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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

PROPOSED NEW 35 ILL. ADM. CODE 217,
SUBPART W, THE NOx TRADING PROGRAM
FOR ELECTRICAL GENERATING UNITS,
AND AMENDMENTS TO 35 ILL. ADM. CODE
211 AND 217

R01-9

(Rulemaking-Air)

Proceedings held on August 28, 2000, at 1:10 p.m., at City
Hall Chambers, Municipal Center West, 300 South Seventh Street,
Springfield, Illinois, before Catherine F. Glenn, Hearing
Officer.

VOLUME I

Reported by: Darlene M. Niemeyer, CSR, RPR
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A P P E A R A N C E S

Members of the Board present:

- Claire A. Manning, Chairman
- Board Member Ronald C. Flemal, Ph.D.
- Board Member G. Tanner Girard, Ph.D.
- Board Member Marili McFawn
- Board Member Nicholas J. Melas
- Anand Rao, Senior Environmental Scientist

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BY: Ms. Laurel Kroack
Assistant Counsel
Division of Legal Counsel
1021 North Grand Avenue East
Springfield, Illinois 62794-9276
On behalf of the Illinois EPA.

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1 P R O C E E D I N G S
2 (August 28, 2000; 1:10 p.m.)

3 HEARING OFFICER GLENN: Good afternoon. We are on the
4 record. My name is Catherine Glenn. I am the Hearing Officer in
5 this proceeding. I would like to welcome you on behalf of the
6 Pollution Control Board to our rulemaking this afternoon
7 entitled, In the Matter of: Proposed New 35 Illinois
8 Administrative Code 217, Subpart W, the NOx Trading Program for
9 Electrical Generating Units, and Amendments to 35 Illinois
10 Administrative Code 211 and 217.

11 Present today on behalf of the Illinois Pollution Control
12 Board and seated to my left is the Board Member coordinating this
13 rulemaking, Dr. Ronald Flemal. Seated to Dr. Flemal's left is
14 Board Member Nicholas Melas. Seated to Mr. Melas' left is Anand
15 Rao of our Technical Unit. Seated to my right is Chairman Claire
16 Manning. Seated next to the Chairman is Member Tanner Girard,
17 and next to Dr. Girard is Marili McFawn.

18 BOARD MEMBER McFAWN: Hello.

19 HEARING OFFICER GLENN: I have placed copies of the notice
20 and service lists on the table in front of the Agency witnesses.
21 Also there you will find the Board's first notice of opinion and
22 order and copies of the Agency's prefiled testimony. Also on the
23 table are copies of the language that will be -- that is being
24 proposed today.

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1 If your name is on the service list, please keep in mind
2 that you will not only receive copies of the Board's opinions and
3 orders but you will also receive copies of all of the documents
4 filed by all of the persons on the service list in this
5 proceeding. If your name is on the notice list you will just
6 receive copies of the Board's opinion and orders and copies of my
7 Hearing Officer orders.

8 On July 11th, 2000, the Illinois Environmental Protection
9 Agency filed this proposal for rulemaking to create 35 Illinois
10 Administrative Code Part 217, Subpart W, the NOx Trading Program
11 for Electrical Generating Units, and Amendments to 35 Illinois
12 Administrative Code 211 and 217. On July 13th, 2000, the Board
13 adopted for first notice the Agency's proposal. This proposal
14 was published in the Illinois Register on August 4th, 2000, at
15 pages 11473 and 11493. This proposal was filed pursuant to
16 Section 28.5 of the Environmental Protection Act, entitled, Clean
17 Air Act Rules, fast-track procedure. Pursuant to the provisions
18 of that Section, the Board is required to proceed within set time
19 frames toward the adoption of the regulation. As stated in the
20 Board's July 13th, 2000, order the Board has no discretion to
21 adjust these time frames under any circumstances. Also pursuant
22 to 28.5 the Board has scheduled three hearings. As announced in
23 the Hearing Officer Order, dated July 17th, 2000, today's hearing

24 is confined to testimony by the Agency witnesses concerning the

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1 scope, applicability and basis of the rule. Pursuant to Section
2 28.5, this hearing will be continued on the record from
3 day-to-day, if necessary, until completed.

4 The second hearing, besides including economic impact
5 considerations, shall be devoted to presentation of testimony and
6 documents and comments by affected by entities and all other
7 interested parties.

8 The third and final hearing will be held only at the
9 Agency's request. If the third hearing is cancelled all persons
10 on the notice list will be advised through a Hearing Officer
11 Order.

12 The second hearing is currently scheduled for Tuesday,
13 September 26, 2000, at 9:30 a.m., in room 9-31 of the James R.
14 Thompson Center in Chicago. It will be devoted to economic
15 impact considerations and presentation of testimony, documents
16 and comments by affected entities and all other interested
17 parties. Prefiling deadlines are in the July 17th, 2000 Hearing
18 Officer Order.

19 The third hearing currently is scheduled for, Tuesday,
20 October 10th, 2000, at 1:00 p.m., in the Pollution Control
21 Board's hearing room at the James R. Thompson Center, which is on
22 the 11th Floor. It will be devoted solely to any Agency response
23 to the materials submitted at the second hearing. The third

24 hearing will be cancelled if the Agency indicates to the Board

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1 that it does not intend to introduce any additional material.

2 This hearing will be governed by the Board's procedural
3 rules for regulatory proceedings. All information which is
4 relevant and not repetitious or privileged will be admitted. All
5 witnesses will be sworn and subject to cross-questioning. Again,
6 the purpose of today's hearing is to allow the Agency to present
7 testimony in the support of this proposal and to allow
8 questioning of the Agency. The Agency will present any testimony
9 it will have regarding its proposal. Subsequently, we will allow
10 for questioning of the Agency regarding that testimony. I prefer
11 that during the questioning period anyone who would like to ask a
12 question please raise your hand and wait for me to acknowledge
13 you. After I acknowledge you, please state your name and the
14 organization that you represent, if any.

15 Are there any questions regarding the procedures that we
16 will be following this afternoon? Seeing none -- oh, we will be
17 taking breaks as needed during the afternoon proceedings.

18 At this time I would like to ask Board Member Flemal if he
19 has anything else he would like to add.

20 BOARD MEMBER FLEMAL: On behalf of the Board, I would like
21 to, as well, extend our welcome to all of the people present. We
22 are fully aware that this is a subject matter that has occupied

23 all of your attention for a considerable period of time. We are
24 eager to learn your perspectives and your take on the proposal

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1 that we have before us so that we can bring this matter,
2 hopefully, to a successful and expeditious resolution.

3 HEARING OFFICER GLENN: Would any of the other Board
4 Members like to say anything this afternoon?

5 All right. Ms. Kroack, would you like to make an opening
6 statement?

7 MS. KROACK: Yes, I have some brief remarks. Good
8 afternoon, Hearing Officer Glenn, Members of the Board, members
9 of the regulated community, and public in the audience. We are
10 pleased to see so many of you are here today.

11 I would like to introduce the representatives of the Agency
12 that are present with me today.

13 To my right is Dennis Lawler, who is the Manager of
14 Division of Air Pollution Control.

15 Robert Kaleel, who is Manager of the Air Quality Modeling
16 Unit.

17 Kathleen Bassi, Policy Advisor to the Chief of the Bureau
18 of Air.

19 Richard Forbes, who is Manager of the Air Quality Planning
20 Unit.

21 Behind him is Vera Herst who is in the Division of Legal
22 Counsel.

23 Behind Vera is Christopher Romaine, who is the Manager of
24 the Utilities Unit in the Permit Section.

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1 Yoginder Mahajan, Berkley Moore and Vir Gupta, who are all
2 in the Air Quality Planning Unit.

3 Then Robert Hutton, who is Manager of the Source Monitoring
4 Unit.

5 Then back in the corner Alec Messina, Division of Legal
6 Counsel.

7 As Hearing Officer Glenn has stated, this rulemaking is
8 being proposed by the Agency to satisfy three separate Clean Air
9 Act obligations of the State of Illinois. One of those is to
10 submit control strategies necessary to demonstrate attainment of
11 the 1-hour ambient air quality standard in the Metro-East
12 nonattainment area, to demonstrate attainment of the 1-hour
13 ambient air quality standard in the Lake Michigan nonattainment
14 area, and to satisfy a portion of our obligations under the
15 so-called NOx SIP Call by implementing the federal NOx trading
16 program determining source allocations for electrical generating
17 units subject to the Rule and to meet the applicable requirements
18 of Section 9.9 of the Illinois Environmental Protection Act.

19 We have included in this proposal a new Subpart W to 35
20 Illinois Administrative Code, Part 217, and conforming amendments
21 to 217 and Part 211. These amendments are proposed to control

22 the emissions of nitrogen oxide, or NOx, as we will refer to it
23 throughout this proceeding, during what is considered the control
24 period, which is May 1st through September 30th of each year

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1 beginning in 2003.

2 At this time I would like to submit the prefiled testimony
3 of Mr. Lawler, Mr. Kaleel, Ms. Bassi and Mr. Forbes and Mr.
4 Romaine into the record as if read. I have already provided
5 copies to the Board Members. I am providing a copy to our court
6 reporter.

7 There are additional copies of each of the prefiled
8 testimony for the witnesses on the table below me as well as
9 copies of the overheads that they will be using today in their
10 brief presentations. Mr. Lawler, Mr. Kaleel, Ms. Bassi and Mr.
11 Forbes have prepared some truncated versions of their prefiled
12 testimony that they would like to present today. Mr. Hutton and
13 Mr. Romaine do not have any additional remarks but will answer
14 questions during the comment and question period as appropriate.
15 The testimony today will include overheads, which I have already
16 provided a copy to each of the Board Members and Hearing Officer
17 Glenn, and at the end of their presentations I will submit each
18 of those into the hearing record.

19 With that, I turn it back to you, Ms. Glenn.

20 HEARING OFFICER GLENN: Thank you, Ms. Kroack. What I
21 would like to do at this time is have all of members of the

22 Agency that are going to be testifying today please be sworn in
23 by the court reporter now.

24 (Whereupon the witnesses were sworn by the Notary Public.)

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1 HEARING OFFICER GLENN: Ms. Kroack, who is going to begin
2 your testimony this afternoon?

3 MS. KROACK: This afternoon Mr. Lawler will be beginning.

4 HEARING OFFICER GLENN: Mr. Lawler, if you will give me
5 just a moment, I am going to mark your prefiled testimony as
6 Exhibit Number 1.

7 (Whereupon said document was duly marked for purposes of
8 identification as Hearing Exhibit 1 and admitted into
9 evidence as of this date.)

10 HEARING OFFICER GLENN: All right. Mr. Lawler, please
11 proceed.

12 MR. LAWLER: Thank you. My name is Dennis Lawler. I am
13 the Manager of the Division of Air Pollution Control, responsible
14 for a substantial amount of the day-to-day activities of the
15 Division of Air Pollution Control and spend a lot of my time
16 working on the State Implementation Plan.

17 The purpose of my testimony today is to explain a little
18 bit the purpose of the proposal, which Laurel already has
19 mentioned and then in a little bit more detail the development of
20 what -- the development process that went into this proposal. A

21 lot of you have been involved in the background of this for the
22 last several years, and so are very familiar with the proposal.
23 Other people are probably not as familiar or are not as familiar
24 with the terms. So I will take a little bit of time and explain

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1 some of the basics but try to be as concise and succinct as I can
2 in going through this.

3 As Laurel mentioned, the purpose of the proposed rulemaking
4 is to help address the Clean Air Act obligations of the State of
5 Illinois, particularly in three different areas. One is with
6 these control strategies we can demonstrate attainment of the
7 1-hour ozone National Ambient Air Quality Standard for the
8 Metro-East/St. Louis area. With these control strategies we
9 expect to be able to demonstrate attainment of the 1-hour ozone
10 National Ambient Air Quality Standard for the Lake Michigan area,
11 and I will give some explanation of a few of the terms that I am
12 using as we go through the testimony.

13 Thirdly, to -- it provides us with a submittal, a SIP
14 submittal, a State Implementation Plan submittal to USEPA to
15 address a substantial part of the NOx SIP Call.

16 (The witness placing new slide on projector.)

17 MR. LAWLER: Probably a good thing to start with on this is
18 some real basics on ozone. Ozone, or essentially summertime
19 smog, is formed by nitrogen oxide emissions in the air with
20 Volatile Organic Materials, VOMs, in the air also and on hot

21 summer afternoons these two sets of materials end up cooking,
22 essentially, to form ozone in the air. The sources of the
23 different emissions are industrial operations, our cars
24 contribute to this, and day-to-day activities that we call area

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1 sources, and things like household products, paints, different
2 materials that you might even use around the house.

3 On hot summer days this material goes into the air and ends
4 up forming ozone. The ozone process is kind of a complex
5 process, but it is generally formed in and around the urban areas
6 and can be transported.

7 (The witness placing new slide on projector.)

8 MR. LAWLER: Also a good thing to always mention when we
9 are talking about ozone is good ozone and bad ozone. The ozone
10 that protects us from the sun's radiation, normally called good
11 ozone, is really the same ozone that causes humans problems, but
12 the difference is the good ozone is ten to twenty miles in the
13 air and acts as a filter for us. When ozone is near the surface
14 and we breathe it, it causes a problem. So that is the ozone
15 that we are trying to get rid of but it is the same material.

16 (The witness placing new slide on projector.)

17 MR. LAWLER: There is a National Ambient Air Quality
18 Standard for ozone. It is based on 1-hour average concentration
19 of ozone. So we have ozone monitors, that I will explain a

20 little bit more about in a few minutes, that continuously measure
21 ozone. If you take the average of these little incremental
22 measurements over a 1-hour time period, that's what you end up
23 comparing to the standard. So any particular ozone monitor that
24 is in the state will have a whole series of these 1-hour values.

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1 If any of the 1-hour values exceed the level of the standard, you
2 have problems.

3 Now, the level of the standard that we look at -- the
4 standard is officially 0.12 parts per million, but it is usually
5 expressed in parts per billion. And because you have to get that
6 third decimal place in there when you go to parts per billion,
7 the standard itself is 125. So if you exceed -- if you are 125
8 or over, you are exceeding the level of the standard.

9 Now, it couldn't be simple enough that you could just look
10 at that number and determine if there is a violation of the
11 standard. The standard itself is written so that the fourth
12 highest value over a three-year period is the critical value. So
13 in a sense you get one freebie a year over this three-year
14 period. You have one free chance to go over 125 or over the
15 three-year period you get three free ones. And the fourth one is
16 the number that you compare to the standard. So at any one
17 particular monitor that you might have in an area, if any one
18 monitor, the fourth highest value exceeds 125, you have a
19 violation.

20 Now, I am not going to mention the eight-hour standard,
21 because that has nothing to do with this rulemaking and it will
22 confuse the issue. But USEPA is proposing an eight-hour standard
23 that will probably be around in a few years and talk about this
24 some more, but we don't need to talk about that anymore today.

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1 (The witness placing new slide on projector.).

2 MR. LAWLER: Through Section 181 of the Clean Air Act areas
3 are designated nonattainment according to the severity. And in
4 the case in Illinois we have a Metro-East/St. Louis nonattainment
5 area, and it is a moderate nonattainment area. The Lake Michigan
6 area, which includes in Illinois the Chicago area, is a severe
7 nonattainment area. Again, those are defined based on the levels
8 that -- the levels to which they have exceeded the standard.
9 Higher levels were measured in the Lake Michigan area than they
10 were in Metro-East. So it is severe. Metro-East is moderate.

11 For each of these different classifications, there are
12 attainment dates, the dates by which we are to achieve the
13 National Ambient Air Quality Standard. In the case of
14 Metro-East, the date was originally in 1996 that we were to have
15 attained the standard. That has been delayed, and I will mention
16 a little bit later on why it has been delayed. For the Lake
17 Michigan area we have until the year 2007 to attain the standard.

18 I mentioned these nonattainment areas, the areas that don't

19 attain the standard. In this part of the country we have got two
20 areas. One is in the vicinity of Lake Michigan and the other one
21 is in the St. Louis and Metro-East area. We refer to the areas
22 in the rulemaking as the Lake Michigan area, because the Lake
23 Michigan area actually sort of encompasses Chicago, the Milwaukee
24 area, some parts of Indiana, and all of those -- the air quality

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1 in all of those areas are influenced by the same group of
2 sources, and they are all in sort of a long urbanized area around
3 the lake. So, hence, comes the term Lake Michigan nonattainment
4 area.

5 There are also several counties in Michigan and a couple in
6 Indiana that were nonattainment of the 1-hour ozone standard that
7 have since then become attainment of the standard. Those are
8 indicated here in those two states. Otherwise, everything shown
9 here is a current nonattainment area. In the case of the Lake
10 Michigan area, or for us the Chicago part of the Lake Michigan
11 area, there is two things that come into play. One is it is a
12 highly populated area, so there are a lot of sources of emission
13 in those areas.

14 Secondly, you have got Lake Michigan sitting there, and
15 Lake Michigan on the hot summer days in the summertime you have
16 lake breezes set up in the afternoon because with the air over
17 the lake being cooler than the air over the land you have an
18 airflow set up. And as that -- as you get this circulation, you

19 end up increasing ozone concentration along the lake shore just
20 simply because it is pulling back some of the air that has gone
21 over the lake earlier in the day back over Chicago or back over
22 Milwaukee as the day goes on.

23 So you have got kind of combined effect. That makes for a
24 worse air quality situation there. So the lake is a kind of

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1 critical factor in this. In terms of the St. Louis/Metro-East
2 area you notice it does include urbanized areas on both sides of
3 the river, but it includes just the states -- just the counties
4 in Illinois and Missouri.

5 (The witness placing new slide on projector.)

6 MR. LAWLER: Specifically in Illinois, the nonattainment
7 counties, in the Chicago area there is six counties and parts of
8 two other counties. In the Metro-East area there is three
9 counties that are affected.

10 (The witness placing new slide on projector.)

11 MR. LAWLER: In order to measure the ozone throughout the
12 state we have a series of -- the Illinois Environmental
13 Protection Agency operates a series of air quality monitors, and
14 there are over 40 monitors in the state. And the little dots
15 that are on this chart indicate where those monitors are. You
16 will notice that because of where the nonattainment areas are,
17 there is a concentration kind of up in the Chicago area, another

18 concentration in Metro-East, and then we have them located in
19 other urbanized areas around the state plus a few background
20 monitors that measure what is coming into the state.

21 (The witness placing new slide on projector.)

22 MR. LAWLER: Over the last 20 to 30 years, you can look at
23 the trends for what has been happening to the ozone in the
24 Chicago area and using the Chicago area here as an example. On

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1 the left-hand side are the average maximum 1-hour concentrations
2 of all of the monitors in the Chicago area. So you really can't
3 compare this to the standard, but it can give you a trend to look
4 at. On the bottom of the chart you notice the different years,
5 and the years run from 1977 until 1999.

6 There is a couple of things that we want to point out from
7 this chart. First of all, you notice a downward trend from the
8 late 1970s until the late 1990s and it is pretty consistent
9 across that time. So we feel that the regulations that have been
10 put in place for control of Volatile Organic Materials, that a
11 lot of us have been working on for a lot of years, have really
12 provided some benefits to air quality. The trend is down.

13 You also notice that there is some peak years and some non
14 peak years. I mentioned how ozone is formed. Meteorology is
15 really important. The number of hot summer days, the number of
16 hot summer cloudless days is very important. And so some years
17 are just more conducive to forming ozone than others. So you

18 notice some peaks on different years. Again, in general, you
19 have a downward trend.

20 I might point out specifically the year 1995, that most of
21 you remember as being the summer when Chicago had 13 or 14 days
22 in a row that were over 100 degrees, I believe. So it was a
23 highly conducive year to ozone formation. You will notice on the
24 chart it is higher than the other years around it, but it is

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1 much, much lower than earlier years, in the 1980s, when the
2 meteorology was not as a bad. So, again, it is a good indication
3 that things are improving.

4 (The witness placing new slide on projector.)

5 MR. LAWLER: Another indication that I will just put up
6 here quickly is the number of ozone exceedances in the Chicago
7 area. And, again, the numbers have drastically decreased since
8 the late 1970s and early 1980s. This is only data for Chicago.
9 This does not include the rest of the Lake Michigan nonattainment
10 area, and some of the highest values are not always in Illinois,
11 but it is, again --

12 HEARING OFFICER GLENN: Mr. Lawler, I am sorry to
13 interrupt. Just for the record, I wanted it to be clear that you
14 are referring to the document entitled, "Chicago Area Ozone
15 Trends, Number of Days with Ozone Greater than 0.12 ppm." We
16 will admit these as exhibits when you are done. I just wanted it

17 to be clear for the record. Thank you.

18 MR. LAWLER: Thank you.

19 (The witness placing new slide on projector.)

20 MR. LAWLER: Okay. Here is a nice busy chart. I have put
21 it up here for a purpose. Back in the late 1980s the four states
22 of Wisconsin, Illinois, Indiana, and Michigan ended up working
23 with the USEPA in the Lake Michigan Ozone Study. The four states
24 went together to form a consortium, the purpose of that being to

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1 identify what was causing -- what was causing the ozone in the
2 area, to take a look at the transport, and then ultimately to
3 come up with a model that you could use to evaluate control
4 strategies. So as part of all of that there was an intensive
5 field study done that was done in 1991, that this map or this
6 chart depicts.

7 The things that I wanted to point out to you was besides
8 the ground level ozone measurements, there were aircraft,
9 tethered balloons, boats, and a lot of different research
10 monitors that were used to collect an incredible amount of
11 information at that time. And so this was used to develop the
12 model that Rob Kaleel will be explaining to you a little bit
13 later.

14 Also another thing on this, if you will notice across the
15 extreme southern part of the little map showing the study area,
16 right across here (indicating) and there was a series of aircraft

17 measurements that were taken, and those provided some pretty
18 interesting information to us back then.

19 (The witness placing new slide on projector.)

20 MR. LAWLER: Here is another busy chart for you.

21 HEARING OFFICER GLENN: Excuse me, Mr. Lawler.

22 MR. LAWLER: Yes.

23 HEARING OFFICER GLENN: Could we go back to the previous
24 diagram for one moment?

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1 MR. LAWLER: Sure can.

2 HEARING OFFICER GLENN: When you say the southern most
3 area, you pointed to the orange shading. Did that also include
4 the pink shaded area, as well?

5 MR. LAWLER: Yes, it is the little blue dashed lines at the
6 bottom is where the aircraft was going through the southern part
7 of the area also.

8 HEARING OFFICER GLENN: Thank you.

9 MR. LAWLER: Does that help?

10 HEARING OFFICER GLENN: Yes, it does.

11 MR. LAWLER: Okay. Now, if you take a look at what those
12 aircraft measured, that were on the little blue lines, we got
13 some pretty -- at the time it was very startling information.
14 Because we knew there was a lot of transport, but we didn't
15 realize the extent to which there was transport.

16 If you can picture yourself standing in Southern Illinois
17 and looking northward then kind of taking a slice of the air as
18 it goes from the ground up to about several miles in the air,
19 these are -- this is the ozone measurements that these aircraft
20 measured in that slice of air. If you will notice at ground
21 level at this particular time measurements were 30 to 40, to
22 maybe a little bit higher, but 30 to 40 parts per billion.

23 As you go aloft, further higher, and this is just about one
24 mile from the surface to the top of this chart, one mile depth of

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1 the atmosphere, you will notice that some of the numbers showing
2 up are 80, 90 even 100 to 110 parts per billion, and if you
3 remember that the level of the standard is 125 parts per billion,
4 this is an indication of what was being transported in to the
5 urbanized area from the south on some of these high ozone days.
6 So not only did you have a problem locally with the emissions
7 that were being formed, but there was transport going on also.

8 HEARING OFFICER GLENN: Mr. Lawler, also, for the record,
9 the chart you are referring to is entitled, Ozone Concentrations
10 Measured Along the Southern LMOS Boundary, July 18, 1991.

11 MR. LAWLER: Yes.

12 HEARING OFFICER GLENN: Thank you.

13 MR. LAWLER: Would it be helpful if I read the titles of
14 the charts?

15 HEARING OFFICER GLENN: For the transcript that would be

16 very helpful.

17 MR. LAWLER: Okay. I will do that.

18 HEARING OFFICER GLENN: Thank you.

19 (The witness placing new slide on projector.)

20 MR. LAWLER: So something that came from that, as at the
21 time we were trying to determine how we were going to get
22 attainment in the Chicago area, if you did nothing to the
23 transported ozone or the transported ozone precursors that were
24 coming in -- oh, I didn't give the title. I am sorry.

23

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1 HEARING OFFICER GLENN: That's okay.

2 MR. LAWLER: This is called VOC Reduction Goals. On the
3 left side of this chart would indicate that you would have to
4 decrease emissions of VOCs in the Chicago area by over 90
5 percent, if you didn't do anything about transport but just had
6 to get to attainment simply by addressing the VOCs in the Chicago
7 area. However, we also discovered that if you could get that
8 transport down, you could decrease the amount of ozone and ozone
9 precursors going into the area, you would not have to get near as
10 much reduction in the Chicago area. For example, the 60 to 70
11 parts per billion, if you could get the background down to that,
12 you are down to more of the 40 to 50 percent range.

13 So this, to us, was a real indication, this transport thing
14 that we knew existed but we didn't realize how substantial it was

15 at the time, it really highlighted to us how important it all
16 was.

17 (The witness placing new slide on projector.)

18 MR. LAWLER: In other areas of the country about that time,
19 although I think we were the first, they started finding the same
20 kind of thing, in the Atlanta area and in the northeastern part
21 of the country. And so it was out of this, these findings like
22 this, that the environmental commissioners of the states in the
23 eastern part of the country decided that there needed to be a
24 large scale study of all of this. And OTAG -- the title of the

24

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1 chart I am looking at is OTAG Participating States.

2 But OTAG, the Ozone Transport Assessment Group, was formed
3 by the environmental commissioners to look at this transport
4 situation in the whole eastern part of the country. It involved
5 37 states and the District of Columbia. There were literally
6 thousands of participants in that. It included governmental
7 folks, industry, environmental groups, and academics, and many
8 folks that are at this hearing were involved in that process, as
9 well.

10 But as part of OTAG there was an inventory of emissions for
11 the eastern part of the country, modeling was done, and just the
12 transport situation was studied in great depth by a large group
13 of sources.

14 (The witness placing new slide on projector.)

15 MR. LAWLER: OTAG lasted for approximately two years, and
16 out of OTAG there were several findings. One is that regional
17 NOx -- the title of this chart is OTAG Findings.

18 HEARING OFFICER GLENN: Actually, Mr. Lawler, we don't have
19 a copy of that in our packets. Do you have any extra copies with
20 you today? It is not necessarily important that we all have one.
21 I would just like to admit one as an exhibit eventually. If you
22 have one extra, that will get us there.

23 MS. KROACK: We will take his, but it should have been in
24 the package. So it must have been a copying error.

25

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1 HEARING OFFICER GLENN: We will borrow yours when you are
2 done. Thank you.

3 MR. LAWLER: Okay. What was found was that regional NOx
4 reductions are effective. By regional NOx it just means nitrogen
5 oxide reductions on a large scale, not necessarily just in the
6 cities or in the urban areas.

7 Ozone improvements are commensurate with NOx emissions
8 reductions. In other words, the more NOx you can reduce, the
9 better you are going to make it for the ozone situation.

10 Ozone benefits diminish with distance. There was concern
11 at the time -- people didn't know the extent of the transport
12 situation. But in general the closer you are to the source, the
13 more benefit you get to controlling emissions.

14 VOC reductions are effective locally. And, again, that is
15 the -- the controls likely put into the Chicago area is
16 effective.

17 NOx controls are effective for 150 to 500 miles. This is a
18 general indication of where NOx controls can be effective.

19 In some situations there is some disbenefits that actually
20 occur from controlling NOx in local areas.

21 (The witness placing new slide on projector.)

22 MR. LAWLER: Now, I had mentioned earlier that for the
23 Metro-East/St. Louis area -- and we refer to it as Metro-East/St.
24 Louis. It is sort of -- there are counties, again, on both sides

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1 of the river, counties in Missouri and in Illinois. But we are
2 required to develop a program that will show USEPA how we are
3 going to reach the air quality standards in these areas. That is
4 called -- we refer to that as our attainment demonstration. We
5 have to show them how we are going to attain the standard.

6 First of all, for the Metro-East we are not attaining the
7 standard yet. From an Illinois standpoint, last October and
8 February we submitted to USEPA an attainment demonstration that
9 included air quality modeling that showed that if we get the VOC
10 reductions in the areas and substantial NOx reductions also, we
11 would attain the standard. The EPA in April of 2000 proposed to
12 approve this contingent on submitting regulations and the
13 regulations really that I am talking about here are the

14 regulations that we are proposing today. These are the regs that
15 we would need. In July of 2000 we submitted to the Pollution
16 Control Board the draft regulations that we believe will achieve
17 that. And in December of 2000, we owe EPA the adopted rules for
18 the attainment demonstration.

19 (The witness placing new slide on projector.)

20 MR. LAWLER: Similarly, for the Chicago area that we have
21 called the Lake Michigan nonattainment area, that area is also
22 not attaining the standard. And in the case of Illinois, we
23 submitted draft rules to the Board in July, which we believe will
24 demonstrate attainment of the standards. And we have to provide

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1 USEPA by December of 2000 our formal attainment demonstration.
2 And at the same time, then, on December of 2000, we also owe them
3 adopted rules to address the attainment demonstration.

4 (The witness placing new slide on projector.)

5 MR. LAWLER: The NOx SIP Call. The first thing maybe to --
6 we wanted to give you a little bit of background on the SIP Call.
7 I have already talked about how the transport and OTAG fit into
8 this. They kind of logically led up to this federal SIP Call,
9 although the USEPA did a lot of analyses themselves before they
10 issued the SIP Call to supplement OTAG and everything else that
11 had been done. But it was all of this that worked its way up to
12 what is now called the NOx SIP Call.

13 It was issued by the USEPA in October of 1998, and required
14 the states to submit a State Implementation Plan, a state plan to
15 the EPA, by September of 1999, that would comply with that, would
16 show that your state would comply with the SIP Call. That
17 included rules and regulations. So when it was first issued we
18 owed them something September of 1999.

19 Also it is worth mentioning that in that NOx SIP Call, the
20 USEPA did propose a Federal Implementation Plan that if states
21 did not provide the SIP Call that is required, this Federal
22 Implementation Plan would automatically go into effect. What
23 that does is it means that states would not have any leeway in
24 what they do on this. You would just have to take the federal

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1 regulations as they stand.

2 Shortly after that, groups of people around the country,
3 including some industry folks, some states, filed petitions with
4 the DC Circuit Court of Appeals opposing the SIP Call. One of
5 the things that happened as part of these petitions is that the
6 Court was asked to grant a stay from this September 1999 date.
7 Obviously, the timing -- you didn't have much time as it was,
8 between October of 1998 and September of 1999, in order to get
9 the SIPs completed and with everything going through the Court of
10 Appeals it was really fairly logical for the Courts to stay the
11 requirement while they were reviewing the whole process. And so
12 a stay was granted in May of 1999.

13 The next event that happened finally was in March 3rd of
14 2000. The Courts upheld the original SIP Call with a few
15 qualifiers. First of all, it omitted the State of Wisconsin from
16 having to comply, because they said Wisconsin did not contribute
17 to the nonattainment areas of any other state. And it remanded
18 back to USEPA for consideration what to do with Missouri and
19 Georgia, I.C. Engines, which is one of the components of the SIP
20 Call, and a few other things.

21 And, finally, in this little chronology that is here, the
22 Court removed the stay on June 22nd of 2000, and set a date that
23 the SIPs were now due to USEPA on October of 2000, which is a
24 pretty short time frame.

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1 (The witness placing new slide on projector.)

2 MR. LAWLER: So we have gone through the chronology of how
3 the SIP Call got there. Now, what does the SIP Call require?
4 Well, the SIP Call now affects -- it says 23 jurisdictions. I
5 believe it is 21 or 22 jurisdictions, given that some things have
6 been remanded right now. But the SIP Call itself addresses four
7 different industry categories. The EGUs -- and you will hear
8 that term mentioned a lot -- Electrical Generating Units or
9 utilities, and these are essentially boilers with -- that serve
10 generators that are greater than 25 megawatts are affected by a
11 requirement to have to meet 0.15 pounds per million btu. You

12 will get more detail. I am just going to give you the overview
13 on this right now. You will get more detail on these elements as
14 we go through some of the other testimony. But this particular
15 rulemaking is just that first line and that first line only, the
16 EGUs component to this.

17 There will be three other sets of rulemakings that we will
18 expect to go to the Pollution Control Board with. One affects
19 the non EGUs, and these are boilers that are over 250 million
20 btu's. There is a control requirement of 60 percent emission
21 reductions. We are working with the non EGU folks right now.
22 There is regulations for large cement kilns. These are cement
23 kilns that emit over a ton of emissions per day. There is a
24 requirement for 30 percent control on them. That particular

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1 rulemaking we proposed to the Pollution Control Board on August
2 18th. And then there will be one for large internal combustion
3 engines once the remand is addressed and the USEPA decides what
4 should be in the SIP Call for them. So that will be longer term
5 element.

6 Finally, the SIP Call itself encourages participation in
7 the National Cap and Trade Program, the national trading program.
8 You will hear a lot more about this as the day goes on.

9 (The witness placing new slide on projector.)

10 MR. LAWLER: The Road to the Illinois Regulatory Proposal
11 for EGUs. I have already mentioned that this has been kind of a

12 complex process, partly because it requires sources to have some
13 pretty substantial reductions, partly because the court situation
14 has been a little more complex than with most rulemaking, and
15 also because this involves so many states, such a large area.

16 So as you remember, I mentioned the SIP Call itself was
17 proposed in the Federal Register on October of 1998. Shortly
18 after that time, in late 1998 the Agency began having meetings
19 with various interest groups on the NOx SIP Call, the various
20 elements of the NOx SIP Call. We recognize it was a short time
21 frame, and I think others recognized the same thing.

22 So we had different groups, one called a policy group that
23 was a large-scale group body that just discussed a lot of the
24 issues and discussed the SIP Call, and we invited anybody to that

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1 meeting, essentially, that wanted to attend. We had meetings
2 with affected sources. And we had a group of technical folks
3 that met very often, monthly, for a good period of -- a good
4 amount of the time, to discuss the technical issues, the
5 inventories and the modeling and what was going on from that
6 standpoint.

7 Again, as you remember, the Court issued a stay of the NOx
8 SIP Call May 25th, 1999. At that point the Agency sort of
9 shifted its focus away from the NOx SIP Call because, again, the
10 Court had issued a stay. We were not sure what was going to

11 happen at that point. We still had the requirement that we
12 needed to get the attainment demonstrations to the EPA, so we
13 focused on those particular elements. The SIP Call for
14 Metro-East was due November of 1999, and for the Lake Michigan
15 area in December of 2000.

16 (The witness placing new slide on projector.)

17 MR. LAWLER: As we went through the process for Metro-East,
18 since that was the first one that was done, for attainment
19 purposes, for attaining the standard, we identified a limit of
20 0.25 pounds per million btu that would be needed for EGUs in
21 Illinois in order to attain the standard. It would be that limit
22 for EGUs plus the VOC controls that were already in place or
23 required by the Clean Air Act in the Metro-East area.

24 In addition to the Metro-East area, we continued working

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1 with the Lake Michigan Air Directors Consortium. That's the
2 group of the four states that I mentioned earlier to do the same
3 thing for the Lake Michigan area, for the Chicago area, but this
4 was more complex and did involve more states and so is a harder
5 process to do.

6 On March 3rd of 2000 the SIP Call was upheld. So, again,
7 we had to worry about the SIP Call again. So the Agency in its
8 revised direction to not only look at the attainment
9 demonstrations, but we were back on the SIP Call track again.
10 And we resumed our discussions with affected people at that

11 point. And finally USEPA officially notified the state that we
12 need to meet the NOx SIP Call.

13 (The witness placing new slide on projector.)

14 MR. LAWLER: So this kind of brings us back to where we are
15 right now. Which is that with this rulemaking we need to take
16 care of three different sets of regulatory requirements that fall
17 upon Illinois from the Clean Air Act. And you will hear a lot
18 more detail about these different elements as we go on.

19 (The witness placing new slide on projector.)

20 MR. LAWLER: Now I just have one more chart. This is to
21 address a question that we have been asked by people, which is
22 why don't you go ahead and propose for EGUs 0.25 limit with a
23 contingency that you do the NOx SIP Call, if everything works its
24 way through. There was a point in time before EPA -- before the

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1 court decided in March and, certainly, before the stay was lifted
2 in June, that we were seriously considering this approach. But
3 now we are to the point that we know the SIP Call is required,
4 and the particular rulemaking that we are proposing does meet the
5 requirements of the SIP Call. USEPA does have this FIP in place
6 and as a state that has had a FIP applied to it before, they are
7 not particularly pleasant. So from a regulatory standpoint as
8 well as the regulated community standpoint, we don't want that
9 FIP to apply in the state.

10 This provides the elements needed for the Metro-East and
11 Chicago attainment demonstrations. Now, in the case of
12 Metro-East we found that 0.25 would make it in the Metro-East.
13 That was the minimum that was needed. But we have got more at
14 stake right now than just that particular element. Again, as
15 number one points out, we have a SIP Call that we have to meet.
16 We feel that sources would likely have to plan to meet the most
17 conservative contingency anyway. So if we provided both options,
18 people would have to plan for the most stringent one at any rate.
19 And we also think that this sends folks the correct message. The
20 correct message being to USEPA, to other state, to the industry
21 that the SIP Call is there and we are going to have to meet it in
22 Illinois.

23 And, finally, I guess I would say as a contingent or as a
24 fallback, if there was some reason that we would ultimately need

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1 to go back because everything was changed or delayed, we can
2 always re-propose to the Board a 0.25 limit well before the
3 compliance date of 2003. We have three years before we would
4 have to address that. So there is time if we would have to come
5 back and do something else.

6 Well, that completes my summarized version of the
7 testimony. I think -- I guess we will go on with others from
8 here.

9 MS. KROACK: I would like to submit a copy of the

10 overheads, including the one that was not in your packet, into
11 the record.

12 HEARING OFFICER GLENN: Thank you, Mr. Lawler. What we are
13 going to do is let the Agency's witnesses all testify and then
14 we will hold questions until they are all finished.

15 Mr. Rieser, did you have a question?

16 MR. RIESER: Just a brief procedural question. Are the
17 copies of the overheads available for the rest of us?

18 MS. KROACK: They are on the table below.

19 MR. RIESER: They are on the table below. Okay. Thank
20 you.

21 HEARING OFFICER GLENN: What I would like to do now, if you
22 will all bear with me, I am going to put an exhibit label on each
23 of these, so that it will be clear for the record what has been
24 admitted. It will just take a few moments. So if you would like

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1 to tune out for a minute, go right ahead. I would like to stay
2 on the record so that I can tell the court reporter what I am
3 doing.

4 HEARING OFFICER GLENN: Exhibit Number 2 is entitled,
5 "Purpose of Proposed Rulemaking."

6 Exhibit Number 3 will be "Ozone Formation Process." It is
7 a chart.

8 Exhibit Number 4 is a chart entitled, "Good Ozone and Bad

9 Ozone."

10 Exhibit Number 5 is entitled, "Ozone Air Quality."

11 Exhibit 6 is entitled, "Lake Michigan Region, 1-hour

12 Nonattainment Areas."

13 Exhibit Number 7 is entitled, "Illinois Ozone Nonattainment

14 Areas."

15 Exhibit Number 8 is entitled, "Illinois Ozone Monitoring

16 Network."

17 Exhibit Number 9 is entitled, "Chicago Area Ozone Trends,

18 Average Maximum 1-hour Concentration."

19 Exhibit Number 10 is "Chicago Area Ozone Trends, Number of

20 Days with Ozone Greater than 0.12 ppm."

21 Exhibit Number 11 is entitled, "Tracking the Ozone Event."

22 Exhibit Number 12 is entitled, "Ozone Concentrations

23 Measured Along the Southern LMOS Boundary, July 18, 1991."

24 Exhibit Number 13 is entitled, "VOC Reduction Goals."

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1 Exhibit Number 14 is "OTAG Participating States."

2 Exhibit Number 15 is "OTAG Findings."

3 Exhibit Number 16 is "Metro-East/St. Louis NAA Attainment

4 Demonstration."

5 Exhibit Number 17 is "Lake Michigan NAA Attainment

6 Demonstration."

7 Exhibit Number 18 is entitled, "NOx SIP Call, a

8 Chronology."

9 Exhibit Number 19 is the "NOx SIP Call Elements."

10 Exhibit Number 20 is the "Road to Illinois Regulatory
11 Proposal for EGUs." Exhibit 20 is two pages long.

12 Exhibit Number 21 is entitled "Regulatory Proposal
13 Addresses."

14 Exhibit Number 22 is entitled "Reasons for NOx SIP Call
15 Rule Rather Than Rate-Based Rule with NOx SIP Call as
16 Contingency."

17 Okay. I think we have all of Mr. Lawler's overheads now
18 admitted as exhibits.

19 (Whereupon said documents were duly marked for purposes of
20 identification as Hearing Exhibits 2 through 22 and
21 admitted into evidence as of this date.)

22 HEARING OFFICER GLENN: Thank you very much, Mr. Lawler. I
23 believe -- is Mr. Kaleel next, Ms. Kroack?

24 MS. KROACK: Mr. Kaleel is next.

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1 HEARING OFFICER GLENN: What I would like to do, Mr.
2 Kaleel, is admit your prefiled testimony as Exhibit Number 23,
3 and then I will also at this time -- well, let me do that first.

4 (Whereupon said document was duly marked for purposes of
5 identification as Hearing Exhibit 23 and admitted into
6 evidence as of this date.)

7 HEARING OFFICER GLENN: I am going to admit the summary of

8 your testimony as one large -- one exhibit, and then if you would
9 as you refer to the charts and things in your testimony, just let
10 us know what the header is of the page you are on for clarity in
11 the record.

12 MR. KALEEL: Okay. I will try to remember to do that.

13 HEARING OFFICER GLENN: If you don't remember, I will
14 rudely interrupt. Please continue now with your testimony.

15 MR. KALEEL: My name is Robert Kaleel. I am with the Air
16 Quality Modeling Unit in the Air Quality Planning Section with
17 the Bureau of Air at the Illinois EPA. I have been involved with
18 Air Quality Modeling for over 20 years. Most of my time has been
19 spent at the Agency. I spent some time as a private consultant
20 in the field of dispersion modeling. I have been responsible for
21 overseeing the State's efforts to develop attainment
22 demonstrations using photochemical modeling approaches for both
23 the Metro-East and Chicago areas. I was also involved in the
24 modeling that was performed during the OTAG study that Mr. Lawler

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1 mentioned.

2 (The witness placing slide on projector.)

3 MR. KALEEL: This is a cover sheet from the package of
4 slides hopefully everyone has a copy of this, and I will try to
5 refer to the slides in the order that they are in that package.

6 (The witness placing new slide on projector.)

7 MR. KALEEL: This slide is called the 1-hour Ozone

8 Attainment Demonstrations. The Agency has been involved in
9 efforts to develop attainment demonstrations for nonattainment
10 areas in both ends or both sides of Illinois. In the Lake
11 Michigan area, of course, our work has gone on for many years.
12 We are finally, I think, in a position to be able to complete our
13 attainment demonstration modeling and submit that to the USEPA by
14 December 2000, December of this year.

15 We have also worked very closely with the State of Missouri
16 to develop an update or revision to the original attainment
17 demonstration submitted for the Metro-East/St. Louis
18 nonattainment area. That work was originally completed in 1994,
19 which was the required date at that time. As Mr. Lawler had
20 mentioned, the attainment date has been delayed. The matter is
21 now actually in court, but the most recent efforts to revise the
22 attainment date and finally achieve attainment in the St.
23 Louis/Metro-East areas, submittal was made in October of 1999 to
24 try to pursue an extension of that attainment date.

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1 (The witness placing new slide on projector.)

2 MR. KALEEL: If I had known that I had to read all of the
3 titles, I would have sure made them shorter than this.

4 (Laughter.)

5 MR. KALEEL: This is Figure 1, Comparison of 1987 to 1989
6 and 1997 to 1999 1-hour Ozone Design Values Within the Lake

7 Michigan Region. Dennis Lawler had previously shown some air
8 quality trends showing the progress that has been made in both
9 Chicago and the Metro-East areas. I wanted to reinforce that
10 with showing some of the air quality data depicted slightly
11 differently to kind of give an idea of the progress that has been
12 made to date or at least over the last ten years in both of these
13 nonattainment areas.

14 On this slide -- there is actually two panels to this
15 slide. On my left anyway, and I assume it is on your left, it
16 depicts the 1987 to 1989 ozone design values. Let me explain
17 what an ozone design value is. Mr. Lawler had mentioned the form
18 of the ozone standard. The form of the ozone standard is such
19 that at any given location certain number of exceedances of the
20 level of this standard are allowed. As many as three exceedances
21 can take place at any given site over a three-year period and
22 still be considered to be an attainment of the standard. It is
23 the fourth highest value in a three-year period that represents
24 the design value at a given monitor. If that design value is

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1 above 125 parts per billion, or .12 parts per million, then that
2 monitor is in violation of the National Ambient Air Quality
3 Standard for ozone.

4 In this slide, the area that is shaded in kind of yellow or
5 brownish color represents the areas in the Lake Michigan region
6 that had ozone design values observed at the monitoring sites

7 operated by the four states that exceeded the level of the ozone
8 standard. In all, I believe there is 25 monitors throughout the
9 nonattainment area that exceeded the standard ten years ago. The
10 highest concentrations in the region occurred actually right at
11 the Illinois-Wisconsin border. The air quality levels or design
12 values at that time approached 190 parts per billion, again,
13 relative to the standard of 125. Values of 179 parts per billion
14 were recorded in the Chicago area. Exceedance values above the
15 standard were recorded in all four states.

16 Ten years later we have a much different picture.
17 Throughout Illinois, at least the northern part of the State of
18 Illinois, in the last three years of the monitored data, 1997
19 through 1999, there are no monitors that currently violate the
20 1-hour ozone standard. There are none in Indiana or in Michigan
21 either. The only remaining monitors that are violating the air
22 quality standard, and there are six monitors that still violate,
23 are all in eastern Wisconsin, right along the Lake Michigan
24 shoreline. The highest value, I believe, is 141, which occurs in

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1 a location just north of Milwaukee. In all, six monitors are
2 still violating, compared to 25, and the design values have been
3 reduced over the last ten years from about 190 down to about 140,
4 so it has made tremendous progress.

5 (The witness placing new slide on projector.)

6 MR. KALEEL: A similar situation to report for the St.
7 Louis and Metro-East area. The title of this slide is called
8 Figure 2, Comparison of 1987 to 1989 and 1997 to 1999, 1-hour
9 Ozone Design Values Within the St. Louis Nonattainment Area. In
10 the period ten years ago, much of the nonattainment areas, the
11 northern half of the nonattainment area, most of the monitors
12 that operating in the Metro-East portion of Illinois and in St.
13 Louis had design values that were above the level of the
14 standard. Peak concentrations in St. Louis at that time, or peak
15 design values, were approaching 160 parts per billion. And just
16 about every monitor in Madison County, Illinois, and most of the
17 ones in St. Louis and St. Charles exceeded the level of the
18 standard.

19 Ten years later, 1997 through 1999, as shown in this slide,
20 there are only two monitors that still exceed the ozone standard.
21 One of those monitors is in St. Charles County in Missouri. It
22 has a design value of 131 one parts per billion. The other
23 monitor is actually not even part of the nonattainment area. It
24 is in Jersey County, Illinois. We have a design value of 127,

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1 just barely above the level of the standard.

2 (The witness placing new slide on projector.)

3 MR. KALEEL: Reporting the ozone trends do indicate that we
4 have made tremendous progress over the last ten year period. It
5 would also indicate that we are not quite there yet. We still

6 have a ways to go as far as being able to demonstrate attainment
7 with the standard. We think that to be able to demonstrate
8 attainment that further control measures will be necessary.

9 We have tried to use photochemical grid models. It is a
10 fancy-sounding construct or a mathematical construct to describe
11 the science behind ozone formation and ways that we can use
12 computer tools, computer models, to project future air quality
13 levels to account for the changes in emissions that we are
14 expecting by the attainment years.

15 We call this subregional modeling. I will explain why we
16 use the term subregional modeling, using LADCO's Grid M modeling
17 domain. I put this up here I guess to introduce a few concepts.
18 One is that we are using the model over a fairly broad region of
19 the Midwest. We are working with the Lake Michigan Air Directors
20 Consortium, and have for a number of years, to develop this
21 modeling system. We have applied the same modeling system
22 developed by LADCO for application to the Metro-East/St. Louis
23 area. So we are using the same system, the same model and it has
24 been a model that we have developed cooperatively over many

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1 years.

2 What is a photochemical model? A model is actually a
3 system of several computer processors. The model that we are
4 using, the photochemical model that we are using, is called the

5 Urban Air Shed Model, Version B or Version 5. It is the version
6 of the model that the EPA has accepted as the state-of-the-art
7 photochemical model for this purpose.

8 The model uses several key inputs to be able to make the
9 calculations or predictions of future ozone air quality
10 concentrations. One of those, of course, is emissions. We have
11 to develop emissions inventories that cover the entire modeling
12 domain or the area of interest for the model. We are using a
13 model called EMS-95, which was developed by LADCO by the four
14 Lake Michigan states specifically for this purpose.

15 Meteorology is obviously a key in determining ozone
16 concentrations. We use a model called the RAMS3a model, which
17 was developed by the University of Colorado, and previously by
18 the University of Virginia, to model a very large portion of the
19 United States to provide the key inputs to the photochemical
20 model. The key inputs would include things like wind direction,
21 wind speed, at all layers of the atmosphere, not just at the
22 surface, cloud cover, precipitation in some cases, the amount of
23 ultraviolet light incoming into the modeling domain. So there is
24 a series of key meteorological parameters that are provided by

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1 the RAMS3a model.

2 Boundary conditions, this is a little tougher concept to
3 explain. I will try to explain that a little bit more in the
4 context of some of the other slides. I think it will be a little

5 easier to visualize. But basically what we need to be able to do
6 is quantify the affect of emission controls and the amount of
7 ozone and ozone precursors that are coming into the modeling
8 domain from areas outside of the domain. Those are quantified
9 through what we call boundary conditions. And for the purposes
10 of the modeling that I will talk to you about today, we have, in
11 fact, run a bigger scale model to try to model the affects of
12 changes in emissions and ozone concentrations in up-wind areas.

13 (The witness placing new slide on projector.)

14 MR. KALEEL: Now, this slide is called photochemical grid
15 modeling. I just use it to try to illustrate visually what the
16 idea is behind a photochemical model. The model is a series of
17 grid squares that cover a particular area or domain. The model
18 that -- what I am trying to depict here is actually run in three
19 dimensions. It is not just surface ozone that we are trying to
20 simulate. It is ozone throughout the boundary layer, throughout
21 the mixing layer of the atmosphere.

22 For each grid cell we try to keep track of a series of
23 ozone precursors, speciated concentrations of a whole range of
24 Volatile Organic Compounds. I believe 120 different Volatile

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1 Organic Compounds are kept track of through the chemical
2 mechanism. Various species of nitrogen compounds, not just NOx,
3 but other nitrogen compounds as well, carbon monoxide. We have

4 run the model for a time step, typically about six minutes. We
5 have introduced in the grid cell the emissions from all the
6 different sources in our emissions inventory. We introduce
7 emissions or concentrations of pollutants from adjoining grid
8 cells, depending upon which way the wind is blowing. We
9 introduce emissions aloft if we are talking about emissions from
10 tall stacks.

11 At the point that we have kept track of all of those
12 different species for that particular time step, we turn on a
13 chemical solver or a chemical mechanism. In the case of urban
14 air shed model, it is called the Carbon Bond 4 chemical
15 mechanism. We run through the chemical reactions that help to
16 cause ozone, and then start the process all over again for the
17 next six-minute time step. So it is a very involved bookkeeping
18 system, if you will.

19 (The witness placing new slide on projector.)

20 MR. KALEEL: This slide is called the Lake Michigan Ozone
21 Study, Study Area. When we first started doing the photochemical
22 modeling for the Lake Michigan region, and in cooperation with
23 the other Lake Michigan states, Wisconsin, Michigan, and Indiana,
24 as well as Illinois, this is the way we originally set up the

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1 model back in 1991. Dennis Lawler had mentioned that we had
2 participated in an extensive field measurement program. I
3 believe the program cost somewhere in the range of six to seven

4 million dollars to collect the extensive measurements needed to
5 develop this model. In the State of Illinois I guess compliments
6 of the Wisconsin lawsuit got to pick up most of the tab for that.

7 The concept of boundary conditions, in the time frame of
8 the 1991 field study Mr. Lawler had mentioned that we had
9 operated aircraft along the edges of this modeling domain. This
10 is what we call the boundary. What we did back in 1991 is to use
11 the measurements from the aircraft to represent ozone and ozone
12 precursors that are coming into the domain. These are what we
13 call the boundary conditions, the amount of emissions and
14 precursors that are entering the domain from the sides of the
15 domain. That is how we quantify those, is through the aircraft
16 measurements.

17 At that time, of course, our focus was just the Lake
18 Michigan area, what is happening over Lake Michigan. So we set
19 up what is called a nested grid, a series of grids with
20 different horizontal resolutions starting basically in Central
21 Illinois, extending to Western Illinois, Central Indiana, and
22 then covering most of the Lake Michigan region with successively
23 tighter grid cell resolution. The tightest resolution at that
24 time was four kilometers, which was over the area of interest,

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1 the western shore of Lake Michigan. And at the time this was
2 probably as much four kilometer modeling as our computers could

3 afford or that we could afford to buy. But we thought that this
4 was very adequate. In fact, it was very much state-of-the-art at
5 the time that we started on this process.

6 The problem we very quickly ran into, though, given the
7 magnitude of the concentrations that we were seeing along the
8 boundary, Dennis Lawler showed a slide that indicated
9 concentrations as high as 100 parts per billion coming into the
10 Chicago area from areas up-wind. We very quickly realized that
11 we are not going to be able to develop control strategies looking
12 just strictly at emissions within the nonattainment area. And
13 also we ran into a problem that -- of course, we could use
14 current measurements, 1991 measurements to look at 1991 ozone
15 episodes and look at present year conditions. We have not yet
16 run aircraft in the year 2007, when we need to be able to
17 demonstrate attainment. So we needed to figure out some way of
18 projecting future level boundary conditions. So as modelers, we
19 obviously wanted bigger computers and bigger models, and I think
20 about 1995 we got our way with the formation of OTAG.

21 (The witness placing new slide on projector.)

22 MR. KALEEL: This slide is called the OTAG Modeling Domain.
23 In 1995 with the start of OTAG, people started to realize, people
24 doing air quality planning, that looking at ozone concentrations

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1 strictly within individual nonattainment areas and developing
2 control strategies just within those nonattainment areas was not

3 going to get us to where we needed to be, which was attainment by
4 the prescribed deadlines. A new approach to analyzing future
5 conditions was needed. And at that point we developed the OTAG
6 modeling domain, where we looked at things on a regional basis.

7 There are actually two different modeling domains that were
8 established, a modeling course grid, the OTAG Course Grid, which
9 had grid intervals of 36 kilometers. This was really developed
10 initially to provide boundary conditions to where we thought the
11 action was, which was in the OTAG fine grid, this 12 kilometer
12 grid domain. Unfortunately, the technical construct ended up
13 with some legal ramifications for states that were right on the
14 border. Places like Missouri ended up with fine grid and course
15 grid areas and that resulted in Missouri being left out of this
16 round of SIP Call modeling. The EPA will have to go back in and
17 develop a new approach for Missouri. Georgia was kind of in a
18 similar situation. Wisconsin and Michigan were in similar
19 situations. So that may be a technical construct that ended up
20 developing into some legal difficulties. But at least you get
21 the idea that what we were really looking at was a much larger
22 modeling domain. At the time we called it regional modeling.

23 (The witness placing new slide on projector.)

24 MR. KALEEL: At the conclusion of OTAG, modelers were

1 realizing that running a model at a 12 kilometer resolution was

2 very good for looking at affects due to long-range transport, but
3 it was not really adequate -- it didn't provide the resolution
4 that we needed for looking back at the urban scale. If you
5 recall the slide that I showed before for the Lake Michigan Ozone
6 Study, where we were tuning into as small as a four kilometer
7 model.

8 Well, on this particular slide, called Figure 3, the
9 Midwest Modeling Domain or Grid M, we backed away from the full
10 regional scale of the OTAG modeling and developed what we are
11 calling a subregional model, which is the area shown in red.
12 This is what we call Grid M. It is a Midwestern modeling domain.
13 It is looking at just the areas of high ozone concentrations,
14 primarily the Lake Michigan region, but for other regions as
15 well, including St. Louis.

16 What we are attempting to do with the Grid M model is to
17 look at ozone on the urban scale at a very fine resolution, which
18 is four kilometers, but to also look at the affects of long-range
19 transport at least within a day or two time prior to arrival, the
20 air mass arrival, in the nonattainment area. So we think that a
21 modeling transport within this particular region, as well as the
22 urban scale emissions for Chicago, that we have the best of both
23 worlds, the best of both the regional model and the urban scale
24 model.

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1 (The witness placing new slide on projector.)

2 MR. KALEEL: If I was thinking ahead, I would have not only
3 had shorter titles, but I would have had titles. This particular
4 slide does not have a title. I am not quite sure what to do with
5 it here.

6 HEARING OFFICER GLENN: There is an intervening page.

7 BOARD MEMBER MELAS: Yes, there is an intervening page.

8 HEARING OFFICER GLENN: It is called Ozone Episodes for
9 Subregional Modeling in the Lake Michigan Region.

10 MR. KALEEL: Okay. I will bring this one back. We will
11 think about this one for a second. I was out of order.

12 HEARING OFFICER GLENN: Thank you.

13 MR. KALEEL: Sorry. This slide is called Ozone Episodes
14 for Subregional Modeling in the Lake Michigan Region. To be able
15 to look at ozone concentrations for a future year, we obviously
16 don't know what the meteorology is going to be in the year 2007,
17 or in the case of St. Louis, the year 2003. So what we do is
18 look at historical ozone episodes and assume that conditions like
19 this will occur in that future year. And we have relied on a
20 series of ozone episodes. I notice that there is a typo on this
21 slide for one of the episodes. It should be June 22nd through
22 28th, 1991. I apologize for that.

23 We have developed a series of four ozone episodes,
24 developed emissions inventory information, developed

1 meteorological conditions to represent these historical
2 conditions. There is about a total of 40 ozone episode days that
3 we have looked at and amongst these four episodes two of these
4 episodes, the July 14th, 1991 episode and the July 7th through
5 18th, 1995 episode were used for St. Louis. We thought that this
6 Midwestern ozone event was as applicable for St. Louis as it was
7 for the Chicago Lake Michigan region. For the Chicago attainment
8 demonstration, we used all four.

9 (The witness placing new slide on projector.)

10 MR. KALEEL: I am not quite sure what to call this slide.
11 I would call it a time series plot. So if I was to put a title
12 on it, it would be a time series plot for Evanston, Illinois.

13 One of the necessary requirements for performing air
14 quality modeling is to demonstrate -- and it sounds simple -- to
15 demonstrate that the model actually works. It is a mathematical
16 construct. We are using the science to try to project ozone
17 concentrations. We think the science is very good, and it is
18 state-of-the-art, as a matter of fact. But to be able to have
19 confidence that it is working very well, we use the measurements
20 from the historical episode to compare the predictions of the
21 model, and once we have shown that the model is performing
22 adequately, it meets certain criteria that are specified by
23 USEPA, then at that point we can change the mix of emissions to
24 represent future year conditions. Leave the meteorology the

1 same, but change the emissions, rerun the model, and try to
2 decide if those model predictions demonstrate attainment or show
3 the air quality benefits that we are looking for.

4 So there is a very extensive model evaluation process that
5 the four states engage in to try to show that the model works
6 well. There is a whole series of statistical measures,
7 mathematical measures, that the USEPA requires us to look at.
8 There is also a series of graphical measures. I have chosen this
9 one not necessarily because it looks the best, but to give you an
10 idea of what it is -- how we use the model predictions and the
11 air quality measurements to evaluate performance.

12 In this particular slide, we are showing four series of
13 graphs. These represent the four ozone episodes I introduced a
14 minute ago. All of these represent model predictions compared to
15 air quality measurements taken at one monitoring site, the
16 monitor located in Evanston, Illinois, just north of Chicago.
17 Evanston typically receives I guess higher concentrations of
18 ozone than many other places in Illinois, given its location
19 north of Chicago. So it is a good choice. It is maybe not the
20 highest monitor, but it is a good choice to look at model
21 performance as it affects Illinois.

22 On each of the graphs there is both I guess a dotted line
23 or a series of small squares that kind of form a broken line.
24 These represent the hourly ozone measurements at the Evanston

1 monitor. The solid line that is sort of tracking those series of
2 squares represents the models prediction at that same location at
3 that same period of time. I guess I just leave it to the
4 audience to visually look at the way the model and the
5 measurements track on each individual ozone episode day.

6 A couple of things that I would point out, one is that in
7 general the model is tracking reasonably well. There is a
8 tendency of the model to underpredict a little bit early in some
9 of these episodes. You can see where the solid line does not
10 quite track up to the highest points, but it is tracking in terms
11 of the time of day. The model is predicting highs at roughly the
12 right times of day. And in many of the highest days the ozone
13 model is performing quite well. The model predictions match or
14 in some cases even exceed the levels that were predicted.

15 Later in some of these episodes, and in particular, this
16 particular episode, July 1991, the model, in fact, overpredicts
17 the peak concentrations on the last two days of the episode.
18 There is a little bit of overprediction during the June of 1995
19 episode right at the end. Actually, in this July 1995 episode,
20 which was a very hot period of time, very ozone conducive, the
21 model is performing very well. It is tracking concentrations
22 very well, both the highs, the low concentrations that occur
23 overnight, and then the ramp down later in the episode as ozone
24 concentrations get lower.

1 I guess I would conclude with the discussion of model
2 performance just to say that we had performed a very extensive
3 evaluation, including all of the EPA's statistical measures, and
4 found that the model does perform well enough to project future
5 year concentrations. The EPA has accepted that the UAM-V model
6 and the way that we are applying it is adequate for this purpose.

7 (The witness placing new slide on projector.)

8 MR. KALEEL: So let's move to some future year scenarios.
9 This particular slide is called Modeling Scenarios. There is
10 three future year scenarios that I would like to talk about
11 today. Of course, there is a whole series of scenarios that we
12 have run over the last ten years of modeling to reach this point
13 or get to this point. But the three key ones I think for today,
14 the first one is called Clean Air Act Controls. This represents
15 kind of a future year based case. These are all the control
16 measures that are currently contained in the Clean Air Act and
17 are, I guess, already in the pipeline. Things like the states 15
18 percent plans, the rate of progress plans, reformulated gasoline,
19 enhanced vehicle inspection and maintenance, Title 4 acid rain
20 controls. These are, again, all things that we are already
21 expecting to occur by the attainment dates for St. Louis and
22 Chicago.

23 I should point out that the attainment date and the
24 projection years that we are dealing with are different for

1 Metro-East/St. Louis than they are for Chicago. The
2 Metro-East/St. Louis area, we hope to be able to bring into
3 attainment by the year 2003. This is consistent with EPA's
4 policy for extension of attainment dates. And this is the
5 earliest year that we hope that the regional NOx controls, in
6 addition to all these Clean Air Act measures, would bring the
7 Metro-East/St. Louis area into attainment. For Chicago the Clean
8 Air Act had established a 2007 attainment date. That's the year
9 that we project for the modeling.

10 The second modeling scenario looks at not only the affect
11 of Clean Air Act controls, but also the implementation of an
12 emission limit, a rate-based limit applied to Electric Generating
13 Units. The level of that limit would be 0.25 pounds per million
14 btu.

15 The third scenario is Clean Air Act controls plus the
16 effect of the NOx SIP Call. So all of the control measures
17 contained within the NOx SIP Call are modeled in this scenario in
18 addition to the clean Air Act measures.

19 (The witness placing new slide on projector.)

20 MR. KALEEL: This slide is entitled, Figure 4, Domainwide
21 Total Anthropogenic Emissions in Tons Per Day. What this slide
22 depicts are the changes of modeled emissions, actually for the
23 year 2007, but the magnitude of this is comparable for 2003.

24 On the left plot or slide are NOx emissions for each of the

1 four -- actually three scenarios, future year scenarios, Clean
2 Air Act, 0.25 pounds per million btu and NOx SIP Call. These are
3 compared to the 1996 base inventory. These emission totals
4 represent all of the emissions within the Grid M modeling domain.

5 On the right slide it would be same four scenarios, the
6 1996 base, the Clean Air Act scenario, the 0.25 pounds per
7 million btu, and the NOx SIP Call. In this slide what I am
8 depicting -- or in this portion of the slide depicting VOC
9 emissions throughout the Grid M modeling domain.

10 From the 1996 base, looking I guess at the NOx emissions,
11 from the 1996 base to the year 2007, when Clean Air Act control
12 measures are implemented, we can see a rather dramatic drop in
13 expected level of NOx emissions throughout the modeling domain, a
14 drop of somewhere in the range of 2000 tons per day. I think the
15 number might even be a little bit higher than 2000 tons per day.
16 For the 0.25 pounds per million btu scenario, which, again,
17 applies only to Electric Generating Units and, again, a very
18 substantial drop in projected NOx emissions throughout the Grid M
19 area. And we are also assuming that the same level of control
20 would occur outside of Grid M in other areas where the SIP Call
21 applies, the 22 jurisdictions that were measured.

22 The NOx SIP Call, which applies not only to EGUs but to non
23 EGUs, cement plants, and I.C. Engines, again, another drop in NOx
24 emissions are projected by the year 2007. Perhaps not as

1 dramatic a drop as in previous scenarios or between different
2 scenarios but, again, a significant further reduction of NOx
3 emissions. For VOC emissions most of the VOC emission reductions
4 are contained within the Clean Air Act scenario. And, again, I
5 had given a list of some of the measures that are contained
6 within there. Many of those Clean Air Act measures are VOC
7 scenarios. The subsequent scenarios, the 0.25 and the NOx SIP
8 Call, of course, are looking just at NOx emissions and you are
9 not seeing much of a change within the domain for VOC.

10 (The witness placing new slide on projector.)

11 MR. KALEEL: These colors show up a little better than they
12 did last week. This slide is called Figure 5, Peak 1-hour Ozone
13 Concentrations, July 13, 1995, Lake Michigan Region.

14 What I am showing here on this slide is just an example of
15 one of the post processing products that we can produce using the
16 photochemical model. There is, as I mentioned, about 40
17 different episode days that we are modeling. There is a number
18 of different ways that we can analyze the model results, one of
19 which -- a very important one of which is being able to depict
20 the model in terms of peak 1-hour ozone concentrations. So
21 rather than wade through the results for 40 different episode
22 days, I have just picked one. It is not necessarily the highest.
23 It is not necessarily the lowest. It illustrates, I think, very
24 well the affect of these different scenarios.

1 There is four different portions of this slide. The 1996
2 base is shown in the upper left. The Clean Air Act scenario is
3 in the upper right. The 0.25 pounds per million btu scenario in
4 the lower left. The NOx SIP Call is in the lower right. The
5 color scale is set up such that the concentrations go to a red
6 color in areas where the model is projecting concentrations above
7 the level of the standard. Yellow colors, green and blue, are
8 levels that are progressively lower concentrations than that.

9 The 1996 base on this one day, July 13th, 1995, this fairly
10 large area that is shown in the model, mostly out over Lake
11 Michigan, with concentrations in excess of the ozone standard.
12 By 2007 with implementation of the Clean Air Act control
13 measures, the area affected and the magnitude of the peak
14 concentration is projected to be much, much less, but not yet in
15 attainment.

16 For the 0.25 pound per million btu limit, the
17 concentrations in excess of the ozone standard are, again, much
18 smaller than in the previous scenario, showing pretty substantial
19 ozone benefits, ozone reductions, in the modeling domain.

20 Then, finally, implementation of the NOx SIP Call, we start
21 to see just a little bit further benefit, not as dramatic a
22 change, but further ozone benefits in the range of one to three
23 parts per billion in the areas of peak concentration.

24 It is important to note that the model is not projecting

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1 ozone concentrations above the standard in the Chicago region,
2 and this is in keeping very consistent with the current
3 monitoring data which suggests that are real problems currently
4 are more up the shoreline up into Wisconsin. So this particular
5 episode date kind of illustrates that, although the winds are
6 perhaps a little bit more to the west so the plume is tilted a
7 little bit more in the direction of Michigan.

8 (The witness placing new slide on projector.)

9 MR. KALEEL: In the Metro-East/St. Louis area -- this
10 particular slide is called Figure 6, Peak 1-hour Ozone
11 Concentrations, July 18, 1991, St. Louis area.

12 Again, the same four modeling scenarios are shown on the
13 slide. It is the same basic color scale. I am using a different
14 episode date here, July 18, 1991, to depict kind of a typical
15 output or a typical scenario for St. Louis. The St. Louis area
16 is kind of right in this little bend of the Mississippi River.
17 On this particular date, July 18th, we observed that most of the
18 highest concentrations actually occurred in Illinois, high levels
19 of ozone to the north of St. Louis across St. Charles County and
20 then on into Illinois, a fairly wide area of projected violation
21 of the standard.

22 On this particular day the Clean Air Act measures were
23 enough to actually get peak ozone concentrations below the level
24 of the standard. That is not the case for all episode days, but

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1 it does show that Clean Air Act measures do yield substantial
2 benefits for ozone air quality by the year 2003.

3 The 0.25 pounds per million scenario, again, the
4 concentrations -- in this case the yellow concentration areas are
5 smaller. Peak concentrations are lower. And a little bit
6 further improvement, again, by the application of the NOx SIP
7 Call.

8 (The witness placing new slide on projector.)

9 MR. KALEEL: As you can probably appreciate, being able to
10 determine whether or not the model predictions are adequate to
11 demonstrate attainment is a rather complex process. It is not
12 merely a case of just looking at peak ozone concentrations and
13 finding that on every particular day you have reduced
14 concentrations below 125. EPA has established a series of tests
15 of the model each one I guess a little bit more flexible than the
16 most conservative test. And we have tried to apply each of these
17 tests to be able to demonstrate attainment for both Chicago and
18 the Metro-East areas.

19 Rather than getting through all of these convoluted tests
20 that EPA recommended, I am going to try to illustrate, for the
21 purpose of today's testimony, one that is a fairly easy concept
22 to be able to show graphically. This is called the relative
23 test. I should point out that in those previous slides you
24 noticed that even in the 0.25 scenarios and in the NOx SIP Call

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1 scenarios that there were still some exceedances of the ozone
2 standard indicated on the one day in Lake Michigan that I showed
3 you and that is also true on other days in both Metro-East and in
4 the Chicago areas.

5 So the model is not showing peak ozone below 125 on every
6 single episode day. If it did, we would be able to show that we
7 have met the attainment test that is most severe, most
8 restrictive. It is what EPA calls the deterministic test.
9 Basically, if every ozone grid cell on every hour of every day
10 showed attainment with the model then we would pass with flying
11 colors. We are not able to show that in either area, even with
12 the application of the NOx SIP Call. So we have to look at other
13 tests that EPA has provided, each one relying further on other
14 argument, other weight of evidence arguments.

15 A more flexible approach is called the statistical test.
16 The statistical test tries to look at the form of the ozone
17 standard. The ozone standard is written to allow a certain
18 number of exceedances if you were measuring air quality. So the
19 statistical test is another test that allows you to model certain
20 exceedances and still be able to show attainment.

21 In the case of the Metro-East modeling that we -- that we
22 presented to EPA or submitted last June, we did not pass the
23 statistical test. In the current modeling that is being
24 performed under the auspices of LADCO, and that we will be

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1 submitting to the EPA in December of this year, we expect to be
2 able to meet the statistical test. So it is not the most severe
3 test, but it is still a very conservative test.

4 Beyond those two tests the EPA allows for submittal of what
5 is called weight of evidence. Other arguments that suggest that
6 because of model performance or because of the severity of ozone
7 episodes or other more subjective measures the states can still
8 make a demonstration of attainment without passing either the
9 deterministic or the statistical test. This particular
10 application of the model, called the relative test, is one of
11 those weight of evidence measures. It is the measure that we
12 relied upon in the St. Louis attainment demonstration and EPA has
13 indicated that they will accept.

14 The idea of the relative test, you would start -- I should
15 probably introduce the slide before I get much further in
16 describing it. This is called Figure 7, Attainment Strategy
17 Modeling Results, Lake Michigan Region. The relative test
18 actually starts with monitored air quality data. In this case
19 the air quality data that was used, the design value, the fourth
20 highest in three years for the three-year period that straddles
21 our base emissions inventory, the 1996 emissions inventory, in
22 that case the design value is about 140 parts per billion.

23 We would use the model in a relative way, basically in a

24 percentage way, how much change did we get from the 1996 base for

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1 all of the monitors on a percentage basis and then use that
2 percentage change to develop what is called a relative reduction
3 factor, apply that factor to the monitored base to project future
4 year design values. So that is what each of these three
5 successive bars show, are the adjusted design values for the
6 future year, in this case for Lake Michigan.

7 Taking the 1995 base design value of 140, application of
8 Clean Air Act control measures would reduce that design value,
9 projected design value to a value of about 132 parts per billion.
10 It is a pretty substantial improvement from the base, but not
11 enough to show attainment.

12 In the 0.25 pounds per million btu scenario, we are
13 projecting a concentration right exactly at 125 parts per
14 billion. We can show attainment without any room to spare with a
15 0.25 scenario. I need to point out that we are still looking at
16 this modeling. We are still revising the emissions inventories.
17 We won't have a package to USEPA before December. So this is
18 perhaps subject to a little bit of change, a little bit up, a
19 little bit down. But given that we are right at the level of the
20 ozone standard, there sure isn't room for much of an ozone
21 increase and still be able to show that the Lake Michigan area
22 works.

23 The NOx SIP Call, we are about -- I believe the

24 concentration is 122 parts per billion. We have a little bit of

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1 cushion there to finish up our modeling and still be able to
2 demonstrate attainment.

3 So I guess from this slide, Clean Air Act measures don't,
4 in and of themselves, show attainment. The 0.25 may show
5 attainment when we finish our modeling in December. The NOx SIP
6 Call almost certainly will show attainment when we finish our
7 attainment demonstration.

8 (The witness placing new slide on projector.)

9 MR. KALEEL: Figure 8, Attainment Strategy Modeling
10 Results, St. Louis Area. This is a very similar slide as the
11 previous one showing projected or adjusted future year ozone
12 design values. In this case the highest monitor in the St. Louis
13 area is what we are using for the 1995 to 1997 design value. In
14 that case in that time period the design value is 136 -- I am
15 sorry -- about 131 parts per billion.

16 Application of Clean Air Act control measures, we are not
17 seeing enough of a model response using just those measures by
18 the year 2003 to demonstrate attainment.

19 The 0.25 scenario, it does appear to work for the
20 Metro-East/St. Louis area and, in fact, there is a little bit of
21 a cushion there. I believe the projected concentration is about
22 123 parts per billion.

23 Then, finally, the NOx SIP Call gets us another one or two
24 parts per billion further benefit for the St. Louis area.

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1 (The witness placing new slide on projector.)

2 MR. KALEEL: Finally, the Summary of Results,
3 Metro-East/St. Louis Area. The attainment demonstration has
4 already been submitted to USEPA in October of 1999. There are a
5 couple of further refinements to that modeling that USEPA had
6 requested. I think the most recent submittal of modeling without
7 any changes at all in the conclusions of the modeling was
8 submitted by both states in June of this year.

9 We need to submit to USEPA fully adopted rules by December
10 of 2000 to complete the attainment demonstration. In the case of
11 the Metro-East/St. Louis, our attainment demonstration showed
12 that a rate-based limit of 0.25 pounds of NOx per million btu in
13 addition to the Clean Air Act control measures should be
14 sufficient to demonstrate attainment by the year 2003.

15 (The witness placing new slide on projector.)

16 MR. KALEEL: Summary of Results for the Lake Michigan
17 Region. As I mentioned, the attainment demonstration must be
18 submitted to USEPA by December of 2000. In this case it is the
19 rules plus the modeling since the modeling has not yet been
20 submitted. We think that the NOx SIP Call plus the Clean Air Act
21 control measures will be sufficient to demonstrate attainment for
22 Chicago. It is also possible that a rate-based limit of 0.25

23 pounds of NOx per million btu will be adequate, but as I showed
24 before, that will be a very close call when we complete the final

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1 modeling.

2 That concludes my testimony.

3 HEARING OFFICER GLENN: Thank you, Mr. Kaleel.

4 MS. KROACK: I would like to submit a copy of the overheads
5 into the record.

6 HEARING OFFICER GLENN: All right. A summary of Mr.
7 Kaleel's testimony will be admitted as Exhibit Number 24.

8 (Whereupon said document was duly marked for purposes of
9 identification as Hearing Exhibit 24 and admitted into
10 evidence as of this date.)

11 HEARING OFFICER GLENN: I think this would be a great time
12 to take about a ten minute break. Let's go off the record and we
13 will reconvene when the clock on the wall says five after 3:00.
14 Thank you.

15 (Whereupon a short recess was taken.)

16 HEARING OFFICER GLENN: Okay. Ms. Kroack, who do you have
17 for us next?

18 MS. KROACK: Ms. Bassi from the Agency.

19 HEARING OFFICER GLENN: All right. Ms. Bassi, what I will
20 do is mark your prefiled testimony, then, as Exhibit 25.

21 (Whereupon said document was duly marked for purposes of

22 identification as Hearing Exhibit 25 and admitted into
23 evidence as of this date.)
24 HEARING OFFICER GLENN: Okay. Please proceed. Oh, and you

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1 have -- are you going to be referring to the Subpart W handout?

2 MS. BASSI: Yes, I have a number of overheads. They are
3 not as exciting as the previous ones. Sorry.

4 (Laughter.)

5 HEARING OFFICER GLENN: Perhaps what I will do is --

6 MS. KROACK: They are more like an outline.

7 HEARING OFFICER GLENN: Okay. I won't worry about
8 admitting those as exhibits, then, because if you have no charts
9 then I think that --

10 MS. BASSI: No charts. Sorry.

11 HEARING OFFICER GLENN: -- it should be clear in the
12 record. Okay. Thank you.

13 MS. BASSI: Thank you. My name is Kathleen Bassi. I work
14 in the Bureau Chief's Office at the Bureau of Air at the Illinois
15 Environmental Protection Agency, and have been involved in
16 development of NOx information for the last five years or so.

17 My testimony today is going to be aimed at the provisions
18 of the proposal that we have made to the Board in this
19 proceeding. Some of this is rather straightforward and some of
20 it is a little less straightforward because of the incorporations
21 by reference. What I will do this afternoon is go through those

22 incorporations by reference and hopefully clear up any questions
23 that there might be with regard to those.

24 (The witness placing slide on projector.)

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1 MS. BASSI: Subpart W is what we are calling our proposal.
2 It applies to electrical -- it applies to units serving
3 electrical generators with nameplate capacity greater than 25
4 megawatts of electricity. Units with a design heat input greater
5 than 250 million btu that commenced operation on or after January
6 1st, 1999, and that serve a generator with a nameplate capacity
7 of 25 megawatts or less, and that have the potential to use 50
8 percent of the unit's potential electrical output capacity to
9 generate electricity and that sell electricity are also included
10 if the EGU group.

11 None of the EGUs that are listed in Appendix F to our
12 proposal fall into this latter category. This also -- the units
13 that are listed in Appendix F to our proposal are ones that began
14 operating or commenced operation prior to January 1st, 1995. So
15 this is applying to strictly new units, this last part.

16 One of the qualifications that we have in our applicability
17 section, which is Section 217.754, is that it does not apply to
18 the units that are listed in Appendix D. Appendix D includes
19 units that are not EGUs, or non EGUs, as we call them, and these
20 are also existing. These are ones that commenced operation prior

21 to January 1st, 1995, and will be addressed more specifically in
22 a future rulemaking.

23 The potential electrical output capacity, as defined at 40
24 CFR, 72.2, this is a term that USEPA referred to in the model

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1 rulemaking that serves as the basis for our Subpart W. I believe
2 Mr. Forbes is much better qualified than I am to discuss this
3 mathematical computation, so I will leave that to him

4 (The witness placing new slide on projector.)

5 MS. BASSI: This rule would apply -- would commence, the
6 implementation would commence in 2003 and would apply during the
7 control period, which is May 1st through September 30th. This is
8 provided in Section 211.1515 of our proposal, which is the
9 definition of control period. And that definition limits this to
10 Part 217, so the term control period at this point in time does
11 not apply to any other part of Subtitle B of Part -- of 35
12 Illinois Administrative Code.

13 The requirement that it commence in 2003 appears in our
14 proposal at Section 217.756 (d)(3). And this -- in the model
15 rule this is found at Section 96.24, which is the effective date
16 of a budget permit. USEPA has anticipated things to go slightly
17 differently than how they will in Illinois. For example, we will
18 issue a permit and it says that you have to comply by a certain
19 days. Whereas in USEPA's thoughts it would be -- the permit
20 would not be effective until such and such a date, which is

21 slightly different from how we issue permits.

22 (The witness placing new slide on projector.)

23 MS. BASSI: Our proposal allows for units that emit less
24 than 25 tons of NOx during the control period to opt-out of the

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1 program. The model rule left it optional for states to include
2 this opt-out provision and Illinois determined that it would be
3 appropriate to include it in our rule or in our proposal.
4 However, once a state includes this opt-out provision in its
5 proposal then it needs to follow pretty closely with what USEPA
6 included in the model rule, and ours does that.

7 There had been some question about whether or not CEMS, or
8 Continuous Emission Monitoring Systems, could be used to
9 demonstrate compliance for low-emitting units, and they may.
10 When USEPA included this particular provision in the model rule,
11 they anticipated that the purpose that people would be using to
12 -- or the reason why people would be opting out is so that they
13 would not have to comply with the Part 75 monitoring provisions
14 or CEMS. And, in fact, we have had some indication that perhaps
15 some units will want to do this, so that they are never subject
16 to the provisions of this requirement.

17 Also, in Subsection 217.754 (c)(1)(d)I, we listed default
18 measures there. If you check with the model rule you will find
19 it merely refers to defaults. We are more explicit and just

20 included what the default values would be for determining
21 emission rates.

22 (The witness placing new slide on projector.)

23 MS. BASSI: If an Appendix F, EGU chooses to opt-out, it is
24 a low-emitting unit and it chooses to opt-out of this proposal or

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1 of Subpart W, the emissions cap budget, our budget would be
2 reduced by the number of tons that that source or that unit is
3 limited to in its permit. It would have to have a federally
4 enforceable permit condition in order to opt-out, and then our
5 budget would be reduced by that number of tons during the control
6 period. If a low-emitting unit was never allocated allowances by
7 the Agency, then our budget is not affected. And I think this is
8 where we are more likely to see CEMS to demonstrate compliance in
9 some of the new EGUs that could perhaps be coming into this
10 program.

11 (The witness placing new slide on projector.)

12 MS. BASSI: Another area that USEPA left optional in the
13 model rule was for sources to opt-in. Our proposal provides that
14 fossil fuel-fired stationary boilers, combustion turbines and
15 combined cycle systems may opt-in. We have -- we have included
16 or allowed only stationary sources to opt-in under the
17 prerequisites for application here. The unit cannot be a budget
18 unit. It must vent through a stack. If it vents through a stack
19 then it is going to be stationary.

20 The other portions of this are ones that are included in
21 the model rule. Again, this is a provision that states were
22 allowed to include but once they included it, there was not
23 flexibility in the prerequisites for a unit to opt-in.

24 We have had indication that some other units besides those

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1 that we have currently listed may wish to opt-in. This is
2 something that we will address later.

3 (The witness placing new slide on projector.)

4 MS. BASSI: For a unit to opt-in to the program it must
5 establish a baseline, and then that baseline becomes its cap. It
6 then -- in order to generate allowances to trade, it would then
7 need to reduce below its cap. So it would be issued allowances
8 on the basis of the cap that it demonstrates.

9 (The witness placing new slide on projector.)

10 MS. BASSI: The operating or the implementation mechanism
11 for Subpart W is a source's permit. In order for this program to
12 be implemented, since it is a federal program, of course, the
13 conditions that apply to Subpart W to the units have to be
14 federally enforceable. Many of the sources under this proposal
15 will be Title 5 sources or part of our Clean Air Act Permitting
16 Program. Others will not be. Some of these are smaller sources
17 and they would be non Title 5 sources and so we will include them
18 in the program through state permits that are federally

19 enforceable.

20 We include in the proposal at Section 217.758 (a)(4) and
21 (a)(5) dates by which existing sources or sources that are
22 existing on November 1, 2002 and August 1, 2002, respectively,
23 must apply for their permits in order to comply with the program
24 by May 1st, 2003. And non Title 5 sources then must apply by

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1 November 1st, 2002. Title 5 sources must apply by August 1st,
2 2002.

3 Another section or subsection that we include in the
4 proposal is that the budget permit, as we call this, has to be a
5 segregable portion of the source's permit. When Title 5 was
6 enacted, one of USEPA's aims was for sources to have a single
7 permit that includes all of the units at that source in this
8 single permit. Our practice for many years had been to issue a
9 permit for each unit at the source or however the source tended
10 to apply for its permits. And in some instances we have sources
11 out there with maybe 200 permits.

12 In addition to consolidating all of the permits that might
13 be applicable to a source and to a single permit on the federal
14 level, for our federal permits, we have also decided to do that
15 with our state permits. So when we say this is a segregable
16 portion of the source's permit, it means that it would still --
17 the provisions for compliance with Subpart W would still be
18 included in the source's one permit, single permit, but that

19 section of the permit would be called its budget permit. There
20 would be a distinctive section in the source's permit that
21 requires compliance with Subpart W and allows for participation
22 in this trading program that could for some reason be segregable
23 if something else -- if there was a reason for that to happen.
24 In order to -- otherwise, the rules and requirements of Sections

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1 39.5 and Part 201 apply with regard to permitting.

2 (The witness placing new slide on projector.)

3 MS. BASSI: Monitoring and record keeping are required
4 consistent with Part 75 -- 40 CFR, Part 75 and 40 CFR, Part 96,
5 Subpart H, which amends Part 75 to make it applicable to seasonal
6 emissions rather than annual emissions, or in addition to annual
7 emissions. Again, a Continuous Emissions Monitoring System is
8 required, although the model rule and Part 75 does allow for some
9 exceptions to that and there are procedures that are included in
10 there to allow exceptions to a CEMS.

11 (The witness placing new slide on projector.)

12 MS. BASSI: What we are measuring in this particular
13 program are mass NOx emissions, how many tons of NOx are emitted
14 at a source during the ozone season or during the control period.
15 The mass NOx emissions must be reported to the state and to USEPA
16 by October 30th, which is a month following the end of the
17 control period. Sources then have until November 30th of each

18 year to reconcile their accounts with USEPA. On December 1st
19 USEPA will make withdrawals from source's accounts and those
20 withdrawals would be on the basis of one allowance per each ton
21 of NOx emitted during the control period.

22 (The witness placing new slide on projector.)

23 MS. BASSI: The model rule allows for trading and banking.
24 This is a part of the federal program that we have incorporated

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1 by reference. The model rule requires that there be one account
2 representative for each budget unit, and if a source has more
3 than one budget unit, then the one account representative needs
4 to cover all of the ones at that source. Because this is an
5 interstate system, the integrity of the currency is necessary to
6 carry across state lines and, therefore, it was -- the USEPA was
7 requiring states that wanted to participate in the program then
8 to either incorporate the program by reference or to adopt rules
9 that looked exactly like the program that USEPA had included in
10 the Federal Register.

11 We felt that for these administrative parts of the program
12 where there was no flexibility allowed in the program if you were
13 going to participate in it, then incorporations by reference were
14 the most efficient means of making sure that we did not differ
15 from the USEPA except in those areas where flexibility was
16 provided.

17 Account representatives must establish a compliance account

18 for each unit that is subject to this program. They may
19 establish an overdraft account for a source that has more than
20 one unit that is subject to the program. And then anybody can
21 establish a general account. This means that a broker, for
22 example, who wants to trade NOx emissions could establish a
23 general account. The broker would not have a compliance account
24 or an overdraft account, but they could have a general account.

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1 The American Lung Association would probably have a general
2 account. States will have general accounts. USEPA will need to
3 give states the allowances that the states allocate to sources or
4 to units and those will go into state's general accounts.

5 (The witness placing new slide on projector.)

6 MS. BASSI: In the trading system the allowances may be
7 used first in the year for which they are allocated. Allowances
8 will be allocated three years in advance. So in 2003 Illinois
9 will be making the allowance allocations to our units for 2006.
10 Those units will be out there. They will be described and
11 sources will know how many they have. They may trade them in the
12 meantime, but they may not use them until 2006 first. They may
13 use them in anytime after 2006.

14 USEPA will establish serial numbers that go for each
15 allowance and the serial numbers will indicate the year for which
16 the allowances may be used. The allowances have an unlimited

17 life, which is different from our Emissions Reduction Market
18 System, for example. So once an allowance is issued until it is
19 retired, it is out there and may be used. But once it is used,
20 it is retired. So an allowance may be used only once.

21 Flow control is the mechanism that USEPA has included in
22 the model rule to address this unlimited lifetime that allowances
23 are given. Flow control is triggered when the total number of
24 allowances that are banked, in other words, these are the ones

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1 that are not eligible yet to be used and the ones that are not
2 going to be used in a given control year. So they are vintage
3 allowances, they are old allowances. When the total number of
4 allowances that are banked exceeds ten percent of the total
5 number of allowances that may be allocated across the entire
6 trading system in a year, then flow control is triggered.

7 USEPA will do its math and it will determine the ratio of
8 the banked allowances that exceeds the ten percent and then apply
9 that to each unit's bank account. For example, if we are in 2006
10 and flow control has been triggered, all of the allowances that
11 we have issued to -- or allocated to our units in 2006 may be
12 used with no question. Those could be used at a one-for-one
13 ratio.

14 Those in their banks, the vintage allowances that they have
15 not used in the past, but that are still viable allowances, that
16 up to the ratio of the banked allowances exceeding ten percent

17 may also be withdrawn on a one-for-one basis. Those beyond that
18 may be withdrawn only on a two-for-one basis. USEPA will figure
19 this out, but it does affect planning and it does affect how you
20 decide which allowances or how a unit might decide which
21 allowances it wants to use first.

22 USEPA will use what is called the first-in-first-out method
23 of withdrawing allowances from sources banks. So the oldest
24 allowances are the ones that it would withdraw first for

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1 compliance purposes or whatever. However, an account
2 representative can designate to USEPA that it wants a specific
3 allowance withdrawn. So if for some reason it is 2006 and there
4 is an allowance -- and the source has an allowance that is a 2006
5 vintage, but it also has some 2004 vintage allowances, USEPA
6 would normally first use the 2004 vintage allowance before it
7 would take out the 2006 allowance. The account representative
8 can say, no, I want you to take the 2006 allowance first. So
9 account representatives can designate which ones are to go. If
10 they do not, then USEPA will take the oldest ones first.

11 One other thing about flow control. In the model rule flow
12 control is supposed to start in 2004, which is the second year of
13 the program. At the same time or at a time very close to when
14 USEPA adopted the model rule in 1998, it also made findings under
15 Section 126 of the Clean Air Act in response to a number of

16 petitions that were filed by states because they were -- well,
17 for various reasons. But these petitions were filed in
18 connection with this same program that we are dealing with now.

19 In January of 2000, USEPA amended Part 97, which is the
20 federal -- if USEPA implements the trading program, that is the
21 program that they will implement, which is codified at Part 97 of
22 40 CFR. In these amendments in January of 2000 they indicate
23 that flow control will not start until 2005, the second year of
24 the program. And it is not clear -- they did not amend Part 96

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1 so the assumption is that flow control still starts in 2004 under
2 Part 96.

3 (The witness placing new slide on projector.)

4 MS. BASSI: Eligibility for allowances. In our proposed
5 rule, we have relied on heat input and emissions rate to
6 determine a unit's eligibility to receive allowances.
7 Determination of the heat input is consistent with 40 CFR, Part
8 75. This is provided for in our rule at Section 217.762 (b).
9 And we have adopted what we call a modified FIP approach, which
10 is what I described here in the second red dot under heat input.

11 In the modified FIP approach, we will average the two
12 highest years of the three years prior to the year in which we
13 make the allocations to determine what the allowances will be.
14 USEPA relied only on the year's operation in the year prior to
15 the year in which it made the allowances. An example helps a

16 whole lot. If we are going to issue allowances for 2008, we
17 would make those allocations in 2005. Under our scenario what we
18 would do is look back to the unit's operations in 2004, 2003 and
19 2002. Whichever of those two years between 2002 and 2004, that
20 the unit operated the most or had the highest heat input, we
21 would take the two highest and average them, and that would be
22 the basis for -- that would be the heat input that we would apply
23 to determine eligibility for allowances.

24 I am not sure why we call it the modified FIP anymore, but

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1 we do. This is an approach that USEPA incidentally adopted in
2 these amendments to Part 97. So we must have included it in
3 comments and they liked them. One of the reasons why we did this
4 is because operations at a unit are not necessarily the same from
5 year-to-year. What this does is helps to even out those
6 operations. If a unit happened to have some kind of a
7 malfunction or it shut down or it was a cold summer, or any
8 number of reasons why the unit might not have operated to its
9 more normal capacity, what this does is not penalize the unit for
10 that. It also, then, helps to put all of the units that are
11 subject to this rulemaking on a more level playing field in that
12 sense.

13 For the Appendix F EGUs, they will have the allowances that
14 are listed in Appendix F in 2003, 2004 and 2005. And then also

15 we have listed what part of their allowance allocation will be in
16 2006 through 2009. There are columns that I can't tell you the
17 names of at the moment, but there are columns in Appendix F that
18 indicate what the actual allowance allocations to those units
19 will be in those years.

20 The flexible -- that's called the fixed portion of our
21 allowance allocation. The flexible portion of our allowance
22 allocation are based on heat input using the modified FIP plus
23 are applied to a rate of 0.15 pounds of NOx per million btu. So
24 what we do is multiply that average heat input times 0.15 pounds

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1 per million btu and divide by 2000 and we get a number of
2 allowances that the source or the unit would be eligible to
3 receive.

4 (The witness placing new slide on projector.)

5 MS. BASSI: All other EGUs, in other words, all those EGUs
6 that are not listed in Appendix F, will have -- will have a rate
7 applied to the heat input that is the more stringent of 0.15
8 pounds per million btu or its permitted rate, but never more
9 stringent than the rate of 0.055 pounds per million btu. We
10 established this floor for determining eligibility for allowances
11 because many of the newer sources that we have coming into this
12 program are subject to BACT or perhaps even LAER.

13 BACT is Best Available Control Technology, and it applies
14 for sources that are subject to the prevention of significant

15 deterioration program.

16 LAER means Lowest Available Emission Rate, which is
17 applicable to sources that are located in the Metro-East
18 nonattainment area that emit NOx. They are subject to New Source
19 Review.

20 What we have found that at least at this point in time when
21 a unit has BACT or LAER applied to it, it is really -- the
22 emission rate that -- its actual emission rate is going to be
23 very, very low. Because we have an oversubscription to our
24 budget cap, units will have to actually operate probably at a

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1 rate that is more stringent than is used to determine eligibility
2 for allowances. So even though we are applying a rate of 0.15,
3 it is probable that many units will be operating -- actually
4 operating at a rate that is more stringent than 0.15 in order to
5 comply.

6 By having the floor for these newer units in here, what it
7 does is it helps to prevent them from being -- when we issue the
8 allowances or when we allocate the allowances, we will end up
9 having to prorate them. We have more tons of NOx out there than
10 there are allowances available. So we will have to prorate the
11 allowances that we give out. What this does is provide a bit of
12 cushion or buffer for these new sources that have a very, very
13 low emission rate, and so that they will not have to operate at a

14 rate that is lower than what is actually in their permit or
15 perhaps won't have to. This provision is not included in the
16 model trading rule. The model trading rule determines all
17 allowances on a basis of 0.15.

18 (The witness placing new slide on projector.)

19 MS. BASSI: The model trading rule includes a new source
20 set-aside and so did we. The new source set aside is found in
21 Section 217.768. This is for -- a new source under this
22 particular program is one that commenced operation on or after
23 January 1st, 1995. Section 9.9 of the Environmental Protection
24 Act limits our new source set-aside to five percent of the total

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1 emissions budget for EGUs. So that means that all of the new
2 units or all of those units that commenced operation after -- or
3 on or after January 1st, 1995, will have allowances issued to
4 them only from this new source set-aside. Our emissions cap for
5 EGUs is 30,701 allowances or tons of NOx in the control period.
6 Five percent of that is I believe 1,535. It is right around
7 there. And this means that all of those new units, a decade's
8 worth by the end of 2005, of new units, must get their allowances
9 from -- any allowances they get from us will come from that 1,535
10 allowances that will be available for them every year. Of
11 course, they may go on the market to trade and buy them
12 elsewhere. But that is what would be issued by the state.

13 Beginning in 2006 we reduce the news source set-aside to

14 two percent of the total budget. The two percent was a number
15 that we arrived at after many meetings, based on the idea that
16 the decade -- the long decade is over from which sources have --
17 we have a whole -- there shouldn't be as many new sources at that
18 point in time. At least that was the thought at that time.

19 (The witness placing new slide on projector.)

20 MS. BASSI: Beginning in 2007 any allowances issued from
21 the new source set-aside that do not go to new sources will go
22 into the Agency's general account. And when we have accumulated
23 a number that is equal to three percent of the budget cap or the
24 capped allowances, then any allowances beyond that number that

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1 are not issued to new sources will be returned to the sources
2 from whom we took the new source set-aside. So in other words,
3 sources that are existing at that time or considered existing
4 sources at that time would have allowances returned to them if
5 there are any left over after having issued them to new sources.

6 One thing I don't have laid out really in the new source
7 set-aside part is how we would issue allowances to the new
8 sources. New sources would have to apply to the Agency each year
9 by March 1st for allowances from the new source set-aside. They
10 would have to demonstrate how many allowances they are eligible
11 for and then we would verify that and announce by April 1st how
12 many allowances we would issue to those new sources. The federal

13 rule -- I am sorry -- the model rule provides that a source, a
14 new source may apply for allowances and may tie them up into the
15 future.

16 Our rule is different from that. We are requiring new
17 sources to come in every year and reapply and then we will
18 prorate the number of -- we will prorate the allowances to these
19 new sources. We expect there to be an oversubscription to the
20 new source set-aside and that's one of the reasons why we
21 approached it this way. We felt that this was -- that everyone
22 who applied ought to get some allowances. They probably will not
23 get 100 percent of what they would like or what they might need,
24 but they will all get some allowances from us.

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1 Then under the model rule it is more like a
2 first-come-first-served basis, that they issue allowances from
3 the new source set-aside. So there could be some new sources who
4 would never be issued allowances by the state.

5 (The witness placing new slide on projector.)

6 MS. BASSI: Our allocation methodology some have described
7 as complex. This is in Section 217.764, and it is different from
8 how USEPA has included it in the model rule. We have taken what
9 we call a fixed flex approach. In 2003 and 2005 we have
10 set-aside five percent of the total budget for new units and the
11 balance goes to the sources that are listed in Appendix F or the
12 units that are listed in Appendix F. This is our 100 percent

13 fixed allowance allocation methodology. In 2006 we began the
14 fixed and the flexible portion of it. In 2006 and thereafter we
15 have set-aside two percent for new sources. The balance then
16 goes to sources that are considered existing at the time. New
17 sources will roll into the existing category four years after
18 they commence operation. So Appendix F units are considered
19 existing from day one, but new EGUs will start -- be considering
20 existing commencing in 2006.

21 To address this, what we have done in 2006 and 2007, 80
22 percent of the initial allocation to Appendix F units is given to
23 them -- and this is also listed in Appendix F, exactly what they
24 would be getting in those years.

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1 (The witness placing new slide on projector.)

2 MS. BASSI: In an effort to place these newer now existing
3 EGUs in the same position or as close to the same position as the
4 Appendix F EGUs, from the remaining 20 percent of the flexible
5 portion of the number of allowances that we have available, we
6 will either issue or prorate those allowances to the newer
7 existing, now existing EGUs, based on 80 percent of their heat
8 input. So we are giving 80 percent of the fixed allocation to
9 the Appendix F sources and 80 percent of the heat input or the
10 allowances based on heat input to the new existing EGUs. If
11 there is any left over after we have distributed that 80 percent,

12 then it will be prorated among all of the existing EGUs based on
13 heat input and the eligibility for allowances that I described
14 earlier. Okay. That's the flexible portion.

15 In 2008 and 2009 the fixed portion is 50 percent. So the
16 Appendix F units will be get 50 percent of their initial
17 allocation, which is also listed in Appendix F. The newer
18 existing units will have -- they will get the first allowances
19 out of the flexible portion of our total cap or total allowances.
20 And that will be based on half of their heat input during the
21 applicable years, and then the remainder will be prorated among
22 all of the existing EGUs based on their heat input.

23 In 2010 and thereafter, our allocations will be based
24 totally on heat input and the applicable emission rate applied,

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1 and then it is considered 100 percent flexible. And that's the
2 point in time when it reflects the model rule. USEPA went to the
3 totally based on heat input in 2003, and we waited until 2010 or
4 we are proposing to wait until 2010. One purpose of this was to
5 accommodate a kind of phasing. Early on in this whole process we
6 had advocated that phasing into this program would be
7 appropriate, and this is one attempt at phasing in.

8 (The witness placing new slide on projector.)

9 MS. BASSI: USEPA in the model rule -- actually, USEPA in
10 the SIP Call itself, at section -- at 40 CFR, Section 51.121 (e)
11 (3) provides for a Compliance Supplement Pool. The USEPA

12 developed this Compliance Supplement Pool to address potential
13 reliability issues that had been raised at the time the SIP Call
14 was being proposed and also to encourage early reductions. They
15 allowed -- the compliance supplement -- participation in the
16 Compliance Supplement Pool is one of those options that is for
17 the state to use and Illinois has opted -- or in our proposal we
18 are opting to use this.

19 If states do choose to use the Compliance Supplement Pool
20 then there are three options that the states may choose from to
21 do this. One is early reduction credits. One is going through a
22 public process to determine the need for compliance extension.
23 So if for some reason the unit felt it was not going to be able
24 to comply by 2003, it could go through a public process, say it

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1 needs these additional allowances issued to it to cover the
2 excess emissions that it might have during that period, or some
3 combination of the above. Our proposal relies only on early
4 reduction credits and does not rely on the public process at all
5 that is there.

6 (The witness placing new slide on projector.)
7 MS. BASSI: The total number of allowances that are
8 available across the entire SIP Call domain is 200,000. The
9 200,000 allowances may be used only in 2003 and 2004. But
10 remember that in 2004 under Part 96 flow control applies. So if

11 the total number of allowances that are banked in 2004 exceeds
12 ten percent of the allocations that may be made that yearly, I
13 believe absent the Compliance Supplement Pool that flow control
14 would apply.

15 Any allowances not used by the end of 2004 will be retired.
16 Any allowances not distributed under the Compliance Supplement
17 Pool by May 1st, 2003 will be retired. So this is a very limited
18 window for use of the Compliance Supplement Pool. The reductions
19 that -- under the model rule the reductions that are eligible for
20 real reduction credits must have occurred in 2000, 2001 or 2003.
21 However, the state must have its SIP approved before early
22 reduction credits will be considered valid by USEPA.

23 Since our SIP has not been approved prior to the 2000
24 control period, then early reductions that have occurred during

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1 this summer will not be eligible for early reduction credit. We
2 expect to have our -- we hope to have our SIP approved before the
3 beginning of the 2002 -- no, the 2001 control period. Therefore,
4 we expect applicability for early reduction credits to be in 2001
5 and in 2002.

6 (The witness placing new slide on projector.)

7 MS. BASSI: As I said, our proposal relies on early
8 reduction credit only that may be earned in 2001 or 2002. We
9 have proposed in Subpart W to reserve at least 15,261 of our
10 total number of allowances under the Compliance Supplement Pool

11 for EGUs. We have worded it in our proposal to say at least this
12 many will be available for EGUs. The reason why we have put it
13 this way, there are a number of -- I think 17,688 was the last
14 number of Compliance Supplement Pool allowances that may be
15 available to the Illinois sources. We reserved the last group of
16 them, the balance from the 15,261 for non EGUs. But those that
17 are not used by non EGUs would be available to the EGUs for use.
18 That is why it says at least.

19 The credits -- the early reduction credits will be earned
20 on the difference between 30 percent between -- I am sorry.
21 Excuse me.

22 The credits will be based on the difference between
23 achieving emissions that are 30 percent below applicable
24 requirements, and those applicable requirements would be

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1 permitted requirements or Clean Air Act requirements or whatever
2 applicable requirements there might be for a unit and what it
3 actually achieves. So, in other words, it would have to achieve
4 a rate that was at least 30 percent below to barely qualify to
5 earn early reduction credits, and then would have to go below
6 that, and it is the difference between that 30 percent and the
7 actual emissions.

8 Not more than 7,630 of the early reduction credits will be
9 distributed for reductions that are made in 2001, and we will

10 distribute those pro rata if necessary. The balance will be
11 distributed in 2002. And if there are early reduction credits
12 that are not used in 2001, those will also carry over to 2002.
13 We will announce to a source or to a unit the number of
14 compliance -- early reduction credits that it will get by the
15 next ozone season so that it knows.

16 (The witness placing new slide on projector.)

17 MS. BASSI: We provide in there by when they must apply and
18 by when we will make the announcement of how many allowances that
19 they are getting or that we would give them.

20 (The witness placing new slide on projector.)

21 MS. BASSI: The last portion of my testimony goes into some
22 detail into the incorporations by reference. This has not really
23 been laid out anywhere in our testimony I think before. There
24 have been some questions about this. We have incorporation -- we

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1 have proposed incorporation by reference of Subpart D, which
2 covers compliance certification. Units are to certify -- the
3 account representative for units are to certify compliance by
4 November 30th of each year. They may identify the serial numbers
5 of allowances that are to be deducted for compliance. And the
6 certification that they must make must be based merely on
7 reasonable inquiry.

8 Subpart G is also proposed to be incorporated by reference,
9 and it covers allowance transfers. These are the mechanics of

10 directing USEPA to transfer allowances and it tells how the USEPA
11 will act, how it will record those allowances and
12 first-in-first-out and so forth.

13 (The witness placing new slide on projector.)

14 MS. BASSI: We propose to incorporate Subpart H and Part
15 96. Subpart H covers monitoring and reporting. It requires
16 compliance with 40 CFR, Part 75, Subpart H. It requires
17 monitoring mass NOx emissions, requires compliance with
18 monitoring requirements by May 1, 2002. We have not specifically
19 noted the date of May 1, 2002 in our proposal. It is included in
20 this incorporation by reference. And basically our thought was
21 that all of the EGUs that are subject to Subpart W are complying
22 with Part 75 already.

23 It requires obtaining approval from USEPA and Illinois EPA
24 prior to relying on any kind of an alternative monitoring system.

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1 Part 75 does provide for alternatives and there is a process that
2 sources may go through in order to have -- to avail some
3 alternative monitoring system as a petition to USEPA. It also
4 requires substitution for missing data, as provided in Part 75.

5 (The witness placing new slide on projector.)

6 MS. BASSI: We also have proposed to incorporate specific
7 sections of Part 96 by reference. In some instances we have
8 repeated portions of those sections in our proposal as well.

9 Section 96.1 covers the purpose of the federal NOx trading
10 program.

11 Section 96.2 contains definitions and we have included some
12 of those definitions specifically in our proposal. For example,
13 a control period is defined in 96.2 and we have also proposed
14 that for inclusion in Part 211.

15 Section 96.3 contains measurements, abbreviations, acronyms
16 and some of those are also specifically included in our proposal.

17 (The witness placing new slide on projector.)

18 MS. BASSI: Section 96.5 is the retired unit exemption.
19 Units that are permanently retired that are budget units are not
20 subject to the requirements of the proposal. Once they are
21 permanently retired they cannot receive allowance allocations
22 either.

23 Section 96.6 includes standard requirements that we have
24 included I believe in Section 217.756, so this one we have

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1 included for the purpose of completeness to make our rules sound
2 a little more complete. Yet we have also incorporated this
3 section by reference. What we have proposed is consistent with
4 what we have proposed to incorporate by reference.

5 (The witness placing new slide on projector.)

6 MS. BASSI: Section 96.7 addresses the computation of time.
7 96.50 addresses the NOx allowance tracking system accounts. This
8 is the one that describes the nature and function of the

9 compliance overdraft and general accounts. It tells who may have
10 them and what you have to do with them.

11 Section 96.51 requires that account representatives
12 establish these accounts and also provides how someone could
13 establish a general account.

14 96.52 covers the responsibility of the NOx tracking system
15 account representative. In other words, there are a number of
16 things that an account representative must do and they are
17 spelled out in this particular section in the Federal Register or
18 in the CFR.

19 (The witness placing new slide on projector.)

20 MS. BASSI: Section 96.53 addresses how USEPA will record
21 allowances. Again, this is the first-in-first-out, unless the
22 account representative specifies the serial number.

23 Section 96.54 covers compliance, including for excess
24 emissions. Excess emissions are those -- that's the term that

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1 the model rule uses for those emissions that a unit may have that
2 go beyond what USEPA can withdraw from the unit's compliance or
3 overdraft account. If there are excess emissions, then USEPA
4 will withdraw three times the number of allowance for each excess
5 emission -- each ton of excess emission that there are in future
6 year allowances. So if you have -- if you are short the number
7 of allowances in your account by the end of the reconciliation

8 by, say, ten allowances, the USEPA will take 30 from future
9 allowances.

10 Section 96.55 (a) covers banking and 96.55 (b) covers flow
11 control.

12 (The witness placing new slide on projector.)

13 MS. BASSI: And this is my last one here. Section 96.56
14 addresses account error. If USEPA discovers there has been an
15 error in an account on its sole discretion it can correct that
16 error. It will notify the account representative of the unit, I
17 believe, within ten days or so of the correction that it has
18 made.

19 Also, and I don't have the section written down. There is
20 a section in there that allows account representatives to also
21 address USEPA if they believe there have been errors. So it is
22 kind of like the appeal process that exists.

23 Section 96.57 allows for the closing of general accounts
24 and then we also propose to incorporate by reference 40 CFR, Part

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1 72, 75 and 76 that address monitoring and the calculation of mass
2 NOx emission.

3 That's all I have.

4 HEARING OFFICER GLENN: Thank you, Ms. Bassi. Did you want
5 it admit her outline at all?

6 MS. KROACK: If you would like.

7 HEARING OFFICER GLENN: Okay. Why don't we, just for

8 consistency.

9 MS. KROACK: Sure. I will submit a copy of the overheads
10 into the record. Thank you.

11 HEARING OFFICER GLENN: We will admit a copy of Ms. Bassi's
12 outline as Exhibit 26

13 (Whereupon said document was duly marked for purposes of
14 identification as Hearing Exhibit 26 and admitted into
15 evidence as of this date.)

16 HEARING OFFICER GLENN: Okay. Ms. Kroack, who do you have
17 next?

18 MS. KROACK: Richard Forbes.

19 HEARING OFFICER GLENN: All right. Thank you. Mr. Forbes,
20 I will go ahead and admit your prefiled testimony as Exhibit
21 Number 27.

22 (Whereupon said document was duly marked for purposes of
23 identification as Hearing Exhibit 27 and admitted into
24 evidence as of this date.)

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1 HEARING OFFICER GLENN: You may begin.

2 MR. FORBES: Good afternoon. My name is Richard Forbes. I
3 am the Manager of the Ozone Regulatory Unit in the Air Quality
4 Planning Section, the Bureau of Air. I have worked for the
5 Agency for some 28 years. I have been in the Air Program for
6 about 20 years.

7 In my testimony today, I am going to add just a little bit
8 more to what I have prefiled. I am going to talk a little bit
9 about NOx emissions budgets to clarify a couple of points that we
10 have been asked on several occasions. So we thought it would be
11 well to maybe address those couple of points in the testimony.

12 (The witness placing new slide on projector.)

13 MR. FORBES: The USEPA has based their NOx control plan on
14 establishing base wide or state-wide emission budgets for each of
15 the 23 jurisdictions in the NOx SIP Call domain. Generally the
16 concept is to establish a current base year emission level and
17 then project base year emissions to 2007, incorporating all
18 currently existing control programs, such as Acid Rain or NOx
19 RACT. This defines the 2007 base NOx emissions level. The NOx
20 SIP Call controls are then applied to the 2007 base NOx emission
21 to define the 2007 budget NOx emissions, which are regulated
22 within the NOx SIP Call itself.

23 (The witness placing new slide on projector.)

24 MR. FORBES: Initially USEPA relied on the OTAG inventory

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1 to develop their NOx SIP Call emission budgets. Initially the
2 base year was 1990, and USEPA relied on OTAG growth factors to
3 project the 1990 emissions to 2007 base emissions. The budgets
4 covered all source categories within the state and these
5 categories included stationary source EGUs, stationary source non
6 EGUs, area sources, and on-road and off-road mobile sources.

7 (The witness placing new slide on projector.)

8 MR. FORBES: During the last several years USEPA has
9 solicited input on the inventory that is used to develop the
10 emissions budgets through a number of comment periods. Beginning
11 with the NOx SIP Call notice of proposed rulemaking on November
12 7th, 1997, USEPA offered comment periods resulting in revised
13 budgets on May 11th, 1998; October 27th, 1999; May 14th, 1999;
14 and March 2nd, 2000.

15 Illinois EPA staff have reviewed each USEPA inventory and
16 budget and provided a substantial number of comments to the USEPA
17 on the Illinois inventory, including comments being filed on
18 March 9th, 1998; January 2nd, 1999; February 19th, 1999; March
19 23rd, 1999, and September 23rd, 1999. Illinois EPA also worked
20 with individual sources to obtain the relevant data, assisted
21 them in reviewing the information and identifying any inventory
22 corrections that were needed. The majority of comments made by
23 Illinois EPA were incorporated into the USEPA final inventory.

24 (The witness placing new slide on projector.)

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1 MR. FORBES: After evaluating all of the inventory comments
2 and making inventory revisions, the USEPA completed its final NOx
3 emissions budget and published it in the Federal Register on
4 March 2nd, 2000. The final USEPA emissions budget is based on a
5 base year of 1996 for EGUs, and 1995 for all other source

6 categories. The NOx SIP Call controls apply to large EGUs, large
7 non EGUs, large cement kilns and large I.C. Engines, although
8 this source category was remanded by a Federal Appeals Court back
9 to the USEPA for reconsideration. The control level for large
10 EGUs is 0.15 pounds per million btu. For non EGUs it is a 60
11 percent reduction in NOx emissions. For cement kilns it is a 30
12 percent reduction in NOx emissions. For I.C. Engines the
13 pre-remanded control was a 90 percent reduction in NOx emissions.

14 (The witness placing new slide on projector.)

15 MR. FORBES: The USEPA calculation procedure is represented
16 by these equations. That is the equations that are shown on this
17 slide, which is entitled NOx SIP Call Budget, continued. The
18 large EGU budget is determined by growing the 1996 seasonal heat
19 input to 2007 seasonal heat input using USEPA's IPM or Integrated
20 Planning Model growth rate for Illinois, which is eight percent,
21 then multiplying that heat input by the control level of 0.15
22 pounds per million btu and dividing by the conversion factor of
23 2000 pounds per ton to obtain the budget emissions and tons per
24 control period for each EGU.

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1 For large non EGUs, cement kilns, and I.C. Engines, the
2 calculation procedure is to multiply the 1995 seasonal emissions
3 by the 1995 to 2007 growth factor, then multiply by the quantity
4 of one minus the control level. All other source budgets are
5 based on taking the 1995 seasonal NOx emissions and multiplying

6 them by their 1995 to 2007 growth factor to obtain the 2007 base
7 and budget emissions.

8 (The witness placing new slide on projector.)

9 MR. FORBES: The final state-wide USEPA 2007 budget
10 emissions for Illinois, as contained in their technical amendment
11 of March 2nd, 2000, which is published at 65 Federal Register
12 11222, is summarized in this table. The total state-wide budget
13 emissions are 270,560 tons. The specific budget for the EGUs is
14 32,372 tons, with the budget for the large EGUs subject to this
15 rulemaking in 30,701 tons.

16 In particular, we have had a number of people ask us about
17 the 30,701 number. They can find 32,372 printed in the Federal
18 Register but nowhere can you find 30,701. Again, that represents
19 the budget emissions for large EGUs using the procedure I have
20 just described. We obtained a file actually from the USEPA staff
21 that identified the large and the small EGUs in this category,
22 and we did check, in fact, to be sure that their calculations
23 were correct, and they are. We agreed with the 30,701 tons as
24 being the budget represented by the EPA calculation procedure.

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1 So we wanted to clarify that because many people could not find
2 that, the large EGU budget number. And hopefully this clarifies
3 where that came from.

4 Then the remaining sectors are, as I said, the budgets for

5 each individual category as printed in that final Federal
6 Register of March 2nd.

7 That concludes my testimony.

8 HEARING OFFICER GLENN: Thank you, Mr. Forbes.

9 MS. KROACK: I would like to submit a copy of the overheads
10 into the record.

11 HEARING OFFICER GLENN: A copy of the overheads used by Mr.
12 Forbes will be admitted as Exhibit Number 28.

13 (Whereupon said document was duly marked for purposes of
14 identification as Hearing Exhibit 28 and admitted into
15 evidence as of this date.)

16 HEARING OFFICER GLENN: Let's go off the record for just a
17 moment, please.

18 (Discussion off the record.)

19 HEARING OFFICER GLENN: We would like to take a five minute
20 break here and reconvene at about 4:22. And then at that time we
21 will open the floor up to questions of the Agency by members of
22 the audience. We would like to limit today's questions to those
23 of you who will not be able to attend the hearing tomorrow. I
24 know some people have flight plans and things like that. So if

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1 the people that ask questions today could only be the people that
2 will not be here tomorrow, we would really appreciate it. We
3 will reconvene at 4:22. Thank you.

4 (Whereupon a short recess was taken.)

5 HEARING OFFICER GLENN: All right. We are back on the
6 record.

7 What we would like to do is start with questions from
8 people who will not be able to be here tomorrow. Incidentally,
9 we will be starting tomorrow at 9:00 in this room.

10 So is there anyone here that needs to testify and leave?
11 Or excuse me. Needs to ask questions and leave? Oh, boy.
12 Everyone is going to be here tomorrow. Great. Okay. Let's open
13 it up then to everybody.

14 What we could like to do is if you have questions, please
15 raise your hand and I will acknowledge you and then if you will
16 step up to the podium state your name and who you represent, if
17 anyone, and then you can ask your questions.

18 All right. Who would like to start?

19 MR. RIESER: I will.

20 HEARING OFFICER GLENN: Okay. Mr. Rieser, thank you.

21 MR. RIESER: I have a whole series of questions so is the
22 best way to do this is just to let me keep going until --

23 HEARING OFFICER GLENN: Yes, and we will interject if we
24 would like to ask a follow-up, if that is all right.

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1 MR. RIESER: All right.

2 HEARING OFFICER GLENN: Then, if you would, just for the
3 record state your name, please.

4 MR. RIESER: Thank you. My name is David Rieser, from the
5 law firm of Ross & Hardies. I am here on behalf of Ameren.

6 I guess I have general questions first and then more
7 specific ones as we go along. The first question I think goes to
8 Mr. Lawler. I assume the Agency will answer as a panel and the
9 person to whom is best to address.

10 I think the first question goes to Mr. Lawler. Based on
11 your testimony and Mr. Kaleel's testimony, I think I could
12 summarize it simply which is that this proposal is intended to do
13 three things, as you testified, address the attainment strategies
14 for the Metro-East and for Lake Michigan and to meet the NOx SIP
15 Call, correct?

16 MR. LAWLER: That's correct.

17 MR. RIESER: If it were not for the NOx SIP Call, would the
18 standard that you applied be the 0.15 standard or would it,
19 instead, be the 0.25 if all you were trying to do is meet the
20 attainment demonstrations for Lake Michigan and Metro-East?

21 MR. LAWLER: For the Metro-East, the 0.25 pounds per
22 million btu limit is good, and so that is what we would be
23 proposing for the Metro-East.

24 For Chicago, I think that Rob mentioned in his testimony,

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1 the 0.25 right now is very close. And we are not in a position
2 where we have to make that decision right now. So given where
3 the modeling is, I don't know whether we would go with a 0.25 or

4 not for Metro-East. But since we need the NOx SIP Call anyway,
5 it says we need a .15 limit or the equivalent of a .15 limit.

6 MR. RIESER: Okay. Has Illinois evaluated whether the 0.25
7 standard would also be appropriate for protection of transport
8 issues, again, absent the NOx SIP Call.

9 MR. LAWLER: Can I get a clarification? Are you asking
10 have we done that?

11 MR. RIESER: Yes.

12 MR. LAWLER: We have not done a modeling analysis ourselves
13 to look at what our modeling would show. We contribute for
14 transport to some of the eastern states. EPA had done some of
15 that work in the SIP Call work analysis that they did, but we
16 haven't.

17 MR. RIESER: Has the State of Illinois -- the Illinois EPA,
18 I should say, independently evaluated the cost of achieving the
19 0.25 standard as opposed to the cost of achieving the 0.15
20 standard?

21 MR. FORBES: No, as far as I know we have not evaluated
22 that alternative.

23 MS. KROACK: Mr. Forbes, to be clear, you mean the 0.25
24 pounds per million btu?

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1 MR. FORBES: That's correct.

2 MR. RIESER: So you don't have -- there is no information

3 that you have to present to the Board about the incremental cost
4 difference between those two standards; is that correct?

5 MR. FORBES: There is no cost information that we have done
6 ourselves. I think EPA -- I recall seeing different incremental
7 control levels and cost information as provided as part of the
8 SIP Call.

9 MR. RIESER: I believe in your testimony, Mr. Forbes, you
10 had a cost figure, a cost per ton figure of about \$1,500.00 per
11 ton; is that correct?

12 MR. FORBES: Right. I think that was our estimate.

13 MR. RIESER: Okay. That's for the cost of achieving the
14 0.15 standard?

15 MR. FORBES: Yes.

16 MR. RIESER: Okay. On what is that based?

17 MR. FORBES: Well, it is based on a number of different
18 factors, looking at what was available, and we have control
19 equipment, trying to estimate who would be buyers, who would be
20 sellers. We included trading as an option and trying to make
21 estimates the best we could as to what the cost to comply with
22 the .15 level would be.

23 MR. RIESER: What were the universal sources that you
24 considered in arriving at that estimate?

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1 MR. FORBES: Well, we considered the Illinois utilities,
2 EGUs, large EGUs that we believe would be controlled by the NOx

3 SIP Call.

4 MR. RIESER: Did those include both the existing EGUs and
5 your projection of new EGUs?

6 MR. FORBES: I believe it only included those existing EGU
7 units at the time that we did the analysis.

8 MR. RIESER: It is correct, isn't it, that the USEPA
9 provided an estimate of what it considered to be a highly
10 cost-effective control strategy in its NOx SIP Call and on that
11 basis -- that was one of the basis on which you justified the
12 0.15 number; is that correct?

13 MR. FORBES: Yes.

14 MR. RIESER: Are you aware whether Illinois costs, based on
15 low -- I am sorry. That number was based on an evaluation of all
16 of the units, EGUs in the groups of states that were subject to
17 the SIP Call?

18 MR. FORBES: Correct.

19 MR. RIESER: Are you aware whether the Illinois costs are
20 higher or lower than those projected by the USEPA?

21 MR. FORBES: Offhand I don't remember what those --
22 specifically if the Illinois costs were higher than the costs
23 that the USEPA utilized involving units that they considered. I
24 think by the end result the cost effectiveness values were very

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1 similar, so I am sure they would be in the same range, but they

2 probably would not be identical.

3 MR. RIESER: You testified right at the end on the budget,
4 the way the Illinois budget was derived. It is accurate, isn't
5 it, that the USEPA's evaluation for budgets for each of the
6 states is also being challenged in the DC Circuit Court of
7 Appeals; is that correct?

8 MS. KROACK: I am sorry. Mr. Rieser, are you asking him to
9 comment on what is included in the court case?

10 MR. RIESER: Well, I am asking specifically whether the
11 USEPA's number is -- on budgets, on which the Illinois number is
12 based, is being challenged.

13 MS. KROACK: In which case?

14 MR. RIESER: The case that is in the DC Circuit Court of
15 Appeals. It is up for decision in September or October.

16 MS. KROACK: I am just going to have interject here,
17 because I am not sure which case you are referring to. What we
18 call the NOx SIP Call case, and I don't have the site in front of
19 me, but I can get it in a moment. Michigan versus EPA.

20 MR. RIESER: It is the Appalachia Power versus USEPA that
21 deals directly with the budget issue.

22 MS. KROACK: I don't really think that this would be
23 appropriate for Mr. Forbes to answer. I am sorry. He is not
24 completely aware of what is in that case or what the

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1 ramifications of it are.

2 MR. RIESER: Is there any provision in the regulation -- I
3 will throw it out generally -- if the budget numbers changed as a
4 result of the court case for modifying the numbers that are in
5 the regulation?

6 MS. BASSI: Yes, there is a provision for that.

7 MR. RIESER: Okay. How would that work?

8 MS. BASSI: What we have -- we have based the proposal on
9 the 30,701 allowances that are available for this sector right
10 now. And in there we have -- and I can't tell you exactly where
11 it is in the proposal at this moment. But the proposal allows
12 for the budget to be reduced or to be increased by a number of
13 factors. And the budget could be reduced or increased by opting
14 in, by opting out, or by some change in the federal -- in the
15 federal requirements. And I now have a site. This is at 217.760
16 (c). It says, if the USEPA adjusts the total base EGU trading
17 budget for any reason, the Agency will adjust the budget pro
18 rata.

19 MR. RIESER: If that happens, and you have just described
20 the Agency adjustment, would that be a subject of another
21 proposed rule to the Pollution Control Board or what would be the
22 procedure for notifying people of the fact of that change and
23 allowing any comment, if necessary?

24 MS. BASSI: I believe that this Subsection 760 (c) allows

1 us to do that adjustment on a pro rata basis. Many of the things
2 that we will be doing under this rule are pro rata. Our purpose
3 or our intent with Section 217.760 (c) was that we not have to
4 come back to the Board to make that adjustment. As you know,
5 rulemakings take time and to interpret this subsection to allow
6 us to do this just, you know, under the authority that is granted
7 here, would be much more -- much quicker and much more beneficial
8 to the units than would the -- the end.

9 MR. RIESER: What process would you use to advise the units
10 of the end, that this change was occurring?

11 MS. BASSI: We have not developed a specific process. That
12 would be an Agency process and, if necessary, my assumption is we
13 would do Agency rules that would address how that would be done.
14 As it is, units can be -- allowances can be issued only in
15 wholes, you know, a whole allowance, not fractions of an
16 allowance. And we do apply the normal rounding conventions in
17 here. So at some point -- I mean, absent an Agency rule that
18 would be very specific and say that we apply rounding and so
19 forth, that is what we would do. It would be pro rata.

20 MR. RIESER: You would envision some process where either
21 through the Illinois Register or some type of state-wide
22 publication you would publish these changes so that sources and
23 anyone else involved in the process would have notice of these
24 changes on a state-wide same time basis?

1 MS. BASSI: That's a possibility. It is not something that
2 we have addressed or proposed yet. There are many, you know,
3 potential ways to do this, other than through the Illinois
4 Register, as well.

5 MR. RIESER: Mr. Forbes, I am going to come back to you on
6 the issue of the budget. One of the things that are used -- that
7 was used by the United States EPA in calculating the budget was
8 something referred to as the growth factor, correct?

9 MR. FORBES: Right.

10 MR. RIESER: Is the growth factor that was used by the
11 USEPA consistent with the current conditions in the State of
12 Illinois for electrical generating capacity?

13 MR. FORBES: Well, I will answer that question this way.
14 The EPA had a very complicated economic model that it relied upon
15 to predict the outcome of the deregulation of the electric
16 utility industry. I think everyone -- every state agency and
17 every source had comments and feelings regarding the assumptions
18 and methodology that they used to run their model. We commented
19 feeling that eight percent was low. We provided our comments to
20 the -- the Illinois EPA provided its comments to the USEPA. The
21 EPA considered all of the comments and in conclusion stayed with
22 their original set of assumptions.

23 I think the way they described it, they believed that that
24 represented all of the balance of the changes that they expected

1 to occur in the utility industry, including growth as well as
2 shutdowns and other things affected by deregulation. It appears
3 that to us, I guess, at this point that eight percent was low and
4 probably still is low in our minds. However, that is the final
5 growth rate that was allowed by USEPA for their budget
6 compilations and stayed with that.

7 MR. RIESER: Okay. Isn't it accurate that the current
8 capacity presently in Illinois exceeds the USEPA's predictions
9 for 2007?

10 MR. FORBES: I don't really know what those numbers are. I
11 think we could, you know, answer that in comments. But I don't
12 have that information at this point to be able to answer that.

13 MR. RIESER: Thank you. Maybe this is a follow-up to Ms.
14 Bassi's discussion on the budget numbers if there is a change in
15 those budget numbers in the future. But what happens if
16 implementation of the entire SIP Call is delayed either because
17 it is overturned at the federal level or the other states around
18 Illinois don't adopt their SIPs? What happens then?

19 MS. BASSI: Both in Section 9.9 of the Act and then quoted
20 in our proposal is a provision that requires that the other
21 states in region five that are subject to the SIP Call and our
22 neighbors, that would be Missouri and Kentucky, who are subject
23 to the SIP Call, have approved SIPs or have FIPS acted upon by
24 USEPA by May 1, 2003, before the rule would be implemented in

1 Illinois or compliance would be required in Illinois.

2 If those -- if any of those conditions should occur after
3 May 1st of 2003, then the rule would not be implemented in
4 Illinois until the following -- until the calendar year following
5 when those conditions had been met. That's one of the reasons
6 why in the rule, for example, in the allocation methodology
7 section, we have what happens in 2006, what happens in 2007, and
8 then in parenthesis I believe after that we have, or the fourth
9 year of the program, or the fifth year, or so forth. So the
10 whole thing would slide to those years. We believe that the
11 rule, as proposed, addresses that slide. It might be a little
12 more complicated to figure it out, but it is there.

13 MR. RIESER: How will --

14 MS. KROACK: Just one moment. Ms. Bassi, when you said the
15 states that are our neighbors that are affected by the NOx SIP
16 Call, you said Missouri --

17 MS. BASSI: And Kentucky.

18 MS. KROACK: -- and Kentucky. Do you mean Indiana and
19 Kentucky?

20 MS. BASSI: No. Indiana is part of Region 5. Those states
21 that are in Region 5 that affected by the SIP Call plus our
22 neighbors, which would be Kentucky and Missouri and are affected
23 by the SIP Call.

24 MS. KROACK: But Missouri is not currently affected by the

1 SIP Call.

2 MS. BASSI: Oh, that is true. Missouri has been remanded.
3 I am sorry. I thought you were aiming at Kentucky. I was
4 confused.

5 MR. RIESER: How will sources in the general public know
6 the changes and the dates they are occurring?

7 MS. BASSI: Sources in the general public?

8 MR. RIESER: I mean how will people know that these dates
9 that are being set in this regulation are changing? Again, what
10 will be the process for advising people that there is going to be
11 a change in these compliance dates?

12 MS. BASSI: I am not sure that the general public is going
13 to know or follows this anyway. The regulated public certainly
14 follows it and they are going to know. A formal process, if
15 necessary, could be addressed in an Agency rule. I am not sure
16 that a formal process would be necessary in this particular
17 instance because these are all going to be the subject of formal
18 publications by USEPA and the Federal Register. The Federal
19 Register has, you know, as much standing with the general public
20 or the regulated public as the Illinois Register.

21 MR. RIESER: You talked a little bit about, Ms. Bassi, in
22 your testimony about the permit process, and you described, to
23 some extent, how the permit process would work. It is accurate
24 that the NOx emission permit, if you will, will be a portion of

1 the permit that a source already has; is that correct.

2 MS. BASSI: That's correct.

3 MR. RIESER: Okay. Is there language in the regulation,
4 the proposed regulation, that says that specifically?

5 MS. BASSI: No, I don't believe that there is language that
6 says that specifically. I believe we have addressed that in a
7 couple of other nonregulatory hearings.

8 MR. RIESER: Would it be accurate to say also that the
9 portion of the permit that constituted the NOx emission permit is
10 subject to all of the same procedural requirements and procedural
11 limitations of the permit to which it is attached?

12 MS. BASSI: Yes.

13 MR. RIESER: Would, for example, if a source had a Title 5
14 permit, would the application for the NOx permit that we talked
15 about in these proposed rules be a modification of that Title 5
16 permit?

17 MS BASSI: If the source were already issued a
18 Title 5 permit?

19 MR. RIESER: Either way. Well, yes, if the source was
20 issued a Title 5 permit.

21 MS. BASSI: I think technically it would be a modification.

22 MR. RIESER: Would you have to file the Title 5
23 modification procedures in order to obtain the NOx SIP permit?

24 MS. BASSI: I will let Chris answer that.

1 MR. ROMAINÉ: Yes.

2 MR. RIESER: If the source did not yet have a Title 5
3 permit, would this have to follow the revisions that the sources
4 are -- the procedures the sources are filing for revising their
5 application?

6 MR. ROMAINÉ: I believe so, but could you clarify what
7 particular aspects of those procedures you are sort of alluding
8 to?

9 MR. RIESER: Well, whatever procedures you are using for
10 when sources are revising the applications that are with the
11 Agency for Title 5 sources for which the permits have not been
12 issued.

13 MR. ROMAINÉ: I think the answer is yes. I would not
14 expect those to be particularly complex, given that the
15 provisions dealing with the NOx budget are self-standing. They
16 don't really tie into other requirements of the permit.

17 MR. RIESER: Thank you.

18 MS. BASSI: I would like to add to that. Even though there
19 might be a requirement to revise the application for a Title 5
20 permit, there is a requirement that they have an active permit
21 that requires compliance with Subpart W. So if the Title 5
22 permit had not yet been issued, even though it was a Title 5
23 source, I think there would need to be a FESOP issued to the
24 source that was active and operating, FESOP reflecting the

1 requirements of this program.

2 MR. RIESER: Okay. Thank you. With respect to
3 enforcement, there are several provisions in the rule that deal
4 with enforcement issues. Excuse me while I find the specific
5 language. I believe it is 754 (f). No, it is 756 (f). It is
6 756 (f)(5). It states the account representative of a budget EGU
7 that has excess emissions in any control period shall (a),
8 surrender the allowances as required for deduction under 40 CFR
9 Section 96.54 (e)(1) and (b), pay any fine, penalty or assessment
10 or comply with any other remedy imposed under 40 CFR 96.54 (d)(3)
11 and the Act. Do you see where I am?

12 MS. BASSI: Uh-huh.

13 MR. RIESER: Okay. My question is, does this mean that
14 when it says that the account representative shall pay any fine,
15 and that's a statement in the regulation and also I believe is
16 intended to be a condition in the permit, that they have no
17 ability to challenge any fine or that the other provisions of
18 enforcement under the Act don't apply?

19 MS. BASSI: No, this is -- what this is meant to do, is to
20 establish that there is an surrendering of allowances at a rate
21 of three-to-one, as I explained earlier. And that in addition,
22 any normal, in quotes, enforcement action must also -- could also
23 occur. If that does occur, then the surrendering of allowances
24 does not excuse the payment of a fine or penalty or whatever.

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1 MR. RIESER: Okay. So it is really more accurate to say
2 that that account representative is subject to any fine or
3 penalty imposed, but not that they have to pay it, correct?

4 MS. BASSI: Yes.

5 MR. RIESER: Now, when you say the account representative
6 shall pay any fine, is the account representative individually
7 liable for fines and penalties or is that something that goes
8 solely to the source?

9 MS. BASSI: I don't believe that the intention is that the
10 account representative, as an individual, human being, is
11 personally liable. But the model rule essentially is using the
12 account representative in the stead of or to stand for the
13 sources or the units that are subject to the program. The
14 account representative is the individual with whom the
15 administrators of the trading program or the state will have the
16 relationship with and it is being used in that more generic
17 sense.

18 MR. RIESER: So in this case the account representative is
19 literally the representative of the source and not individually
20 responsible except for, I assume, falsification or something that
21 that person actually does?

22 MS. BASSI: Right. He has to certify -- he or she has to
23 give certain certifications that, you know, whatever liability
24 attached with certifications that are made falsely would go to

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1 the individual as opposed to the source.

2 MR. RIESER: Focusing on the issue of surrendering of
3 allowances, if the NOx permit is incorporated into a larger
4 permit, say a Title 5 permit, would the surrender of allowances
5 constitute a permit modification?

6 MS. BASSI: This is -- the entire transactions involving
7 the issuance or the allocation of allowances and then the
8 surrendering of allowances, both for compliance purposes and for
9 excess emissions purposes is technically considered a
10 modification of the permit and our rules provide that this will
11 occur without further action. So we do not have to open up the
12 permit. It is just a function that the permit has provided for
13 and, therefore, each one is technically considered a change to
14 the permit.

15 The permit, though, unlike in our ERMS, the Emission
16 Reduction Market System, will not specify the number of
17 allowances that are being issued to a unit at any given time. In
18 the ERMS system I believe it says you will have -- you know, this
19 source will have this many allowances and it has the baseline and
20 then go from there. This will not say that or anything close to
21 that. So that is another reason why the condition in the permit
22 or this portion of the permit is considered to be modified but
23 not a physical reopening and public noticing every time this
24 occurs.

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1 MR. RIESER: So the permit itself won't specify a level of
2 allowed emissions?

3 MS. BASSI: The permit may include the traditional
4 emissions limitations or emissions rate or other limitations on
5 operation that occur outside of this program or outside of these
6 requirements. Those still apply to the unit. The budget permit
7 or the portion of the source's permit that is at -- that requires
8 compliance with this particular program will not specify an
9 emissions limit necessarily or a rate, an emissions rate. It
10 will simply require compliance with this program.

11 MR. RIESER: What will the permit permit the unit to do?

12 MS. BASSI: The permit will require the unit to have
13 allowances equal to the number of tons of NOx that it emits
14 during the control period, and then to surrender those. I assume
15 to surrender those allowances.

16 MR. RIESER: Then it would be accurate to say that it would
17 have -- it would allow the unit to emit the number of tons that
18 are allowed by this other process, this USEPA trading process
19 that is being set up by --

20 MS. BASSI: No, I don't think it would allow. Because what
21 this program does is require an allowance for each ton emitted.
22 Even though we have a cap of 30,701 tons, essentially, an
23 emissions cap, there is nothing to prevent units in Illinois from
24 purchasing allowances from units outside of Illinois, which means

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1 that the actual emissions in Illinois could be greater than that.
2 So when you say it allows them to do that, it allows them to
3 participate in the trading program. It does not necessarily
4 allow or disallow how many tons the unit emits, other than it
5 requires an allowance per ton emitted.

6 MR. RIESER: I assume the EPA -- that you all have not
7 written the language of what this permit will say or look like?

8 MS. BASSI: No.

9 MR. RIESER: Is that correct?

10 MS. BASSI: Yes, that is correct.

11 MR. RIESER: Okay. Thank you. It is going to get a little
12 less organized from here on because I took down some questions as
13 the testimony came out. With respect to the early reduction
14 credits, I believe the state is not going to advise the units of
15 how many credits that will be available until May of the control
16 period; is that correct?

17 MS. BASSI: That's what the rule provides, yes.

18 MR. RIESER: What is the basis for the May date when the
19 state will have the information as of November 30th of the year
20 before?

21 MS. BASSI: We will have to go through a process of
22 verifying the number of reductions that each account
23 representative has applied for. Then we will have to distribute

24 them, if there are not enough, on a prorated basis. There is

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1 a -- other than that, there is no reason. There is no particular
2 reason. Many other things will be occurring during this same
3 time period.

4 MR. RIESER: Isn't that same process of verifying, isn't
5 that what goes on during the month between the end of the control
6 period, September 30th, to the time from -- well, two months at
7 the time when the USEPA makes its decisions as to overall
8 allowances available?

9 MS. BASSI: Would you say that again, please.

10 MR. RIESER: Let me rephrase it. Does the USEPA do that
11 same task of verifying and then reassigning during a two month
12 period at the end of the control period?

13 MS. BASSI: Are you talking about reconciliation period?

14 MR. RIESER: Yes.

15 (Ms. Kroack and Ms. Bassi confer briefly.)

16 MS. BASSI: The USEPA is not assigning allowances. What it
17 is doing is checking math and then deducting allowances. What we
18 are doing is going through a process of verifying and then
19 issuing allocations, notifying not only the source but the USEPA.
20 It seems like there are some additional steps involved for us to
21 perform.

22 MR. RIESER: Okay.

23 MS. BASSI: But you are right, there is a two-month time

24 period -- actually, only a month during the reconciliation period

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1 for sources to comply.

2 MR. RIESER: Again, I am going to be skipping around. For
3 the opt-out, through the opt-out provision of 754, and
4 specifically 754 (c)(4), when a low emitter opts-out, then its
5 allowances disappear out of the budget; is that correct?

6 MS. BASSI: What happens is the budget -- if the low
7 emitter that is opting out has ever been issued allowances by the
8 state, then the number of tons that it takes in its cap, in the
9 FESOP that allows it to opt-out, must be deducted from our
10 emissions budget.

11 MR. RIESER: And why is that?

12 MS. BASSI: Because I -- because this is what is in the
13 model rule. And I think the rationale behind that is because
14 these are -- these are sources or units that had been included in
15 the baseline and, therefore, they are being counted for in that
16 way. They were assumed to be large units that would be
17 contributing or emitting underneath the cap, so they reduced that
18 from the cap. Whereas with new units, if a new unit has never
19 been -- or a unit that has never received allowances from the
20 Agency takes that low emitter status then it is considered a
21 small EGU from the beginning.

22 MR. RIESER: Let's assume that this unit that is opting out

23 had, say, 32 tons of allowances and they opt-out and they are
24 going to 25. So do the seven allowances -- 25 tons. What

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1 happens to the seven tons of allowances that they had?

2 MS. BASSI: They stay in the budget, and so -- remember
3 also that our budget is a floating -- I want to say a floating
4 budget. It is a budget that is being constantly redivided. At
5 the time that those particular -- if the unit was issued
6 allowances for 2006 and it opted out in 2005, then I would assume
7 that those seven allowances remain with the account
8 representative in, say, a general account or an overdraft
9 account.

10 MR. RIESER: Okay. If a unit opts in -- conversely, if a
11 unit opts in, where do the allowances for that unit come from.

12 MS. BASSI: The allowances for that unit are made up.

13 (Laughter.)

14 MR. RIESER: Where do the --

15 MS. BASSI: The units that would be opting into the program
16 would have been accounted for in the small EGU or in the other
17 EGU or non EGU portion of the state-wide budget. So what is
18 happening is those allowances or those emissions are being more
19 specifically identified and accounted for and then that unit
20 would also be capped and it moves those emissions from that
21 broader state-wide budget into the capped portion of our
22 emissions budget.

23 MR. RIESER: So the idea is that opt-in units will be,
24 quote, existing units? In other words, they are units that are

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1 already in existence since 1995.

2 MS. BASSI: Yes.

3 MR. RIESER: For which the state has a number assigned for
4 their emissions and they are now opting into the program for some
5 reason?

6 MS. BASSI: They are opting into the capped trading portion.
7 You know, they want to participate in trading.

8 MR. RIESER: So these are not -- so opt-in units are not,
9 quote, new units? They are correctly existing units?

10 MS. BASSI: Correct.

11 MR. RIESER: Excuse me just a minute, please. I think I
12 just have a couple more questions, which is the worse thing a
13 lawyer can say, because they always have more than a couple more.

14 MS. BASSI: It is just like the dentist and his drill.

15 (Laughter.)

16 MR. RIESER: That's right. Thank you, Ms. Bassi.

17 (Laughter.)

18 MR. RIESER: What was the basis for the decision to use the
19 fast-track process in this set up?

20 MS. BASSI: The proposal is subject to sanctions and the
21 fast-track rulemaking is applicable to rules that must be

22 promulgated under the Clean Air Act and that are subject to
23 sanctions.

24 MR. RIESER: Has the fast-track process been used

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1 previously for addressing SIP revisions?

2 MS. BASSI: Yes.

3 MR. RIESER: Ms. Hearing Officer, rather than me standing
4 up here and flipping through my copy of the regulation and taking
5 everyone else's time, I guess I would like to stop at this point
6 but reserve the right, if there is something specific in the
7 regulations that I have not written down, to come back and ask
8 some more questions or if something is triggered by something,
9 like a question that somebody else has.

10 HEARING OFFICER GLENN: Certainly, Mr. Rieser.

11 MR. RIESER: I would like to stop at this time, but reserve
12 the right to come back and ask further questions.

13 HEARING OFFICER GLENN: You are always welcome to come
14 back.

15 MR. RIESER: Thank you very much.

16 HEARING OFFICER GLENN: I believe Dr. Flemal would like to
17 ask a question right now.

18 BOARD MEMBER FLEMAL: Yes. Mr. Rieser gave me an opportune
19 moment there to jump in on this question. For the record, what
20 is it about this proposal that makes it appropriate to be doing
21 this as a 28.5? Can we get that on record from any or all over

22 there?

23 MS. KROACK: Basically I really -- I would direct the
24 Board's attention to the language at 28.5. But, in essence, we

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1 would say that this is a rulemaking required under the Clean Air
2 Act to be adopted, and failure to adopt would subject us to
3 sanctions. The reference to sanctions appear throughout the SIP
4 Call.

5 The USEPA has already promulgated a proposed FIP, which
6 they we will go final if we fail to meet the deadline. There is
7 some play in that deadline. They have tied this to Clean Air Act
8 requirement. They had a SIP Call under Section 110 (a)(2)(b).
9 So those are the only two elements that Section 28.5 requires and
10 both of those elements are present here.

11 This is a SIP revision like other SIP revisions. Clean Air
12 Act requires that we address downwind affects and the USEPA used
13 that provision to promulgate a SIP Call. And because of the
14 other two purposes for which we are proposing this rulemaking,
15 the attainment demonstrations, those are also, quote, SIP
16 revisions under a different section of 100 of which we are
17 required to make a SIP submittal to the USEPA.

18 BOARD MEMBER FLEMAL: Is there anything in the Agency's
19 mind that causes this rulemaking to be different from other
20 rulemakings that have proceeded previously under 28.5?

21 MS. KROACK: We don't see any.

22 HEARING OFFICER GLENN: Okay. Thanks, Dr. Flemal. Anyone
23 else?

24 Yes, sir, the gentleman in the navy coat, please come

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1 forward. Please state your name and the organization that you
2 represent.

3 MR. RODRIGUEZ: Good evening. For the record, I am Gabriel
4 Rodriguez with the law firm of Schiff, Hardin & Waite. I am here
5 for Dynegy. I just have a couple of points that I wanted to
6 clarify. The first has to do with Exhibit Number 28. Mr.
7 Forbes, this was your exhibit.

8 MR. FORBES: Yes.

9 MR. RODRIGUEZ: In fact, it was the last page of that
10 exhibit.

11 MR. FORBES: Yes.

12 MR. RODRIGUEZ: It was the one entitled Final Illinois
13 State-wide NOx Budget. In particular, I wanted to ask you about
14 the 32,372 tons per season that are comprised as budget for EGUs
15 in Illinois. And the specific question goes to what happens to
16 the 1,671 tons as small EGUs are retired? Do those go back pro
17 rata into the budget for everyone else for the large EGUs?

18 MR. FORBES: No. They are actually -- what we are talking
19 about is for trading purposes it is 30,701. So the small units
20 are not part of that trading in the budget.

21 MR. RODRIGUEZ: And that is because that cap is federally
22 imposed?

23 MR. FORBES: Yes, and because it is the federal trading
24 program and it is centering on the large EGUs.

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1 MR. RODRIGUEZ: Okay. And you had indicated that there was
2 a document, and I am not sure it was -- has it been made a part
3 of the record that breaks down where the 30,000 and the 1,600
4 were broken out?

5 MR. FORBES: I mentioned a computer file that we had
6 received from the USEPA. I don't believe that is directly part
7 of the record. The 32,372 is part of the record. That is
8 contained in the March 2nd, 2000 SIP Call.

9 MR. RODRIGUEZ: That's correct. That is in the SIP Call,
10 the 32,000. I was just wondering how the number had been parsed
11 in two.

12 MR. FORBES: Well, it actually goes back to the
13 methodology. I mean, if you are wanting to know how that was
14 divided, it depends on the definition of a large EGU that we have
15 described before. Those units which are identifiable that are
16 subject to 0.15 pounds per million btu limitation apply to the
17 2007 input using the eight percent growth factor from 1996 to
18 2007. That's the identified units, and that's how the EPA
19 calculated the 30,701. The remaining units, the small EGUs are

20 also identified in that database. They are not subject to a .15
21 limitation. They are simply -- the emissions are grown to 2007
22 at whatever their emission rate is.

23 MR. RODRIGUEZ: So then the Agency is viewing the 30,701 as
24 being a federally imposed number, a federally imposed cap for

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1 trading purposes if the State opts for the trading program?

2 MR. FORBES: Yes.

3 MR. RODRIGUEZ: The second area that I wanted to talk about
4 really I think had to do with Ms. Bassi's testimony. I believe
5 you had indicated that when there were delays caused by -- or
6 that the implementation date is delayed because other states,
7 neighboring states or region five states were delayed in
8 implementing their programs that we would have a slide of dates
9 in Illinois. That is not true with respect to the section that
10 deals with early reduction credits. I was wondering why that is
11 so. Section 217.770, which deals with early reduction credits, I
12 think Subpart E talks about what happens in the event of delays,
13 and it only reaches back for two years in the event of delay. So
14 that if the program is delayed one year and it does not get
15 implemented until 2004 you can reach back into the 2003, 2002
16 control seasons but not 2001. So that any kind of reductions
17 achieved in 2001 presumably are not available for early reduction
18 credit. Is there any reason why that is true?

19 MS. BASSI: Because we were sliding, if you will, the

20 program to comport with the reductions or to comport with an
21 implementation date, we just envisioned the entire program
22 sliding. Since the current proposal allows for only two years of
23 early -- two years of eligibility to develop or to make early
24 reduction credits or earn early reduction credits, then the two

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1 years -- we were just keeping it at two years. Presumably,
2 though, if a source reduced its emissions in 2001 and 2002, the
3 same reductions -- it would be continuing with those same
4 reductions in 2003 or 2004. In other words, if --

5 MR. RODRIGUEZ: I think it is for controls that are put in
6 place in a particular season, if I recall the wording of the --

7 MS. BASSI: No. Well, the intent here is that if a source
8 reduces its emissions by whatever means to more than 30 percent
9 below applicable requirements, then that difference is eligible
10 for early reduction credits. So this is not a rule that requires
11 certain controls or any controls to be put in place.

12 MR. RODRIGUEZ: So just to make clear, the Agency, then,
13 would consider any reductions that would be achieved in 2001
14 would be available for early reduction regardless of what the
15 wording of the rule is currently, that if you achieve a reduction
16 in 2001 those would be available for early reduction credit
17 regardless of when the program goes into effect?

18 MS. BASSI: No. What we mean is that if the program -- if

19 implementation of the program is delayed until 2004, then the
20 years during which early reduction credits could be earned would
21 be 2002 and 2003, two years, and simply because right now the
22 proposal allows for two years during which units may earn early
23 reduction credits.

24 MR. RODRIGUEZ: You are saying that the federal -- that the

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1 USEPA is mandating that it be limited to two years?

2 MS. BASSI: No, I am not saying that at all. I am saying
3 that is what our proposal has.

4 MR. RODRIGUEZ: Well, okay, so that if in Illinois
5 everybody starts implementing their reductions in 2001, 2002, but
6 other states are delaying it, pushing out our implementation
7 date, all those early reduction credits are not going to be
8 available; is that --

9 MS. BASSI: That's the way our proposal is written at
10 moment.

11 MR. RODRIGUEZ: That's the policy? And that is not because
12 it is required by the federal program; is that correct?

13 MS. BASSI: That's correct.

14 MR. RODRIGUEZ: Okay.

15 MS. BASSI: It was written this way simply because of the
16 slide of the whole program.

17 MR. RODRIGUEZ: Okay.

18 MS. BASSI: And just to make things a little clearer, if I

19 can, the slide or a delay in the implementation date of this
20 program is dependent upon whether USEPA approves a SIP or
21 implements a FIP. It does not rely on when another state
22 implements its program.

23 MR. RODRIGUEZ: Uh-huh. But still -- but that delay is
24 something that is outside of everybody in the State of Illinois?

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1 MS. BASSI: That's correct.

2 MR. RODRIGUEZ: Okay. So it is -- okay. I think that's
3 all. Thanks. I don't have anything more.

4 HEARING OFFICER GLENN: Thank you, Mr. Rodriguez. I think
5 what we will do now is recess until tomorrow morning at 9:00.
6 Before we do that, there are a few housekeeping things. One is I
7 need to admit Chris Romaine's prefiled testimony as the final
8 exhibit of the day. That's Exhibit Number 29.

9 (Whereupon said document was duly marked for purposes of
10 identification as Hearing Exhibit 29 and admitted into
11 evidence as of this date.)

12 HEARING OFFICER GLENN: Before we continue, Mr. Rieser, you
13 have a question?

14 MR. RIESER: Yes. Just one more quick question. This is
15 just a follow-up on Mr. Rodriguez's questions about 9.9 and the
16 impact of the SIP Call slide, if you will.

17 The thing that slides is compliance with the NOx SIP Call,

18 correct? The state would still have to meet its attainment
19 strategy; is that correct?

20 MR. LAWLER: That's correct.

21 MR. RIESER: So if the NOx SIP Call were overturned
22 sometime in the next couple of years, the IEPA would have to come
23 back to the Board with another set of regulations to meet the
24 attainment strategies for Metro-East and Lake Michigan?

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1 MR. LAWLER: To answer that question we would have to know
2 where we stood in two years.

3 MR. RIESER: Right.

4 MR. LAWLER: But we could come back to the Board at that
5 point with another proposal if that is what we needed to address
6 the attainment demonstration.

7 MR. RIESER: Understanding you don't know where you are
8 going to stand in two years, would it be the intention of the
9 Agency to come back to the Board with a separate proposal if the
10 NOx SIP Call is overturned?

11 MR. LAWLER: Well, again, it is a what-if down the road.
12 So that makes it hard to answer, but that would be an option that
13 would be available to us at that time if we needed to do that.
14 We certainly could come back to the Board at that point.

15 MR. RIESER: Would it be the Agency's interpretation that
16 the -- that if in the event that the NOx SIP Call is overturned
17 by the Supreme Court, that the -- that these regulations that you

18 are proposing in Subpart W would then be ineffective and would
19 not be a control program that could be legally applied to sources
20 in the state?

21 MS. KROACK: I am actually going to object. That calls for
22 a legal conclusion that Mr. Lawler is not qualified to make, but
23 we will be happy to address that in written comments.

24 MR. RIESER: Okay. I appreciate that. But the next

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1 question would be whether the -- maybe this is also a legal
2 conclusion -- whether the Subpart W is ineffective because the
3 SIP Call has been overturned, or other reasons, as stated by 9.9,
4 whether the state would have to immediately propose a different
5 attainment strategy to have appropriate control measures to meet
6 its attainment strategy responsibilities for Lake Michigan and
7 Metro-East?

8 MS. KROACK: I think there is a portion of that question
9 that calls for a legal conclusion as to the technical conclusion
10 about what might be necessary to demonstrate attainment. I think
11 Mr. Kaleel addressed that in his testimony, but he can restate
12 that for you now.

13 MR. RIESER: No, I think you did address that. Thank you
14 very much.

15 BOARD MEMBER FLEMAL: Maybe this is not the proper panel to
16 ask this question. Maybe I will have to get Mr. Rieser under

17 oath to answer it. But perhaps somebody could enlighten me at
18 least personally as to what the appeal status of the NOx SIP Call
19 is under what -- where does that stand?

20 MS. KROACK: I can give you the information that we have.
21 As far as we know, there has been a motion for -- I don't know
22 what the motion is entitled right now. We don't actually have a
23 copy of it. It is essentially asking the court to clarify a
24 portion of one of the previous motions that the petitioner's

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1 viewed that the appellate court had not ruled on it. It was my
2 understanding that is still pending. As far as any appeals to
3 the Supreme Court, as far as we know none have yet been filed.

4 BOARD MEMBER FLEMAL: Is it still possible to make those --
5 we are talking about Michigan versus USEPA.

6 MR. MURRAY: I believe the filing date for cert is
7 September 21st.

8 HEARING OFFICER GLENN: Thank you, sir. Would you mind to
9 give your name?

10 MR. MURRAY: William Murray, City of Springfield.

11 BOARD MEMBER FLEMAL: Thank you all.

12 HEARING OFFICER GLENN: Ms. Kroack, is there anything else
13 you would like to say before we wrap up for the afternoon?

14 MS. KROACK: No. I think that perhaps we might have a
15 little bit more information for you on the Supreme Court question
16 tomorrow, but the panel wants to talk about it. Thanks.

17 HEARING OFFICER GLENN: Thank you. Okay. Let's see. For
18 your own information, we have additional copies of the service
19 lists up front. I believe we ran out earlier. So if you didn't
20 get one and you would like one, please take one. We will have
21 all of those handouts available tomorrow as well. If you are not
22 on the notice or service list and would like to be, there is two
23 sign up sheets in the front at the table.

24 For those of you who won't be joining us tomorrow, the

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1 transcript of the proceedings in this hearing will be available
2 on the Board's Web page. I believe it will be available mid to
3 late next week. We are getting an expedited transcript and then
4 we will have to let our Web master put it on the Web page. If
5 you want a copy of the transcript, it is available on the web mid
6 to late next week.

7 All right. We will reconvene tomorrow at 9:00, and I would
8 like to thank everybody for their attention and attendance today
9 and thank you for your comments as well. They are very much
10 appreciated.

11 Are there any questions? All right. Let's recess until
12 tomorrow at 9:00 a.m. Have a nice evening.

13 (Hearing exhibits retained by Hearing Officer Catherine F.
14 Glenn.)

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) SS
2 COUNTY OF MONTGOMERY)

3 C E R T I F I C A T E
4

5 I, DARLENE M. NIEMEYER, a Notary Public in and for the
6 County of Montgomery, State of Illinois, DO HEREBY CERTIFY that
7 the foregoing 136 pages comprise a true, complete and correct
8 transcript of the proceedings held on the 28th of August A.D.,
9 2000, at 300 South Seventh Street, Springfield, Illinois, In the
10 Matter of: Proposed New 35 Illinois Administrative Code 217,
11 Subpart W, the NOx Trading Program for Electrical Generating
12 Units, and Amendments to 35 Illinois Administrative Code 211 and
13 217, in proceedings held before Catherine F. Glenn, Hearing
14 Officer, and recorded in machine shorthand by me.

15 IN WITNESS WHEREOF I have hereunto set my hand and affixed

16 my Notarial Seal this 1st day of September A.D., 2000.

17

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Notary Public and
Certified Shorthand Reporter and
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