony and we had deferred

23   consideration of that motion specifically at your

24   request, Ms. Hodge. Do you or any other participant

1   wish to be heard on motion to admit hearing Exhibits

2   Number 20 through 24 as attachments to Dr. Staudt's

3   pre-filed testimony?

4   MS. HODGE: We have no objection as

5   U.S. Steel, but we will be making some brief comments

6   today and we do expect to be submitting post hearing

7   comments, additional comments on --

8   MR. FOX: We'll certainly take up the

9   hearing -- the post-hearing comments and those deadlines

10   before we wrap up today.

11   Seeing or and hearing no objection to the

12   admission of those exhibits, Ms. Roccaforte, they have

13   been marked and will be admitted as Exhibits Number 20

14   through 24 corresponding to the, of course, to the

15   preliminary numbers that we had assigned to them

16   earlier. So, we have addressed those.

17   That would in effect bring us to U.S.

18   Steel. Noting the objections, Ms. Roccaforte, you had

19   made The Board did receive pre-filed testimony from

20   Mr. Stapper.

21   And Ms. Hodge, I believe you had indicated

22   that Mr. Siebenberger wished to be sworn and offer a

23   brief statement or summary of --

24   MS. HODGE: Yes.

1   MR. FOX -- of the company's position. Did

2 you have a specific sense of whether you prefer to begin

3 with Mr. Siebenberger or Mr. Stapper?

4   MS. HODGE: I think we prefer to start with

5 Dr. Siebenberger.

6   MR. FOX: Why don't we do this then, why

7 don't we have the court reporter swear both gentlemen

8 in.

9   And Mr. Siebenberger, if you're ready we

10 could go ahead with a statement or summary of remarks on

11 your part in just a moment then.

12 WHEREUPON, MR. SIEBENBERGER AND MR. STAPPER WERE FIRST

13 DULY SWORN; AND THEN TESTIFIED AS FOLLOWS:

14   MR. FOX: Mrs. Hodge, please, go ahead if

15 you want to make any introductions.

16   MS. HODGE: Thank you so much.

17   As Mr. Fox indicated we did file this

18 pre-filed testimony of Mr.. Stapper yesterday afternoon.

19 We did serve everyone on the service list electronically

20 so they'd have a copy, but I note some members of the

21 public here today. We do have additional copies of the

22 testimony if anyone wants a copy.

23   MR. FOX: I appreciate that, Ms. Hodge.

24   MS.. HODGE: And I guess before we get

1 started I would like to move for the admission of that

2 pre-filed testimony.

3   MR. FOX: Do you have copies that could be

4 circulated, Ms. Hodge?

5   MS. HODGE: Yes. How many do you need?

6   MR. FOX: Just a single one, frankly.

7   MS. HODGE: Okay.

8   MR. FOX: And Ms. Hodge has moved admission

9 into the record of Mr. Stapper's pre-filed testimony,

10 which would be hearing Exhibit Number 25.

11   Is there any objection to the motion?

12   MS. ROCCAFORTE: I indicated at the

13 beginning of hearing The Agency's objection to the

14 pre-filed testimony of Mr. Stapper.

15   MR. FOX: Certainly I acknowledge your

16 objections, Ms. Roccaforte.

17   I'll go ahead and admit that as I indicated

18 as Exhibit Number 25.

19   Mr. Stapper certainly is available here and

20 has been sworn and will be available for questions on

21 the basis of that pre-filed testimony today.

22   That will be, as I said, be marked as

23 Exhibit Number 25.

24   And Ms. Hodge, thank you for supplying a

1   copy and please, go ahead.

2   MS. HODGE: We'll do.

3   Also, as -- as we've discussed

4   Mr. Siebenberger has a brief statement.

5   And then as to Mr. Stapper, again, since

6   this was filed late I would like him to read some of

7   this into the record, not all of it, of course, but just

8   so folks do have an opportunity to -- to hear the

9   testimony, but --

10   MR. FOX: It would be a long read in its

11   entirety. If in your judgment there are some select

12   portions of it that would be appropriate. That would be

13   fine.

14   MS. HODGE: Okay. Thank you so much..

15   And then let's -- let's start with

16   Mr. Siebenberger.

17   MR. SIEBENBERGER: Okay. Thank you.

18   We are currently reviewing Dr. Staudt's

19   submittals and I'm sure upon our analysis we will have

20   additional comments we will file post hearing, but at

21   this point in time I just had a couple of general

22   statements I'd like to make regarding our analysis thus

23   far.

24   First of all, you know, I do not disagree

1   with Dr. Staudt's premise that we, obviously, can't burn

2   more coke oven gas in a given year than we produce and I

3   think it's physically impossible and we understand that.

4   I think though that what Mr. Staudt is not

5   considering is that from year to year our operating

6   scenarios that we may operate our facilities under can

7   change. And as historically you can look at how we've

8   operated our facilities where we were operating coke

9   ovens, blast furnaces and steel making shops and

10   finishing, which includes our reheat furnaces all at the

11   same time. But as an example of how what can happen

12   going forward today we are operating our facility with

13   just the coke ovens running and our boilers running.

14   Our blast furnaces are idle. Our steel making

15   facilities are idled and reheat furnace is idle. And we

16   cannot at this point in time say that we will not

17   operate this way for the entire year. Market conditions

18   will dictate that.

19   Under the current operating scenario that

20   we're under the only place we can burn coke oven gas is

21   our boilers. So we cannot consume coke oven gas in our

22   reheat furnaces and take the remainder to the boilers.

23   And I think this is just one example of it's a changing

24   world from where we've operated in the past. And I

1   think we will be required to operate our facilities

2   under different operating scenarios, which will be

3   dictated by market in our -- in U.S. Steel's desire to

4   be competitive.

5   One other comment I would make that I think

6   Dr. Staudt's assumption that we would not shut down the

7   coke oven gas sulfurization for maintenance during the

8   ozone season. And I do not believe that we at this time

9   can guarantee that we will not have to do that.

10   Obviously, you know, we have been trying to schedule

11   this outage, but the condition of the equipment may

12   dictate when we have to take it down for maintenance.

13   And I don't think we can guarantee, as I said, that --

14   that we would not have shut the facility down during the

15   ozone season and that's built into your assumptions

16   also.

17   And that's really all I have to say at this

18   time.. I guess I think we will have some additional

19   comments once we finish our analysis.

20   Thank you.

21   MR. FOX: Thank you, Mr. Siebenberger.

22   And as I said just a moment ago, we will

23   address timeline for filing post-hearing comments. We

24   will get that issue resolved by the -- the end of day.

1   Was there any question on the basis of

2   Mr. Siebenberger's testimony and comment today that --

3   that they would like to pose to him?

4   (No response.)

5   MR. FOX: Seeing that there is not one,

6   Ms. Hodge, it sounds like we would be in order to

7   proceed to Mr. Stapper if you want to do a brief

8   introduction.

9   MS. ROCCAFORTE: I -- I just have one quick

10   question.

11   MR. FOX: I'm sorry, Ms. Roccaforte, I

12   didn't mean to overlook you, of course.

13   MS. ROCCAFORTE: Mr. Siebenberger, I was

14   just wondering if you are still willing to continue

15   discussions with The Agency on these issues that are

16   outstanding?

17   MR. SIEBENBERGER: Yes, absolutely. We

18   were attempting to get together before the hearing, but

19   scheduling did not permit it. We would be happy to do

20   that.

21   MS. ROCCAFORTE: Thank you.

22   MR. FOX: Any follow up?

23   MS. ROCCAFORTE: That's it. Thank you.

24   MR. FOX: Sorry, again, for overlooking

1   you.

2   Ms. Hodge, I'm sorry, back to you if you

3   had a brief introduction for Mr. Stapper.

4   MS. HODGE: Certainly.

5   As I said, Mr. Blake Stapper is now going

6   to offer some testimony. And Mr. Stapper had testified

7   at one of the prior hearings in Chicago back in

8   December. And then when we reviewed Dr. Staudt's

9   pre-filed testimony U.S. Steel made a determination that

10   it wished to, you know, offer some comments on that

11   today as well.

12   And again, I apologize for the late filing,

13   but we had not intended initially to offer testimony.

14   Mr. Stapper had prepared testimony and again, because of

15   the late filing I would ask that he be allowed to read,

16   you know, some of it into the record, you know, of

17   course, summarizing other parts, but I think there were

18   a couple of typos that he needed to correct from the

19   pre-filed to his testimony here today.

20   MR. FOX: Very good.

21   I should have emphasized, Ms. Hodge and

22   Mr. Stapper, under The Board's rules pre-filed testimony

23   is entered into the record as if read in it's entirety,

24   so while there may be corrections or other issues that

1   would be best addressed by reading it out loud, we

2   certainly would want to emphasize in the interest of

3   moving forward expeditiously it is in the record as if

4   read and perhaps lengthy repetition shouldn't be

5   necessary.

6   MS. HODGE: Thank you.

7   MR. FOX: Please, go ahead.

8   MR. STAPPER: Again, thank you for allowing

9   me to speak this morning.

10   My name is Blake Stapper. I'm principal

11   engineer for URS Corporation. We were contracted to

12   perform a study for U.S. Steel to provide our

13   recommendations for burn suitable controls to apply to

14   Boilers 11 and 12.

15   I wanted to acknowledge Dr. Staudt's

16   efforts to -- to dig into the particulars of his

17   applications and to try to develop further information

18   to help us all come to a better understanding of Boiler

19   11 and Boiler 12, what technologies would be appropriate

20   there. And I believe that his efforts have head us down

21   a road that we will be able to better illustrate for

22   The Board what the considerations are for this

23   particular application and how URS arrived at it's

24   recommendation for U.S. Steel.

1   Would it be appropriate to -- in the

2   pre-filed testimony there is one paragraph that contains

3   a number of typos. It is the first paragraph on page

4   six, the third line in that paragraph should read

5   40 percent COG, 35 percent BFG.

6   MS. BASSI: I'm sorry, I didn't hear that.

7   MR. STAPPER: It should read 40 percent COG

8   and 35 percent BFG.

9   MS. BASSI: Thank you.

10   MR. STAPPER: And in addition down on the

11   sixth line that begins "blast furnace down" the blend

12   should be 40 percent NG and 60 percent COG.

13   MR. STAPPER: And that's the extent of the

14   typos that I am aware of.

15   MR. FOX: Very good.

16   MR. STAPPER: If -- and if it pleases

17   The Board I would attempt to parcel this down and I

18   appreciate -- my voice appreciates your willingness to

19   meet in the middle somewhere maybe reading the

20   introductory sections that -- that speak in general

21   about our study and then skipping the details of the

22   specific vendor by vendor analysis and picking it up

23   again with the conclusions in the summary statements.

24   MR. FOX: Why don't we start and see where

1   this takes us, Mr. Stapper. Why don't you go ahead.

2   MR. STAPPER: Okay.

3   Good morning. My name is Blake Stapper. I

4   am a principal engineer for URS corporation. And I

5   previously testified before the Illinois Pollution

6   Control Board in this matter on December 10th, 2008.

7   The purpose of my testimony today is to provide

8   information in support of the reasonably available

9   controlled technology determination for Boilers 11 and

10   12 at U.S. Steel's Granite City Works. In particular I

11   wish to respond to the comments offered by

12   Dr. James E. Staudt in his pre-filed testimony filed

13   with The Board on January 20, 2009.

14   In his testimony Dr. Staudt contended that

15   the URS study, which was commissioned by U.S. Steel, is

16   suspect because of errors and inconsistencies that he

17   identified and suggested that URS did not perform a

18   complete diligent analysis.

19   To support his conclusions he noted that

20   URS did not contact any burner boiler suppliers directly

21   about the application of their technologies to Boiler 11

22   and 12. Dr. Staudt disputed URS's claims that there are

23   no Low-NOx burners suitable for application to Boilers

24   11 and 12 by referencing communications he had with four

1 burner vendors who all indicated that they could provide

2 Low-NOx burners for multi-fuel applications. I would

3 like to address each of these points in turn.

4   At any given time URS is executing numerous

5 projects to implement NOx controls on industrial

6 boilers. These turnkey projects involve engineering,

7 procurement, construction, and start up. These projects

8 included burner replacement with and without free glass

9 circulation or FGR. FGR addition to existing burners,

10 Selective Catalytic Reduction installations, and a few

11 Selective Non-Catalytic Reduction installations.. The

12 contract terms generally require URS to provide

13 emissions guarantees. As such, URS places both it's

14 professional reputation and it's financial interest at

15 stake when performing these projects, and we work

16 diligently to protect both.

17   The success of these projects requires URS

18 to have relationships with a number of burner

19 manufacturers and boiler suppliers. As such we not only

20 have access to the most current information on available

21 technologies, but we also have practical knowledge of

22 how such technologies perform a variety of real world

23 applications. As a result of our ongoing experience

24 with these installations, it is not necessary for us to

1   contact vendors when we conduct a study such as the one

2   that we completed for U.S. Steel.

3   MR. FOX: Mr. Stapper, you've gone on to

4   describe some of the key operating circumstances based

5   by U.S. Steel and your -- you go on to address, I

6   believe, four different vendors. Would it be

7   appropriate to summarize any conclusions that you might

8   have drawn on the basis of these operating circumstances

9   and those four vendors?

10   MR. STAPPER: If you would like I'll skip

11   down to our conclusions.

12   MR. FOX: That would be great.. Thank you.

13   MR. STAPPER: In summary, of the four

14   burner vendors contacted by Dr. Staudt all four proposed

15   solutions using a combination of their own burners with

16   FGR. Three of the four vendors estimated that their

17   solution would result in NOx emissions at or above the

18   0.113 pound per million Btu level that U.S. Steel has

19   already proposed to achieve by adding FGR to it's

20   existing burners. The fourth vendor, Coen, while

21   suggesting that it could achieve lower NOx emissions,

22   noted that the burner for Boiler 11 would have to be a

23   custom design. Coen also confirmed that it does not

24   have a single application in which they are co-firing

1   natural gas, coke oven gas and blast furnace. In

2   addition, URS contacted a widely respected expert in a

3   design and operation of SNCR systems who stated that he

4   did not think that SNCR would be able to achieve NOx

5   RACT emission limits proposed by the Illinois EPA,

6   either as a stand-alone solution or applied in

7   combination with another NOx control technology.

8   I would like to verify that URS conducted a

9   complete and diligent analysis of the available NOx

10   control technologies for Boilers 11 and 12 at U.S.

11   Steel's Granite City Works. Our conclusions were based

12   on decades of practical experience and successfully

13   applying NOx controls to a variety of combustion

14   equipment. It is my contention that this experience is

15   more relevant than the information that has been

16   obtained by Dr. Staudt through internet searchs and via

17   brief E-mail exchanges to vendors that lacked crucial

18   specifics of this particular application.

19   Thank you for allowing me the opportunity

20   to present my statement today. I would be happy to

21   answer any questions.

22   MR. FOX: Thank you, Mr. Stapper.

23   I bet there are at least a couple questions

24   and you can proceed to those.. If there is anyone who

1   wishes to pose a question based on that testimony.

2   MS. VETTERHOFFER: Dana Vetterhoffer,

3   Illinois EPA.

4   Mr. Stapper, at the December 9th, 2008

5   hearing Mr. Siebenberger testified that Exhibits A and B

6   to his pre-filed testimony were based on an evaluation

7   performed by URS. At that time The Agency requested a

8   copy of the evaluation, which Mr. Siebenberger agreed to

9   provide.

10   Last Friday in response to The Agency's

11   request U.S. Steel filed a NOx reduction study.. I

12   believe you mentioned it was part of the materials

13   filed. The report has a date of March 2008 on it.

14   Was a report originally prepared in March?

15   MR. STAPPER: The RACT analysis report

16   was -- that U.S. Steel based it's calculations upon --

17   was dated March 2008.

18   MS. VETTERHOFFER: As far as you know that

19   version of the report was relied upon by U.S. Steel for

20   the December hearing, correct?

21   MR. STAPPER: Yes.

22   MS. VETTERHOFFER: At the bottom of the

23   report that was filed with U.S. Steel documents it says

24   REV1 January 19, 2009.

1   Was the report revised after the December

2   hearing before being submitted to The Board?

3   MR. STAPPER: Yes.

4   MS. VETTERHOFFER: Was this the first

5   revision that you know of since the March 2008 date?

6   MR.. STAPPER: It is the first revision that

7   I am aware of.

8   MS. VETTERHOFFER: And why was the report

9   revised before being submitted to The Board?

10   MR. STAPPER: I believe that there was

11   information in the report that was -- that was believed

12   was not necessary to include for business

13   confidentiality purposes. There may have also been some

14   clarifications in the original language in the report.

15   There were no substantive changes in the report.

16   MS. VETTERHOFFER: So, just to summarize,

17   you may have clarified a few things and then a few thing

18   were redacted under the concept of business

19   confidentiality; is that accurate?

20   MR. STAPPER: That's correct..

21   MS. VETTERHOFFER: Is there any way that

22   the revisions could be submitted to The Board perhaps,

23   you know, under business confidentiality, not viewed by

24   anyone else but The Board and The Agency? We would just

1   like a copy of the original version of the report as it

2   existed on December 9th and 10 from the last hearing

3   took place.

4   MR. STAPPER: Those documents are owned by

5   U.S. Steel, so. . .

6   MS. HODGE: We will certainly entertain

7   your request and speak with folks at corporate and we

8   will respond.

9   MR. FOX: Just for the record, The Board

10   has it's own procedure for submitting privileged

11   documents or documents that would be except from

12   disclosure, which may not be precisely the same as the

13   Agency's.

14   MS. HODGE: That's correct.

15   MS. VETTERHOFFER: Thank you.

16   Similarly, at the December hearing

17   The Agency requested a copy of the technical proposal

18   U.S. Steel had received from Bloom Engineering for the

19   burners on reheat furnaces.   The documents submitted to

20   The Board as attachment F, however, is dated January

21   22nd, 2009.

22   When exactly did U.S. Steel or URS first

23   obtain the proposal from Bloom?

24   MR. STAPPER: I can't answer that.

1   MS. VETTERHOFFER: Do you know -- do you

2   happen to know if U.S. Steel might have that

3   information?

4   MS. HODGE: We will be happy to check on

5   that.

6   MR. STAPPER: Again, to clarify for the

7   purposes of questions for me, I focused on the two

8   boilers so, blast furnaces those questions will be

9   better directed elsewhere.

10   MR.. FOX: Mr. Stapper, we lost most of the

11   volume.

12   MR. STAPPER: I'm sorry. I'm trying to get

13   closer.

14   The questions as they pertain to me -- my

15   role in this analysis was really two boilers. And so,

16   the questions for the reheating furnaces should go

17   elsewhere.

18   MS. VETTERHOFFER: Could we take a short

19   break? The laptop computer that we're using has a low

20   battery. We just need to recharge or use a different

21   computer.

22   MR. FOX: That would be fine.

23   Why don't go off the record.

24   WHEREUPON, THE PARTIES TOOK A SHORT BREAK; SUBSEQUENT TO

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1    WHICH THE FOLLOWING PROCEEDINGS WERE MADE OF RECORD:

2              MR. FOX:  We are back on the record.

3              We did want to interrupt.  I appreciate

4    The Agency's flexibility on this, the order of our

5    proceedings.

6              We have Ms. Amy Funk, a member of the

7    public, who has a comment that she has prepared that she

8    would like to deliver.

9              And please, Ms. Funk, when you're ready

10   proceed with that.  Thank you for your patience.

11             MS. FUNK:  Well, I should thank you for

12   humoring me and my daughter here.  I'm a little -- this

13   is my first public hearing -- public hearing, so I'm a

14   little out of my element, honestly.  So, I do apologize

15   if this is not appropriate for this type of forum.

16             MR. FOX:  Ms. Funk, if I may introduce you.

17   You're doing fine.  If you would identify any group or

18   organization that you might represent.

19             MS. FUNK:  Yes.  Yes.

20             My name is Amy Funk.  And I am a

21   stay-at-home mom of two children.  And I am also active

22   member of the local Sierra Club, as well as I've started

23   local group for Mothers on Environmental Issues locally.

24             Really let me just kind of get a brief why
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 1   I'm motivated to be here and sit with a four-year-old

 2   for a couple of hours.  Starting at a young age I

 3   learned from my father the impact of air quality on

 4   one's health.  My father grew up in East Chicago and he

 5   had asthma the first 18 years of his life.  He then went

 6   off to college and asthma stopped.  And every time he

 7   would go visit, even growing up, his breathing was

 8   always labored every time he would visit at my

 9   grandparents' in that area.  And he also attributed it

10   to the pollution in the area.  And it seemed like a

11   reasonable analysis when you consider where we lived and

12   where we went.

13               In addition to that I lived in Hawaii for

14   six years.  My husband was in the military and we have

15   since moved to this area.  And I remember a few summers

16   ago when I went running for the first time during the

17   summer, mid afternoon, it wasn't terribly hot, I thought

18   I would go for a run.  Oh, my breathing was labored and

19   I had never ever experienced that until I moved to this

20   area..  I -- I won't say it's with concrete proof that

21   it's directly related to this area, but I do think it's

22   a bit telling.  And I remember the doctor telling me,

23   giving me times, best times to run, avoid certain times,

24   you know, pay attention to the news and the air quality
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1   updates and that was very telling me for.

2   And I have two young children, so my

3   primary motivation here today is because of them.

4   And John Kennedy once said: "Children are

5   the world's more valuable resource and it's best hope

6   for the future."

7   So, basically, I am compelled to speak.

8   The fact that the Metro East County has failed to meet

9   air quality standards very disturbs to me. And it is

10   also, I think, an opportunity for us to put over three

11   million children ahead of special interests and

12   industry. When one considers the costs of health care

13   due to respiratory illness, time missed from work and

14   school, along with impact of one's quality of life the

15   answer seems pretty easy.

16   I understand the needs of business to

17   operate. They serve a vital function, particularly

18   providing jobs for the community, but isn't the health

19   of our 13 million residents here in Illinois also vital

20   to our -- the health of our economy?

21   Recently my father lost his job, as so many

22   others have. He worked a manager for the car industry.

23   You know, never would he attribute it to the company's

24   having to meet control technology. He would attribute

1   it to the short-sided decision making on the side of

2   both business and government.

3   The reasonably available control technology

4   for NOx being discussed here today is both responsible

5   and forward thinking. This is the kind of thinking we

6   need to ensure the recovery and viability of our economy

7   and the health of our -- health of our citizens and

8   environment.

9   There's a Proverb: "That which is escape

10   now is pain to come." I ask you to consider in your

11   rule making that, basically, what we do today we will

12   face tomorrow.

13   I could stand here and talk about the long

14   list of health impacts on NOx and particulate matter,

15   but all of you are more well-versed in that than me.

16   And so I'm, basically, here holding hope for my

17   children's future. Hope that we will allow or will not

18   allow short-sided decision making on the part of

19   industry to jeopardize the environment quality of our

20   health of our children. For me today is about working

21   for a cleaner, healthier environment for the nearly 13

22   million Illinois residents.

23   Lastly, I just want to say as a mother I,

24   you know, make sure I feed her healthy foods. I can

1   make sure she gets exercise and can keep her safe, you

2   know, teach her how to cross the road. But one thing

3   that is beyond my control, but is in your control here

4   today, is the air she breathes. And so, basically, I'm

5   here just asking you, you know, that you consider that

6   in your decision making.

7   And thank you so much for letting me kind

8   of move in and I appreciate your time.

9   MR. FOX: Ms. Funk, thank you for your time

10   and your patience today.

11   Of course, the court reporter has made a

12   report of your comment that's now part of the record of

13   this proceeding for today, so thank you.

14   MS. FUNK: Thank you very much.

15   MR. FOX: Ms. Vetterhoffer, that brings us

16   back to you. I appreciate your patience in letting us

17   break our order to get here, but please, feel free to go

18   ahead with any questions.

19   MS. VETTERHOFFER: I do thank you for

20   stopping so I can recharge the computer.

21   Before we left off I had asked Mr. Stapper

22   a question about the technical proposal from Bloom,

23   forgetting Mr. Siebenberger is also sworn in. So, I

24   know we're directing questions to Mr. Stapper now. If

1   it's all right I'd like to direct a couple quick

2   followup questions to Mr. Siebenberger.

3   MR. FOX: Certainly that would be

4   appropriate. Mr. Siebenberger indicates he's available.

5   MS. VETTERHOFFER: Mr. Siebenberger, at the

6   December 9th and 10th hearings regarding this rule

7   making did you -- I believe you testified that you had

8   relied on a mechanical proposal from Bloom or at that

9   time you had a technical proposal from Bloom; is that

10   correct?

11   MR. SIEBENBERGER: Yes. We -- what I had

12   was the guaranteed values or the values that Bloom had

13   given our engineering department for the NOx levels that

14   they said that their equipment could achieve on our slab

15   furnaces.

16   MS. VETTERHOFFER: Do you recall if the

17   technical proposal that was provided with U.S. Steel's

18   supplemental materials is the same one that you had at

19   the time of the December hearing?

20   MR. SIEBENBERGER: Well, I didn't actually

21   have the entire proposal, but what I had was the values

22   that engineering had provided to me.

23   MS. VETTERHOFFER: And I know Ms. Hodge had

24   said that she would follow up on that, but do you recall

1   or in your opinion can you provide a copy of what you

2   did have in December? Is that something you can submit

3   to The Board?

4   MR. SIEBENBERGER: Well, I think it is the

5   values that I used in the calculations.

6   MS. VETTERHOFFER: Right. I'm just --

7   MR. SIEBENBERGER: Without looking if it's

8   not in my exhibits I'm sure I can provide that. I think

9   it's already in there, but. . .

10   MS. VETTERHOFFER: Okay. Thank you.

11   MR. SIEBENBERGER: Uh-huh.

12   MS. VETTERHOFFER: Back to Mr. Stapper,

13   your testimony today is based on, in large part, on

14   Dr. Staudt's testimony that he pre-filed on

15   January 20th, correct?

16   MR. STAPPER: Yes. That's correct.

17   MS. VETTERHOFFER: And you state in your

18   pre-filed testimony that you contacted some of the same

19   vendors that Dr. Staudt did; is that correct?

20   MR. STAPPER: That's correct.

21   MS. VETTERHOFFER: And in your testimony

22   you've researched a number of safety issues in

23   California, correct?

24   MR. STAPPER: Yes, that's correct.

1   MS. VETTERHOFFER: And since January 20th

2   you've updated your analysis of NOx controls; is that

3   accurate?

4   MR. STAPPER: Are you referring to my

5   working practical experience of NOx controls or are you

6   referring to my analysis for U.S. Steel?

7   MS. VETTERHOFFER: For U.S. Steel obtained

8   in your report that was submitted with U.S. Steel

9   supplemental materials.

10   MR. STAPPER: I have not updated my

11   analysis from the standpoint that everything I uncovered

12   in following up on Dr. Staudt's contacts with vendors

13   supported our conclusions as such our recommendations to

14   U.S. Steel have not changed.

15   MS. VETTERHOFFER: And I know you testified

16   when exactly your testimony was filed with The Board,

17   but considering The Agency has only had less then

18   24 hours to review it do you believe that provides

19   The Agency or The Board sufficient time to review it as

20   it was submitted at the close of business yesterday?

21   MS. HODGE: I'm going to object to that

22   question. We filed it when -- as soon as we could get

23   it available and served everyone electronically. And

24   the hearing officer has been kind enough today to allow,

1   you know, the testimony to go forward today. And my

2   understanding in my practice before The Board is the

3   standard in rule making is relevancy. His testimony is

4   certainly relevant.

5   MR. FOX: Ms. Vetterhoffer, did you wish to

6   be heard on -- in response to Ms. Hodge?

7   MS. VETTERHOFFER: No, I was just, again,

8   pointing out the short amount of time of The Agency had

9   to prepare.

10   MR. FOX: And on the issue of adequate time

11   for The Agency or The Board I'm not sure that

12   Mr. Stapper's opinion is relevant or has basis in fact,

13   so I would uphold the objection.

14   Ask your next question, please.

15   MS. VETTERHOFFER: Thank you.

16   On page two of your pre-filed testimony you

17   state that URS provides emission guarantees on equipment

18   it installs.

19   Isn't that true of all vendors?

20   MR. STAPPER: No, that's not true.

21   MS. VETTERHOFFER: Is that true of some

22   vendors?

23   MR. STAPPER: Yes.

24   MS. VETTERHOFFER: Doesn't that make URS a

1 vendor as well?

2   MR. STAPPER: For some technologies URS is

3 a vendor.

4   MS. VETTERHOFFER: How old, if you know,

5 are the existing burners on Boilers 11 and 12 at Granite

6 Steel Works?

7   MR. STAPPER: Just off the top of my head I

8 don't recall their age. The age of the boilers? Forty

9 to 50 years.

10   MS. VETTERHOFFER: And again, is there any,

11 if Mr. Siebenberger perhaps knows the answer to the

12 question, perhaps he would answer?

13   MR. SIEBENBERGER: No, I don't have any

14 specific knowledge on that.

15   MS. VETTERHOFFER: Mr. Stapper, is there

16 any other reason that a burner might be replaced besides

17 NOx control requirements?

18   MR. STAPPER: Yes.

19   MS. VETTERHOFFER: And what are some of

20 those other reasons?

21   MR. STAPPER: Burners wear out over time,

22 so it's conceivable that somebody would replace one just

23 as they maintenance replace.

24   MS. VETTERHOFFER: Or perhaps to address

1   safety or code requirements; would you agree with that?

2   MR. STAPPER: I agree.

3   MS. VETTERHOFFER: In the event that

4   U.S. Steel had to replace their burners for reasons

5   other than NOx control wouldn't it have to work with

6   burner vendors to do that?

7   MR. STAPPER: Yes.

8   MS. VETTERHOFFER: Is there a chance that

9   U.S. Steel would face the same problems in light of age

10   of the existing burners?

11   MR. STAPPER: Which problems are you

12   referring to?

13   MS. VETTERHOFFER: The same problems

14   discussed in your pre-filed testimony and the problem

15   regarding your testimony regarding fitting the burners

16   into the existing boilers, problems associated with

17   that?

18   MR. STAPPER: The distinction I'm trying to

19   draw is that there are burners suitable for multi-fuel

20   applications. There are not widely available

21   commercially developed Low-NOx burners for that

22   application. If they were not having to replace the

23   burners for purposes of NOx control they would be able

24   to find burners that were more proven, more readily

1   available similar to the ones that are already

2   installed.

3   MS. VETTERHOFFER: And I believe we were

4   just discussing didn't U.S. Steel contact Bloom

5   Engineering about their reheat furnaces?

6   MR. STAPPER: Again, I'm not the reheat

7   furnace person.

8   MS. VETTERHOFFER: I am sorry. I'll direct

9   that to Mr. Siebenberger as well.

10   MR. SIEBENBERGER: Could you repeat?

11   MS. VETTERHOFFER: Sure.

12   Didn't U.S. Steel contact Bloom Engineering

13   about their reheat furnaces?

14   MR. SIEBENBERGER: Yes.

15   MS. VETTERHOFFER: Okay. Bloom Engineering

16   is a vendor as well, correct?

17   MR. SIEBENBERGER: I believe so, yes.

18   MS. VETTERHOFFER: So, would you agree that

19   U.S. Steel has relied on information provided from

20   vendors in making it's own decision for NOx control?

21   MR. SIEBENBERGER: In case of blast

22   furnaces, yes.

23   MS. VETTERHOFFER: Mr. Stapper, on page

24   four of your testimony you stated that a critical

1   omission in Dr. Staudt's correspondence with vendors

2   concerned the fuel mix to be burned in the boilers.

3   This included 35 percent blast furnace gas, 25 percent

4   natural gas and 40 percent coke oven gas and then 40

5   percent natural gas and 60 percent coke oven gas.

6   Wasn't this information provided by U.S.

7   Steel?

8   MR. STAPPER: These average plans were

9   provided by U.S. Steel in the context of explaining

10   their emissions calculations. I don't believe the

11   intention was to represent the range over which those

12   fuels vary and how they operate.

13   MS. VETTERHOFFER: Okay. And to your

14   knowledge has U.S. Steel or URS ever provided that

15   information to The Agency?

16   MR. STAPPER: No.

17   MS. VETTERHOFFER: You -- do you know if

18   The Agency requested that information at the last

19   hearing?

20   MR. STAPPER: I'm not aware of that

21   request, no.

22   MS. VETTERHOFFER: The Agency did request

23   information concerning the fuel mix in those boilers

24   though; is that correct?

1   MR. STAPPER: I don't recall a specific

2   request of that nature, no.

3   MS. VETTERHOFFER: On page five of your

4   testimony you discuss limitations regarding the size

5   required for the Bloom Low-NOx burners. And you state

6   that these are too large for Boilers 11 and 12.

7   How was the information you base this

8   opinion regarding boiler dimensions how was that

9   information obtained?

10   MR. STAPPER: For the information on the

11   Bloom 1030 series burner that information for the

12   specific burner series was contained in the

13   correspondence between Bloom and Dr. Staudt. The

14   specifics of the burner dimensions I obtained from Bloom

15   brochures.

16   MS. VETTERHOFFER: What about the

17   information about the dimensions of the boilers?

18   MR. STAPPER: That information I obtained

19   from drawings, the boiler general arrangement drawings.

20   MS. VETTERHOFFER: Have you inspected

21   Boilers 11 and 12?

22   MR. STAPPER: Yes, I have.

23   MS. VETTERHOFFER: Do you know if

24   Dr. Staudt had those drawings that you just mentioned

1   available to him?

2   MR. STAPPER: I don't know.

3   MS. VETTERHOFFER: I'll just ask

4   Mr. Siebenberger.

5   Mr. Siebenberger, are you aware whether

6   that information was ever provided to Dr. Staudt or

7   The Agency?

8   MR. SIEBENBERGER: I -- I don't believe so.

9   MS. VETTERHOFFER: Would the information be

10   available to The Agency? Would you be willing to

11   provide it -- and to The Board?

12   MR. SIEBENBERGER: Again, assuming I guess

13   that there's no confidentiality issues with it.

14   MS. VETTERHOFFER: Okay. Thank you.

15   And isn't it true that The Agency requested

16   an opportunity to inspect boilers with Dr. Staudt

17   present prior to this hearing?

18   MR. SIEBENBERGER: Yes, I believe

19   Ms. Roccaforte requested that we be able to sit down,

20   get together prior to the hearing and discuss these

21   matters. We attempted to set up a meeting to discuss

22   the matter further and I think at that time they were

23   hoping to be able to go out and view the boilers.

24   MS. VETTERHOFFER: Was U.S. Steel and

1   The Agency able to set up that inspection?

2   MR. SIEBENBERGER: No, due to scheduling

3   problems we're going to have to reschedule.

4   MS. VETTERHOFFER: Back to Mr. Stapper, on

5   page 12 of your testimony you state that the selective

6   non-catalytic reduction, SNCR, could not be used to

7   reduce emissions on Boilers 11 and 12 to below .08

8   pounds per MMBtu; is that correct?

9   MR. STAPPER: Yes.

10   MS. VETTERHOFFER: Didn't Dr. Staudt's

11   original pre-filed testimony state that he did not

12   envision the need for SNCR on any gas fired facilities

13   subject to the proposed rule?

14   MR. STAPPER: That must be a matter of the

15   record. I can't speak to that.

16   MS. VETTERHOFFER: Okay. Do you

17   specifically recall that testimony personally?

18   MR. STAPPER: I personally do not recall

19   that testimony.

20   MS. HODGE: Mr. Stapper was not present at

21   the first hearing in this matter.

22   MS. VETTERHOFFER: I -- the second I asked

23   that question I realized that. I'm sorry.

24   Didn't Staudt's -- Dr. Staudt's more recent

1   testimony filed regarding this hearing discuss SNCR use

2   on multi-fuel and no-bearing heat systems?

3   MR. STAPPER: May I have just a moment to

4   come back to Dr. Staudt's testimony.

5   MR. FOX: Yes. Yes. You need a moment or

6   two that's fine.

7   WHEREUPON, THERE WAS A SHORT PAUSE IN PROCEEDINGS;

8   SUBSEQUENT TO WHICH THE FOLLOWING PROCEEDINGS WERE MADE

9   OF RECORD:

10   MR. STAPPER: I am sorry. Could you point

11   me to the page of Dr. Staudt's pre-filed testimony?

12   MS. VETTERHOFFER: Just one moment.

13   MR. STAPPER: I got it.

14   Could you repeat the question?

15   MS.. VETTERHOFFER: Sure.

16   I simply asked if you had seen Dr. Staudt's

17   recent testimony in this hearing concerning SNCR use for

18   multi-fuel systems?

19   MR. STAPPER: His testimony does speak to

20   multi-fuel boiler application of SNCR, yes.

21   MS. VETTERHOFFER: Would it be correct to

22   say that the co-firing of blast furnace gas, coke oven

23   gas and natural gas is pretty limited to the steel

24   industry?

1   MR. STAPPER: Yes.

2   MS. VETTERHOFFER: You testified at the

3   December hearing that URS is involved in the burner

4   retrofit business and that experience allows URS to

5   operate without contacting the vendors for every

6   application.

7   How many steel mill boilers co-firing

8   natural gas, coke oven gas and blast furnace gas has URS

9   performed Low-NOx reduction on?

10   MR. STAPPER: I am not aware that we have

11 performed any.

12   MS. VETTERHOFFER: To your knowledge has

13 U.S. Steel performed emissions tests of the reheat

14 furnaces or Boilers 11 and 12?

15   MR. STAPPER: Could you repeat that,

16 please?

17   MS. VETTERHOFFER: Sure.

18   To your knowledge has U.S. Steel performed

19 emissions tests on it's reheat furnaces or Boiler 11 and

20 12?

21   MR. STAPPER: I have no knowledge or --

22   MS. VETTERHOFFER: Maybe I can direct that

23 question to Mr. Siebenberger.

24   MR. SIEBENBERGER: Yeah. I mean,

1   historically I think there's been some analysis or some

2   testing of number 12 boiler and some limited testing of

3   number four reheat furnace.

4   MS. VETTERHOFFER: Okay. And was that for

5   NOx controls, I'm sorry, NOx emissions?

6   MR. SIEBENBERGER: I -- yes, I believe some

7   of it was for NOx emissions.

8   MS. VETTERHOFFER: Can you by any chance

9   recall what the emissions rates were for the different

10   fuels?

11   MR. SIEBENBERGER: No, I can't off the top

12   of my head.

13   MS. VETTERHOFFER: Would you be willing to

14   provide a copy of the test results to us and to

15   The Board?

16   MR. SIEBENBERGER: Yeah, assume -- yeah, I

17   think so.

18   MS. VETTERHOFFER: Were those emissions

19   tests used in formulating the emissions rates for the

20   cases that you submitted in Exhibit A to your pre-filed

21   testimony for December 9th and 10th hearing?

22   MR. SIEBENBERGER: Not -- not directly in

23   determining what the limit was, no.

24   I think -- well, I know in both cases URS

1   for the boiler projected what they thought the emission

2   rates are currently. And Bloom did the same thing with

3   reheat furnaces. And so, that was -- then they used

4   that in their analysis to determine what the control

5   rates could be. I think the only place some of these

6   earlier numbers from your tests are used was in any

7   emission reports. And we may have used those numbers to

8   reflect -- and typically those are conservative numbers.

9   And we may have used those numbers to reflect what the

10   Low-NOx reductions would be to reflect that that had no

11   bearing on what the final control level is.

12   MS.. VETTERHOFFER: Okay. Mr. Stapper, just

13   for clarification sake, you are the author of the NOx

14   Reduction Study for U.S. Steel that was submitted to

15   The Board on Friday; is that correct?

16   MR. STAPPER: URS authored that report. I

17   am not the sole author of that report.

18   MS. VETTERHOFFER: Did you help author that

19   report?

20   MR. STAPPER: Yes, I did.

21   MS. VETTERHOFFER: In that report you

22   discuss Low-NOx burners on page nine of the report you

23   state, or whoever authored the document with your help

24   states, of course, a Low-NOx burner combined FGR would

1   produce significant NOx reductions, but it is unlikely

2   that the NOx reduction would be any greater than

3   application of FGR to the existing burners.

4   This is one of the reasons that URS pulled

5   out Low-NOx burners; is that correct?

6   MR. STAPPER: That's correct.

7   And I believe that's consistent with what

8   we in response received from the burner vendors.

9   MS. VETTERHOFFER: In the previous

10   paragraph on that same page URS also discusses the

11   possible need to upgrade burner management system, which

12   would add cost to the project; is that correct?

13   MR. STAPPER: Low-NOx burners generally

14   require better instrumentation, because they have

15   tighter operating windows. And therefore, Low-NOx

16   burner retrofit may often or even an FGR retrofit may

17   often require instrumentation upgrades such that the

18   cost of the instrumentation even exceeds the cost of the

19   burner itself.

20   MS. VETTERHOFFER: So, the added cost was a

21   consideration that URS considered?

22   MR. STAPPER: URS considered what the total

23   installed cost would be. It would be necessary to

24   install and safely operate the equipment we were

1   evaluating.

2   MS. VETTERHOFFER: Assuming a Low-NOx

3   burner would be installed on Boilers 11 and 12 would it

4   be fair to say that Low-NOx burner in combination with

5   FGR would provide reduction that is at least as good as

6   FGR alone, perhaps better?

7   MR. STAPPER: I don't believe that I have

8   seen any information from any burner vendor that would

9   suggest that they have a burner capable of exceeding the

10   emissions that U.S. Steel has proposed with the

11   installation of their burner in combination with FGR. I

12   am aware of no existing installations.

13   On this fuel blend and the feedback I

14   received as -- as is included in the testimony that was

15   presented today the estimates that those vendors

16   provided with their Low-NOx burner in combination with

17   FGR are not any lower than what U.S. Steel is proposing

18   to achieve by simply adding FGR to their existing

19   burners.

20   And the point I made in the testimony is

21   that a burner vendor doesn't sell FGR projects. They

22   sell burners. And they are going to try to respond with

23   their best burner driven solution.

24   MS. VETTERHOFFER: Is there significant

1   fuel NOx produced using coke oven gas?

2   MR. STAPPER: The scrubbed coke oven gas is

3   estimated by the scrubber vendor to contain 130 parts

4   per million hydrogen cyanide, which would add

5   approximately .03 pounds per million Btu full NOx to the

6   overall NOx emissions from the boiler.

7   The un-scrubbed coke oven gas contains 1900

8   PPM hydrogen cyanide, which is -- the scrubber is

9   estimated to reduce 93 percent of the hydrogen cyanide

10   from the coke oven gas. So, the -- the un-scrubbed coke

11   oven gas would have a very significant impact on the NOx

12   emissions.

13   MS. VETTERHOFFER: And FGR does not reduce

14   fuel NOx; is that correct?

15   MR. STAPPER: That's correct, nor does

16   Low-NOx burner, just to clarify.

17   MS. VETTERHOFFER: Did you examine with any

18   calculations the NOx reduction in combination of Low-NOx

19   burner and FGR might achieve versus FGR alone?

20   MR. STAPPER: Yes. As we've stated we have

21   data for Low-NOx burner in combination with FGR. We

22   have those emissions tests. And they are, essentially,

23   the same as what U.S. Steel is proposing to achieve with

24   just FGR applied to it's existing burners.

1   And our recommendation to U.S. Steel was

2   rather than to go the expense of rebuilding their

3   boilers and buying new burners and installing them and

4   adding FGR that it would be much more prudent to simply

5   add FGR to obtain the same NOx emission levels.

6   MS. VETTERHOFFER: Mr. Stapper, did you

7   obtain a cost estimate for FGR?

8   MR. STAPPER: Do you mean did I obtain a

9   cost estimate from an FGR vendor?

10   MS. VETTERHOFFER: Or did you, yourself,

11 develop a cost estimate?

12   MR. STAPPER: URS did develop a cost

13 estimate. URS does sell reinstallation retrofits.

14 And -- and as far as the same I -- I -- I've prepared

15 one within the last month for a design that we're doing.

16 It's actually matter of the public record, so I can even

17 say the installation is NASA Johnson Space Center, so I

18 have most current possible cost estimate information is

19 available.

20   MS. VETTERHOFFER: Just one moment.

21 WHEREUPON, THERE WAS A SHORT PAUSE IN PROCEEDINGS;

22 SUBSEQUENT TO WHICH THE FOLLOWING PROCEEDINGS WERE MADE

23 OF RECORD:

24   MS. VETTERHOFFER: Mr. Stapper, in your

1 opinion then based on your analysis of FGR does that

2 meet RACT requirements or FGR considered RACT in your

3 opinion?

4 　　　　　　　MR. STAPPER: By the definitions of cost

5 effectiveness and it's availability and proven record

6 I'm agreeing that FGR is -- generally qualifies as RACT.

7 　　　　　　　MS. VETTERHOFFER: Thank you, Mr. Stapper.

8 I have no further questions.

9 　　　　　　　MR. FOX: Are there any other questions?

10 (No response.)

11 　　　　　　　Ms. Vetterhoffer, thank you.

12 　　　　　　　Were there questions from any of other

13 participants for Mr. Stapper here today?

14 　　　　　　　Ms. Hodge?

15 　　　　　　　MS. HODGE: I have just one full up

16 questions for him, if I may?

17 　　　　　　　MR. FOX: Please, go ahead.

18 　　　　　　　MS. HODGE: Mr. Stapper, could you

19 elaborate a bit on URS' experience with evaluation of

20 burner application with various fuel blends?

21 　　　　　　　MR. STAPPER: Yes.

22 　　　　　　　The question was asked previously if URS

23 had had -- if I was aware of URS had installed burners

24 in application involving blast furnace gas, coke oven

1   gas and natural gas and my answer was no. But URS does

2   conduct studies of -- of sources firing a wide variety

3   of fuels, including blast furnace gas and coke oven gas

4   for specific burner retrofit. Our experience includes

5   units firing refinery gasses with various blends of

6   hydrogen and other hydrocarbons.

7   We are involved in -- we've been involved

8   in retrofits with -- with co-firing low Btu gasses and

9   co-firing other waste treatments of hydrocarbons that

10   require the burner to accommodate swings in both fuel

11   heating value and -- and the load range of the firing

12   equipment. So, URS does have extensive experience in

13   the actual installation and start up of a variety of

14   multi-fuel boiler applications.

15   MS. HODGE: Thank you.

16   MR. FOX: Any other questions for -- for

17   Mr. Stapper?

18   Mrs. Andria?

19   MS. ANDRIA: Am I allowed to ask a very --

20   it's very brief?

21   MR. FOX: Yes.

22   MS. ANDRIA: Kathy Andria, A-N-D-R-I-A.

23   MR. FOX: This question, Ms. Andria, is

24   directed specifically to --

1   MS. ANDRIA: Specific to what you just said

2   -- Mr. Stapper just said.

3   MR. FOX: Very good. Thank you.

4   MS. ANDRIA: From my memory of reading the

5   transcript of the previous public hearing and something

6   he just said I just wanted to clarify something for our

7   own purposes or our comments: URS specializes in

8   retrofit burners, not new burners; is that correct?

9   MR. STAPPER: No. We -- we -- we supply

10   new burners for retrofit applications, but we supply new

11   burners both as part of boiler retrofits and as part of

12   new boiler installations.

13   MS. ANDRIA: So, I'm unclear. I'm not a

14   technical person or an engineer. I am unclear. Are you

15   a vendor or are you a consultant in this case?

16   MR. STAPPER: In this particular case URS

17   is a consultant and we are -- we will not be installing

18   whatever solution is ultimately implemented by

19   U.S. Steel.

20   MS. ANDRIA: But you are recommending

21   equipment that you sell; is that correct?

22   MR. STAPPER: We're recommending a

23   technology that we -- we do provide to clients, yes.

24   MS. ANDRIA: That's all. Thank you.

1   MR. FOX: And Mrs. Andria, if would refer

2   to comments, could you just mention to the record any

3   organization or group on whose behalf those comments

4   might be filed?

5   MS. ANDRIA: Yes. American Bottom

6   Conservancy and Sierra Club.

7   MR. FOX: Thank you, Mrs. Andria. Should

8   have taken care of that first.

9   That appears to conclude all of the

10   questions for Mr. Stapper on the basis of his pre-filed

11   testimony.

12   There was, as I announced at the top of

13   hearing, an opportunity for anyone to sign up if they

14   wish to testify without having pre-filed or to offer

15   comments and we have with Ms. Funk's comment taken care

16   of, one of the three people.

17   Mr. Smith, I think you had indicated and

18   forgive me if I'm mistaken, you merely offered -- wanted

19   to offer brief comment rather than be sworn in and offer

20   testimony and be subject to questions.

21   MR. SMITH: Just a brief comment, yes.

22   MR. FOX: Terrific. I think we've come to

23   the point in the hearing with the conclusion of those

24   questions, for any comment you may wish to offer. I

1   don't think you have to move from that seat, but if you

2   could use the microphone and pull it down to within a

3   couple of inches of your chin I think the court reporter

4   and the rest of us here can hear you just fine. Please,

5   go ahead whenever you're ready.

6   MR. SMITH: Okay. Thank you.

7   MR. SMITH: I am Steven Smith. I work for

8   Saint-Gobain Container. And I just have a brief

9   statement with respect so the notice filed by

10   Gina Roccaforte January --

11   MR. FOX: Mr. Smith, maybe it would make

12   the most sense if you come down two rows in front of you

13   to an empty seat with a microphone that was working. I

14   hate to ask you to do that, but it be might be the most

15   efficient.

16   MR. SMITH: Is this one working?

17   MR. FOX: They are. Terrific. Thanks.

18   MR. SMITH: I just have a brief statement

19   with respect to the notice filed by Gina Roccaforte on

20   January 30th, 2009 on the motion to amend rule making

21   proposal Saint-Gobain Containers has been working with

22   the Illinois EPA to develop specific sessions involving

23   glass melting furnaces and we support that motion.

24   MR. FOX: Anything further, Mr. Smith, on

1 behalf of Saint-Gobain?

2   MR. SMITH: That's it. Thank you.

3   MR. FOX: Thank you for patience waiting to

4 deliver those few sentences all morning.

5   MR. SMITH: No problem.

6   MR. FOX: We had one other person, unless

7 there was further interest in testimony -- testifying or

8 offering comment and that was Ms. Andria on behalf of

9 she had mentioned of the American Bottom Conservancy and

10 Sierra Club.

11   Ms. Andria, if you're prepared to offer a

12 brief public comment, please, proceed at this point to

13 do that.

14   MS. ANDRIA: Thank you.

15   Mr. Fox, members of The Board. Mr. Rao.

16   My name is Kathy Andria. I'm president of

17 American Bottom Conservancy and Conservation Chair for

18 the Kaskaskia Group Sierra club. I am a member of the

19 Sierra Club National Clean Air Team and an active

20 participant in the East/West Gateway Council of

21 Government's Air Quality Advisory Committee. I have

22 been a member of the Illinois EPA Environmental Justice

23 Advisory Group since it's inception. In all capacities

24 I am a volunteer.

1   We want to thank you for holding a thorough

2   hearing on this matter so those of us living in the

3   Metro East are able to comment on this proposed rule

4   making, which very much affects us. We are surrounded

5   by coal fired power plants, smelters, chemical plants,

6   steel mills, refineries, a hazardous waste incinerator

7   and other facilities. We will soon have a new coke

8   plant. We also have a massive cement kiln that is being

9   built right across the river. All are going to or will

10   and have contributed to our air quality.

11   I know that a number of people living on

12   the other side of the river who share our air shed also

13   wanted to come today, but the Missouri Department of

14   Natural Resources is also holding an air quality public

15   hearing today and they are there. I hope that they and

16   other local residents who are unable to come to a

17   daytime hearing will submit written comments.

18   Several weeks ago in anticipation of that

19   hearing I read through most of the filings on the rule

20   making that were posted on The Board web site and began

21   writing my comments, some of which address concerns I

22   found in the records such as I was concerned about

23   the -- the question of the recommending something they

24   sell and not going to be able to go -- to get questions

1   answered by only those who sold new boilers.

2   Unfortunately, I discovered yesterday that my notes on

3   that were among those lost in a recent computer

4   malfunction, so I regret that my comments today will be

5   limited. I hope to reconstruct my comments and submit

6   them in writing, although the Illinois EPA has done much

7   of the comments, brought up questions that I had.

8   We want to thank Illinois EPA for proposing

9   this rule making and for the work they have put into

10   seeing that it is adopted. Those opposing this rule

11   making, the industries which would have to comply with

12   it, claim that adding stricter controls is unnecessary

13   because our air is getting cleaner, would cost too much

14   and the deadline is too soon. That is all the argument

15   and they do everything they can to delay, delay, delay

16   the adoption and implementation of any rule making or to

17   quash it altogether. In this instance they hired the

18   former Chief of Illinois Air Bureau, very smart tactic.

19   If we had the funds those of us worried about the health

20   of our communities might have done the same thing and

21   his testimony might have had a very different focus.

22   I am not a technical person. I am not an

23   engineer. I am not a health professional, but I do know

24   something about our air quality and our people and I

1   know a bit about the local industries that would be

2   affected by your rule making.

3   American Bottom Conservancy and Sierra Club

4   have been actively involved in air permitting issues

5   concerning the ConocoPhillips Wood River refinery and

6   the U.S. Steel facility in Granite City. Both

7   facilities contribute significant emissions of

8   pollutants to our air that cause our status as

9   non-attainment. Both facilities will be affected by

10   this rule making. Both facilities are opposing it.

11   Neither, apparently, has reached an agreement with IEPA.

12   ABC and Sierra Club oppose certain recent permit

13   decisions by the Illinois EPA regarding the two

14   facilities. Both resulted in settlement agreements that

15   would keep the plants operating, the workers working and

16   given environmental benefits to communities such as

17   increased monitoring, school bus and public building

18   energy efficiency retrofits.

19   The Greater St. Louis Metro East area does

20   not meet federal air quality standard for fine

21   particulates being 2.5 in our ozone. The Wood River

22   Refinery and Granite City Steel are the largest Metro

23   East contributors to that numbers. And the U.S. Steel

24   facility has been identified as largely being

1   responsible for our PM 2.5 non-attainment designation.

2   The company indicated that they have been working with

3   IEPA for the last year on controls, yet they oppose this

4   rule making.

5   I grew up in Granite City. My father

6   worked for most of his life in a steel mill. He was a

7   union pattern maker and carpenter. So, I very much

8   understand the importance of jobs to our communities and

9   to our families, but my father knew firsthand the

10   companies could do more, much more to control their

11   pollution. And he urged me to work to help clean our

12   air. My father had heart disease and emphysema. My

13   mother died from cancer. All three diseases can be

14   caused or aggravated by poor air quality by exposure to

15   fine particulates. We have a very high cancer rate and

16   lung disease in the St. Louis area. St. Louis was just

17   named the worst city in America for asthma by the Asthma

18   and Allergy Foundation. Madison County and St. Clair

19   County received failing grades for air quality annually

20   from the American Lung Association. The asthma rates

21   among our children both in St. Louis and the Metro East

22   are astronomical, nurses in the local schools have bags

23   of inhalers for the kids. Children must limit their

24   play time or play indoors.

1   Illinois EPA is trying this rule making to

2   make our air cleaner to help our area come into

3   attainment. ConocoPhillips and U.S. Steel are fighting

4   it. I have toured both facilities and know there is

5   much each can do to better control their emissions.

6   And I don't know for sure, but I think

7   that's Boilers 11 and 12 might be as old as I am, which

8   is not 40 or 50. That would help, if they do the

9   control their emissions, that would help not only us it

10   would help the two companies to use their energy more

11   efficiently that would help their bottom line.

12   Granite City Steel is currently partially

13   idle because of the economy as Larry Siebenberger

14   testified. What better time for the company to install

15   better controls reasonably available control technology.

16   If they act now they would not have to plant -- idle the

17   plant when the economy recovers when it is at full scale

18   production and they could put some of their laid off

19   workers back to work installing the equipment.

20   President Obama's stimulus package has,

21   presumably, it has billions of dollars targeted for

22   infrastructure, which should result in increased need

23   for steel. Installing better controls will also provide

24   jobs to workers who would maintain the equipment.

1   Building control equipment also provides jobs. We would

2   hope that U.S. Steel would use this opportunity to

3   install the equipment now and drop their opposition to

4   the rule.

5   ConocoPhillips has done very well in recent

6   years with the high cost of oil. The Wood River

7   refinery is poised to develop 30 tar stands that will

8   result in even more pollutants being released to our

9   air. They too should drop their opposition and allow

10   rule making to proceed. Each company used an end run

11   around having better controls than lower emission limits

12   in their recent rule making.

13   The Board is charged with making this

14   decision. Are you going to listen to the EPA, the

15   Illinois EPA, the agency charged with protecting the

16   people of Illinois? Will you decide that what they are

17   proposing is reasonable or will you listen to companies

18   who might never control air pollution were they not

19   required by law to do so, to companies who try to delay

20   or overturn every rule proposed by the state or federal

21   government that would better protect the public? Will

22   you rule so that the companies affected rather than

23   spend millions on pollution controls give their CEO's

24   even bigger bonuses and their shareholders a few more

1   cents per share.   The companies -- the two companies I

2   referred to are based in Pennsylvania and Texas.   The

3   shareholders live mostly elsewhere.   Will you protect

4   the health of the children such as Diyosa, who was here

5   with her mother, Amy, and their parents and children and

6   grandparents who live here in Illinois?   As Ms. Funk

7   said, health care has costs too, big costs, often

8   unreasonable costs.   It is your decision, but remember

9   you are the Illinois Pollution Control Board.

10   I have several studies that I'll submit

11   electronically to go on record.   One came out in the

12   Journal -- New England Journal of Medicine I believe

13   last week.   Particulate Air Pollution and Life

14   Expectancy in the United States.   I also believe there's

15   another one and this was came as a total surprise to me

16   I think it was just two weeks ago in a study by Ohio

17   State researchers suggested a connection between air

18   pollution and diabetes.   Who would have thought that?

19   Reminder: President Obama said his

20   administration will base it's decisions on sound

21   science.   The scientific advisory board recommended

22   standards that are lower than what is currently being

23   used but for both ozone and PM 2.5.   The new standards

24   when they are revised will be more protective.   It will

1   be such a nice thing if these industries who are

2   affected by this would have a leg up on better controls.

3   Thank you.

4   MR. FOX: Thank you for your comments and I

5   think that leads us to a point where we may go off the

6   record and discuss procedural matters, including the

7   deadline for any post-hearing comments, unless before

8   then anyone have any final questions or other issues

9   that we wish to raise?

10   (No response.)

11   MR. FOX: Let's go off the record then.

12   WHEREUPON, THERE WAS A SHORT PAUSE IN PROCEEDINGS;

13   SUBSEQUENT TO WHICH THE FOLLOWING PROCEEDINGS WERE MADE

14   OF RECORD:

15   MR. FOX: In going off the record the

16   participants here today discussed procedural issues

17   related to the filing specifically of post-hearing

18   comments. Before it takes action on The Agency's

19   proposal The Board will hold open a post-hearing comment

20   period ending on Monday March 23rd, 2009, which is

21   30 days after The Board expects to rule upon a standing

22   motion to correct the transcript and a standing motion

23   to amend the proposal and by which time The Board

24   certainly expects to have a transcript of this hearing

1   today on February 3rd. Once that transcript is in

2   The Board's hands our collection office will place it on

3   line very quickly where it is, of course, available to

4   be viewed, copied and downloaded free of charge.

5   And I indicated to the participants in

6   going off the record once the hearing, I'm sorry, once

7   the post-hearing comment period does begin I'll issue a

8   brief hearing officer order simply so that everyone has

9   unambiguous information about the start and end of that

10   comment period.

11   Finally, anyone including participant

12   persons who have not participated in these hearings may

13   file written public comments with the clerk of

14   The Board. They can be filed electronically with

15   The Board's clerk's office and any questions about that

16   process can certainly be directed to our assistant clerk

17   John Therriault, who I know has assisted many of you

18   with various questions.

19   Any filings with The Board must be served

20   on the hearing officer and on the service list and that

21   service list is also available on The Board web page

22   under this docket number.
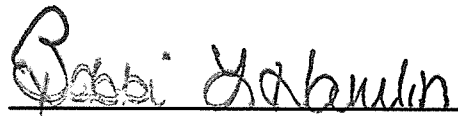
23   If you have questions about procedural

24   aspects of the rule making you may always reach me

1   through my office phone number or e-mail address that

2   are listed on The Board's web page.

3   There are, of course, now no other hearings

4   scheduled in this rule making and unless there are any

5   other issues anyone would be prepared to raise and

6   address we can certainly adjourn with thanks from

7   The Board members and The Board staff for all of your

8   time an effort preparation.

9   Safe travels back to your offices and home

10   and thank you once again.

11   We're adjourned.

12   SIGNATURE WAIVED.

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 1    STATE OF MISSOURI              )
                                     ) SS
 2    COUNTY OF JEFFERSON            )
 3
 4           I, Bobbi L. Hamlin, a Notary Public in and for
 5    the County of Jefferson, State of Missouri, DO HEREBY
 6    CERTIFY that pursuant to agreement of the parties the
 7    aforementioned hearing held before me on February 3,
 8    2009, at the Madison County Administration Building,
 9    Edwardsville, Illinois, touching upon the matter in
10    controversy aforesaid so far as the witnesses should be
11    interrogated concerning the same; that the witnesses
12    were examined and said examination was taken down in
13    shorthand by me and afterwards transcribed, not being
14    signed by said participants, and said hearing is
15    herewith returned.
16           IN WITNESS WHEREOF, I have hereunto set my
17    hand and affixed my Notarial Seal this 10th day of
18    February, 2009.
19
             _____
20                 Notary Public, CCR, RMR
               Illinois License #084-002797
21           My Commission Expires June 26, 2009
22
23
24
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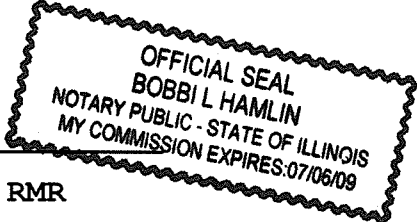
OFFICIAL SEAL
BOBBI L HAMLIN
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:07/06/09

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