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CLERK'S OFFICE

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

AUG 2 1 2000

IN THE MATTER OF:))		STATE OF ILLINOIS
PROPOSED NEW 35 ILL. ADM. CODE, SUBPART W,)	R01-9	Pollution Control Board
THE NOx TRADING PROGRAM FOR)		

ELECTRICAL GENERATING UNITS, AND AMENDMENTS TO 35 ILL. ADM. CODE 211 AND 217 (Rulemaking-Air)

NOTICE

TO: Dorothy Gunn, Clerk Illinois Pollution Control Board James R. Thompson Center 100 West Randolph, Suite 11-500 Chicago, IL 60601

> Catherine Glenn, Esq. Hearing Officer Illinois Pollution Control Board James R. Thompson Center 100 West Randolph, Suite 11-500 Chicago, IL 60601

SEE ATTACHED SERVICE LIST

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Pollution Control Board the TESTIMONY OF DENNIS LAWLER of the Illinois Environmental Protection Agency, a copy of which is herewith served upon you.

> ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Laurel Kroack

Acting Associate Counsel **Division of Legal Counsel**

Bureau of Air

DATED:

August 18, 2000

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CLERK'S OFFICE
AUG 2 1 2000
STATE OF ILLINOIS

Pollution Control Board

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

	IN THE MATTER OF:)	
Section 1985)	
/	PROPOSED NEW 35 III. ADM. CODE 217, SUBPART W, THE NOX TRADING PROGRAM)	R01-9
	THE NOx TRADING PROGRAM)	
, see	FOR ELECTRICAL GENERATING UNITS,)	(Rulemaking-Air)
	AND AMENDMENTS TO 35 ILL. ADM. CODE 211 AND 217)	

TESTIMONY OF DENNIS LAWLER

QUALIFICATIONS

My name is Dennis Lawler. I am Manager of the Division of Air Pollution Control for the Bureau of Air at the Illinois Environmental Protection Agency. In that role I am responsible for day-to-day operation of the division and focus considerable efforts on the development of Illinois' State Implementation Plan (SIP) to meet the requirements of the Clean Air Act (CAA). I have a Bachelor of Science degree in physics from Loras College and Master of Science degree in meteorology from the University of Wisconsin. I am a Certified Consulting Meteorologist by the American Meteorological Society. The intent of my testimony is to explain the purpose of this rulemaking and discuss the development of the proposal.

PURPOSE OF RULEMAKING

The Illinois Environmental Protection Agency (Agency) is proposing amendments to Part 217 and Part 211 of the Board's air pollution control regulations to control the emissions of nitrogen

oxides (NOx) from fossil fuel-fired electrical generating units (EGUs) during the period May 1 through September 30 of each year, beginning in 2003. The proposed amendments are intended to meet several obligations of the State of Illinois under the CAA, including as follows: to submit control strategies necessary to demonstrate attainment of the 1-hour ozone National Ambient Air Quality Standard (NAAQS) for the Metro-East/St. Louis moderate ozone nonattainment area (NAA); to submit control strategies necessary to demonstrate attainment of the 1-hour ozone NAAQS for the Lake Michigan severe ozone NAA; to satisfy a portion of Illinois' obligation to submit a State Implementation Plan (SIP) to address the requirements of the so-called NOx SIP Call, by implementing the NOx Trading Program, 40 CFR part 96, and determining NOx allowance allocations for EGUs, as part of that program; and to meet the applicable requirements of Section 9.9 of the Illinois Environmental Protection Act (Act). Included in this proposal are new Subpart W, the NOx Trading Program for Electrical Generating Units, 35 Ill. Adm. Code 217, and conforming amendments to Parts 217 and 211.

DEVELOPMENT OF PROPOSAL

A. The Ozone NAAQS

The United States Environmental Protection Agency (USEPA) has promulgated a 1-hour NAAQS for ozonc, which is set at 0.12 parts per million (ppm) and is designed to minimize the negative impacts of ground level ozone on public health.

In 1990, Congress amended the CAA to address continued nonattainment of the 1-hour ozone NAAQS by establishing a classification scheme based on relative air quality for areas not attaining the standard. Under CAA Section 181, NAAs were designated either marginal, moderate, serious, severe or extreme. Pursuant to the 1990 amendments, USEPA designated the Metro-East/St. Louis NAA as a moderate ozone NAA and the Lake Michigan area, consisting of the Chicago-Gary-Lake County area, Porter County, Indiana and the Milwaukee-Racine area, as severe ozone NAAs, based on each area's air quality and pursuant to the criteria in CAA Section 181(a)(1). The State of Illinois has the primary responsibility under the CAA for ensuring that Illinois meets the ozone NAAQS and is required to submit SIPs that specify emission limitations, control and other measures necessary for attainment, maintenance and enforcement of the NAAQS within the State.

The 1990 amendments established specific planning requirements for each classification, including the need for Rate-of-Progress (ROP) reductions in ozone precursor emissions and an attainment demonstration. The ROP and attainment demonstration SIPs for moderate areas relying on photochemical grid modeling and for serious and above areas were required by 1994. CAA Section 181(a)(1) established November 15, 1996, as the attainment date for the Metro-East/St. Louis NAA, and CAA Section 181(a)(2) established November 15, 2007, as the attainment date for the Lake Michigan NAA. I note that USEPA has proposed to delay final action on the attainment date for the Metro-East/St. Louis NAA.

This proposal comprises part of the State's attainment SIPs for the 1-hour ozone NAAQS for both the Metro-East/St. Louis NAA and the Lake Michigan NAA.

B. The Metro-East/St. Louis NAA Attainment Demonstration

The Metro-East/St. Louis NAA has not attained the ozone standard. The States of Illinois and Missouri have worked cooperatively to provide to USEPA an approvable attainment demonstration for the 1-hour ozone NAAQS for the Metro-East/St. Louis NAA. Illinois submitted its initial attainment demonstration for the Metro-East/St. Louis NAA in 1994, which identified the need for upwind reductions in ozone. Even though Illinois satisfied all CAA mandated requirements for the Metro-East portion of the NAA, exceedances of the NAAQS in the Metro-East/St. Louis NAA continue to occur. As discussed in more detail below, air quality in the area is impacted by ozone transport and based on USEPA guidance, Illinois has been conditionally granted an extension of the submittal date for the attainment demonstration for the Metro-East St. Louis NAA, and an extension for the date the area is required to attain the 1-hr ozone NAAQS.

On March 2, 1995, Mary D. Nichols, Assistant Administrator for USEPA's Air and Radiation Division, published a memorandum entitled "Ozone Attainment Demonstrations" (Nichols Memo). In this memorandum, USEPA "recognized that development of the necessary technical information, as well as the control measures necessary to achieve the large level of reductions likely to be required had been particularly difficult for the States affected by ozone transport." In the Nichols Memo, USEPA established a two-phase process for States with severe ozone NAAs to develop approvable SIPs. Under Phase I, States were required to complete pre-November 1994 SIP requirements, submit regulations sufficient to meet the initial ROP requirements, and submit supporting modeling analyses. Phase II called for a two-year consultative process to assess

national/regional strategies to address ozone transport in the eastern United States and required submittal of all remaining ROP submittals, an attainment demonstration, including any additional rules needed to attain, and any regional controls needed for attainment by all areas in the region.

In response to the growing awareness of the problem of ozone transport, the Environmental Council of States (ECOS) recommended the formation of a national workgroup to assess the problem and to develop a consensus approach to addressing the transport problem. As a result of ECOS' recommendation and in response to the Nichols Memo, the Ozone Transport Assessment Group (OTAG), a partnership among USEPA, the 36 eastern-most States and the District of Columbia, industry representatives, and environmental groups, was formed to assess the ozone transport phenomenon.

The Nichols Memo indicated that part of the Phase II submittals, consisting of the attainment demonstration, target calculations for the post-1999 ROP milestones and the identification of rules necessary to attain and for post-1999 ROP, were due in mid-1997. This date was extended to April 1998 to allow the States time to incorporate the results of OTAG's assessment into their attainment planning.

As a moderate NAA, the Metro-East/St. Louis NAA was not included in the two-phase approach set forth in the Nichols Memo. However, USEPA recognized that moderate areas are also significantly impacted by ozone transport and should not be expected to demonstrate attainment through the imposition of local control measures only. Since many of these moderate NAAs were

downwind from areas with a higher classification, and, therefore, with later attainment dates, they could not expect to receive the benefits of any national/regional control measures prior to their CAA established attainment dates. Thus, on July 16, 1998, USEPA established a policy that allows for a deferral of the final findings on attainment for NAAs impacted by ozone transport where certain conditions are met and subsequently published this guidance in the Federal Register. Under this policy, USEPA balanced the reductions expected from the decrease in ozone transport with the need for local controls to ensure that the downwind regions bear only the regulatory burdens associated with the emissions from sources within their control.

In October 1999, Illinois committed in a draft supplement to its attainment SIP for the Metro-East NAA to implementing state-wide (in both attainment and nonattainment areas) reductions of NOx from sources within the State. After completing a public hearing, Illinois submitted this supplemental attainment SIP to USEPA in February 2000. The attainment strategy for the Metro-East/St. Louis NAA in the October 1999 supplement assumes that the 23 jurisdictions affected by the NOx SIP Call, including the eastern one-third of Missouri, and the District of Columbia, would limit NOx emissions from large EGUs beginning in 2003 to an emissions rate of no more than 0.25 pounds of NOx per million Btu heat input (lb/mmbtu). Large EGUs in the western two-thirds of Missouri would be limited to a NOx emission rate of no more than 0.35 lb/mmbtu.

The NOx reductions called for by the proposal now being submitted to the Board are consistent with the emissions cap required for large EGUs in Illinois by the NOx SIP Call (based by USEPA on an emission rate of 0.15 lbs/mmbtu for EGUs operating in 1995/1996 applied to

operating levels anticipated in 2007) and thus exceed the level of NOx reductions assumed in the attainment demonstration modeling for the Metro-East/St. Louis NAA. The Agency, therefore, believes that this proposal, upon implementation and in conjunction with the other control measures in place for the area or applicable to the area, will result in attainment of the 1-hour ozone NAAQS in the Metro-East/St. Louis NAA.

On April 17, 2000, USEPA proposed to approve the 1-hour attainment demonstration SIPs for the Metro-East/St. Louis NAA contingent on the States of Illinois and Missouri preparing revised modeling to incorporate corrections to their 1996 base year emissions inventories and upon each State submitting rules to implement the control levels relied upon in the modeling. The revisions to the modeling and drafts of proposed rules (including this proposal) were submitted to USEPA on June 29, 2000, and adopted rules from both States are due to USEPA by December 31, 2000.

C. Lake Michigan NAA Attainment Demonstration

Beginning in 1988, the Agency has worked with the States of Indiana, Michigan, and Wisconsin, through the Lake Michigan Air Directors' Consortium (LADCO), to assess ozone air quality in the Lake Michigan area and to develop appropriate strategies to attain the 1-hour ozone NAAQS. Despite large local reductions in emissions of volatile organic materials (VOM), an ozone precursor, since the 1990 CAA amendments, the Lake Michigan NAA has not attained the NAAQS.

Pursuant to the Nichols Memo, the Agency submitted Illinois' Phase I submittals for the Lake Michigan NAA to USEPA in June 1996. These submittals included modeling analyses with interim assumptions about existing ozone transport levels and future changes in these ozone transport levels. Phase II submittals consisting of an approvable attainment demonstration, including fully adopted measures and based on revised modeling, are due by December 2000.

In regard to the Lake Michigan NAA, the Agency has determined, in cooperation with LADCO, that substantial reductions in transported ozone and ozone precursors would be needed, in addition to reductions of VOM emissions in the NAA, for the Lake Michigan NAA to attain the 1-hour NAAQS. Although not yet completed, the results of modeling conducted by LADCO to date indicate that the application of the NOx SIP Call level controls in the modeling domain, in conjunction with local control measures already required and additional measures required by the CAA, will likely demonstrate attainment of the 1-hour NAAQS in the Lake Michigan NAA. The Agency, in conjunction with LADCO, will complete its air quality modeling later this year and will submit its final attainment demonstration to USEPA in December 2000.

D. The NOx SIP Call

With regard to ozone transport, Illinois was one of the first states to recognize its impacts in the Midwest region. The Agency on behalf of the State actively participated in OTAG's efforts by chairing and staffing the OTAG Policy Group and by providing significant technical expertise in analyzing the impact of ozone transport on air quality within the Lake Michigan and Metro-East/St. Louis NAAs and surrounding States. Agency technical staff worked in conjunction with other

OTAG participants to conduct modeling analyses to determine the magnitude and direction of ozone transport in the eastern half of the United States, including both the Metro East/St. Louis NAA and the Lake Michigan region of the modeling domain.

In July 1997, OTAG completed its work and made recommendations to USEPA concerning the regional emissions reductions necessary to reduce transported ozone as an obstacle to attainment in downwind areas. Based on OTAG's recommendations and other information, USEPA issued the NOx SIP Call rule on October 27, 1998.

After the NOx SIP Call was adopted as a final rule, a number of petitions for review of the rule were filed by various parties in the D.C. Circuit Court of Appeals. That Court upheld the bulk of the NOx SIP Call on March 3, 2000 (Michigan v. EPA, 213 F3d663(D.C.Cir.2000)). On June 22, 2000, the Court removed the stay of the NOx SIP Call in effect since May 25, 1999, and denied motions for rehearing. (Michigan v. EPA No. 98-1497 (D.C.Cir. June 22, 2000)).

In the NOx SIP Call, USEPA determined that sources in 23 jurisdictions emit NOx in amounts that contribute to ozone formation. USEPA then identified reductions that could be achieved using "highly cost-effective measures" and set state-wide budgets for NOx for each affected jurisdiction, including line items for various sectors based on the levels of reduction that could be achieved with highly cost effective measures. Additionally, USEPA established emissions caps for large EGUs, those serving generators greater than 25 megawatts and for large non-EGUs, those with a maximum design heat input of 250 mmbtu/hr. USEPA established these caps based

upon their determination of highly cost-effective control measures by applying an emissions rate of 0.15 lbs/mmbtu NOx to large EGUs and by assuming a 60% reduction from uncontrolled levels of NOx emissions from large non-EGUs. The statewide, but not capped portions of the budgets assumed a 30% reduction from uncontrolled NOx levels from large cement kilns and a 90% reduction from uncontrolled NOx levels from large stationary internal combustion engines.

Although the statewide NOx budgets were based on the levels of reduction achievable through highly cost-effective control measures, the NOx SIP Call allows each State to determine what measures to adopt to meet its statewide budget. The NOx SIP Call merely requires States to submit SIPs, which, when implemented, will require controls that meet the NOx statewide budget. The NOx SIP Call encourages States to adopt a cap and trade program for large EGUs and large non-EGUs as a cost-effective strategy to meet the capped budgets and provides an interstate NOx trading program that USEPA will administer for the States that adopt the federal program. If States do choose to participate in the national trading program, they must submit SIPs that conform to the trading program at 40 CFR part 96.

Section 9.9 of the Illinois Environmental Protection Act recognizes that the NOx SIP Call had been adopted and finds that emissions trading is a cost-effective means of obtaining reductions in NOx emissions. This Section requires the Agency to propose and the Board to adopt regulations necessary to participate in the federal NOx Trading Program but places restrictions on the enforcement of any rules adopted to allow such participation. The Section provides in pertinent part:

The regulations promulgated by the Board pursuant to subsections (b) and (d) of this Section shall not be enforced until the later of May 1, 2003, or the first day of the control season subsequent to the calendar year in which all of the other States subject to the provisions of the NOx SIP call that are located in USEPA Region V or that are contiguous to Illinois have adopted regulations to implement NOx trading programs and other required reductions of NOx emissions pursuant to the NOx SIP Call, and such regulations have received final approval by USEPA as part of the respective States' SIPs for ozone, or a final FIP for ozone promulgated by USEPA is effective for such other States.

Our proposal today requires implementation of necessary control measures by May 1, 2003, but includes the contingency language to ensure that sources in Illinois are not required to comply with this proposal until neighboring States that are subject to the NOx SIP Call and USEPA Region V States that are subject to the NOx SIP Call (i.e., Indiana, Michigan, Kentucky and Ohio) have an approved SIP or a FIP has been proposed addressing the NOx SIP Call.

In late 1998, following the issuance of the NOx SIP Call, the Agency met with representatives of industry and environmental groups to notify them of the Agency's intent to proceed with development of rules responsive to the SIP Call. The Agency established a NOx Technical Committee comprised of Agency technical staff and representatives of environmental groups and affected sources to evaluate the NOx emissions inventory and modeling efforts that Illinois and LADCO were undertaking as part of the additional subregional modeling recommended by OTAG. The NOx Technical Committee met initially on December 21, 1998, January 26, 1999, and March 3, 1999. Additional meetings were held during 1999 and in early 2000.

In early 1999, the Agency commenced regular meetings with the NOx Technical Committee and with representatives of the existing EGUs, as listed in Appendix F of the proposed rule (Appendix F EGUs or Appendix F sources). All of the Appendix F sources had emission units that commenced operation before January 1, 1995, and were considered to be existing units under the NOx SIP Call. Emissions from these sources comprised the EGU inventory that served as the basis for the budget for large EGUs established in the NOx SIP Call. USEPA anticipated that initial allocations would be made for the 2003, 2004, and 2005 control periods to these sources under the federal NOx Trading Program, and all other sources would receive their allowance allocations through the new source set-aside.

The Agency met with the Appendix F sources on February 5, February 18, February 24, March 2, March 10, March 31, April 8 and April 14, 1999. Most of this time was spent developing the concepts to be embodied in the Board's rule addressing the flexible portions of the federal NOx Trading Program, i.e., initial allocations, allocation methodology, and the use of the Compliance Supplement Pool.

The Agency met with both "new" EGUs, those that commenced operation on or after January 1, 1995, and the Appendix F sources on April 21, April 28, May, 7, May 11 and May 17, 1999. On May 5, 1999, the Agency met just with representatives of the new EGUs. These meetings addressed how allowances would be allocated to new EGUs and the size of the new source set-aside.

Then, on May 25, 1999, the U.S. Court of Appeals for the D.C. Circuit issued its stay of the submittal date for SIPs under the NOx SIP Call in response to the appeal of that rule filed by various parties. The Agency then shifted its attention to the attainment demonstrations due by November 15, 1999, for the Metro-East/St. Louis NAA, and by December 31, 2000, for the Lake Michigan NAA. With the status of the NOx SIP Call in question, the Agency believed it was incumbent to determine what control strategies (or levels of reduction) were necessary to attain the 1-hour ozone NAAQS in these nonattainment areas. Previously, the Agency's technical analyses had focused on the NOx SIP Call, both because it was required and to determine whether NOx reductions expected from the rule would be sufficient to demonstrate attainment in these areas.

As discussed previously, modeling analyses demonstrated that the Metro-East/St. Louis NAA would be able to demonstrate attainment through NOx reductions that could be obtained from application of a rate of 0.25 lb NOx/mmbtu to large EGUs located in the 23 jurisdictions affected by the NOx SIP Call, including the eastern one-third of Missouri, and a rate of no more than 0.35 lbs/mmbtu applied to large EGUs in the western two-thirds of Missouri beginning in May 2003. The Agency submitted a supplement to its attainment demonstration to that effect in October 1999 and February 2000. Rules that will, when implemented, provide for NOx reductions that meet or exceed those modeled are necessary to complete the attainment demonstration.

When the U. S. Court of Appeals for the D. C. Circuit upheld the NOx SIP Call in its March 3, 2000 opinion, the Agency again turned to developing a program that would both comply with the NOx SIP Call and satisfy Illinois' attainment approach. The Agency resumed meetings with

Appendix F EGUs and new EGUs. Additionally, a representative from the American Lung Association of Chicago (ALAC), on behalf of ALAC, the Illinois Environmental Council and the Environmental Law and Policy Center, attended most meetings and kept other representatives of the environmental community apprised of the meetings. Also, representatives from the Illinois Environmental Regulatory Group (IERG) attended meetings. The Agency meet with these groups on May 2, May 16, May 30, June 15, June 27 and July 6, 2000.

On July 7, 2000, USEPA Region V notified the Agency that based on its preliminary review of the attainment demonstration submittals, including a copy of this proposal, this proposal would "address key requirements both for the ozone attainment demonstrations and for the NOx SIP Call." The letter also noted that Illinois would still need to "adopt additional regulations, such as for non-EGU boilers and cement kilns, to achieve the remainder of the reductions needed to satisfy the statewide NOx emission budget as established in the NOx SIP Call." Such regulations will be proposed in the near future.

In other testimony that will be provided by the Agency, you will hear a brief discussion of ozone air quality analysis, a review of the various control technology alternatives, and a discussion of the rule proposal itself. We believe that this proposal is necessary to meet the various federal and state obligations relating to imposing the 1-hour ozone air quality in Illinois.

STATE OF ILLINOIS) SS COUNTY OF SANGAMON)

PROOF OF SERVICE

I, the undersigned, on oath state that I have served the attached TESTIMONY OF

DENNIS LAWLER upon the person to whom it is directed, by sending a copy by facsimile to
the (312) 814-3669 and by placing it with a courier for overnight delivery to the following:

TO: Dorothy Gunn, Clerk
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(Overnight Mail)

Catherine F. Glenn, Esq. Hearing Officer Illinois Pollution Control Board James R. Thompson Center Suite 11-500 Chicago, Illinois 60601 (Overnight Mail)

SEE ATTACHED SERVICE LIST

Lynthin Sims

from Springfield, Illinois on August 18, 2000.

SUBSCRIBED AND SWORN TO BEFORE ME

This 18th day of August, 2000

Notary Public

"OFFICIAL SEAL"
STEPHEN C. EWART
Notary Public, State of Illinois
My Commission Expires 11/16/02

SERVICE LIST

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