

Fighting Ozone – A Multi-Tiered Approach

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Abstract: Questions regarding the validity of ozone emission trend estimating methods and the effects of ozone to the health and welfare of the public have been raised for over 20-years, while at the same time the strategic complexity of ozone reduction plans have become even more convoluted. This dynamic has led to divisiveness as leaders in opposing camps argue the rational, science, and delegated legal authority of administrative agencies to set and enforce ozone policy in the United States.

The purpose of this paper is to provide a brief background of NO_x and VOC emission trends and a recent update of three major programs designed to reduce detrimental public health and welfare resulting from ground level ozone. These programs include: (1) The Nitrous Oxide State Implementation Plans (NO_x SIP Call) and Section 126, (2) Recent activities surrounding the National Ambient Air Quality Standard (NAAQS) for ozone and NO_x, and (3) The New Source Review (NSR) program in relation to coal-fired utilities.

Introduction

Under section 109 of the Clean Air Act (CAA) the EPA is directed to promulgate “primary” National Ambient Air Quality Standards (NAAQS) to protect human health and “secondary” NAAQS to protect public welfare. In making the judgements, EPA must develop and rely on “air quality criteria” that “accurately reflects the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of pollutants in the ambient air.” (CAA 109 (b)). In accordance with this rule, EPA established NAAQS for six pollutants: sulfur dioxide, carbon monoxide, nitrogen oxide, lead, ozone, and particulate matter.

Congress amended the CAA on several occasions, including an extensive revision in 1990. The 1990 Amendments recognized, among other things, that many areas of the country had failed to attain the existing NAAQS, including the primary ozone NAAQS, set in 1979, of 0.12 parts per million (ppm) averaged over one hour and not to be exceeded more than three times in a 3-year period. It is important to note, that EPA’s initial photochemical oxidants standard set in 1971 had an hourly average level of 0.08 ppm that was not to be exceeded more than once per year. After the 1979 revision to the standard, and in combination with aggressive permit review programs and state required implementation plans detailed by the 1990 amendments, many ozone nonattainment areas achieved attainment in the mid to late 90s. For example, Ohio counties achieved complete attainment with the 1979 standard in the late 90s.

In July 1997, according to scientific data reviewed by the EPA Scientific Advisory Committee, EPA found that the 1979 one-hour ozone NAAQS was inadequate to protect public health. EPA therefore revised and promulgated a more stringent ozone NAAQS of 0.08 ppm, averaged over an eight-hour period, where a formal exceedance was triggered by the fourth highest concentration over a 3-year period. Numerous industry groups, states and scientific experts responded to EPA’s bold move by challenging the scientific evidence used to develop the new standard and EPA’s delegated authority to establish and enforce the standard.

Nonetheless, EPA was adamant in establishing programs designed to reduce ozone levels throughout the United States. Special concern and attention was given to northeastern states due to the complexity involved in improving air quality resulting from ozone transport from the midwestern states. Amongst other actions, such as the recent diesel engine ruling, EPA is primarily concentrating on three key stationary source initiatives designed to improve air quality by reducing ambient levels of ozone. These programs are summarized as follows:

- The establishment of a new NAAQS for ozone (0.08 ppm eight hour standard) that would require many states to re-designate air quality attainment areas to non-attainment, thereby re-introducing stringent pollution control mechanisms for new and existing sources of NO_x and VOC emissions.

- The Nitrous Oxide State Implementation Plan Call (NOx SIP Call) requires the effected states to develop implementation plans to achieve aggressive NOx reductions. Section 126 Federal rules required specific sources to achieve NOx reductions.
- Enforcement of a stringent New Source Review (NSR) policy designed to discourage outdated sources of pollution from “life extension” engineering and support the building of new “environmentally sensitive and compliant” sources. This program is currently effecting coal-fired powered plants and is expected to be expanded should the EPA prevail through the judicial process.

Understanding Ozone and NOx

Ozone is a toxic gas consisting of three oxygen atoms (O₃). It occurs naturally in the stratosphere from solar-induced chemical reactions, and at that altitude ozone is a vital form of protection from harmful ultraviolet rays. Ground level ozone is created through a series of chemical reactions involving sunlight, oxides of nitrogen and volatile organic compounds (VOCs). Ozone molecules are highly reactive oxidizing agents that tend to stick to and react with large molecules lining human respiratory tracts causing damage to cells and leading to respiratory tract inflammation and reduced lung function. According to USEPA’s 1998 National Air Pollutant Emission Trend Report, ozone is also responsible each year for agricultural crop yield loss in the United States of several billion dollars and causes noticeable foliar damage in many crops and species of trees.

Not unlike ozone, oxides of nitrogen have also been attributed to health and public welfare detriment. In addition to causing acid deposition and eutrophication, oxides of nitrogen (NOx) have been identified in numerous studies as a precursor to ozone and nitrate particulate matter. NOx pollution can irritate the lungs and lower resistance to respiratory infection, severely stress water quality and aquatic environments through nutrient loading (leading to reductions in dissolved oxygen), and contribute to regional haze, which impairs visibility and can reduce property values and revenues from tourism.

According to the 1998 Emission Trends Report, NOx and VOCs are often considered together when analyzing ground level ozone impact because they comprise the principal components in chemical and physical atmospheric reactions that form ozone and other photochemical oxidants. The emission trends report confirms that a VOC ambient air quality standard does not exist; however, because VOCs have been scientifically shown to contribute to ground level ozone formation, emission trend reports measure both NOx and VOC emissions as indicators of air quality trends for ozone. Therefore, the regulatory and legal activity discussed in this paper will address the impact to and from sources emitting NOx and VOCs.

Recent Pollution Trends (United States) from VOCs and NOx

The following data is taken directly from the Office of Air Quality Planning and Standards Research Triangle Park National Air Pollutant Emission Trends, 1900-1998.

- NOx emissions steadily increased through the mid-1970s to 24.4 million tons in 1980. These emissions declined slightly during the early 1980s, and then climbed again, exceeding 25 million tons in 1994. The total NOx emissions have since declined slightly.
- Furthermore, major source contributors of NOx emissions have changed only slightly over the past 30 years.
- Total National Emissions of Nitrogen Oxides, 1940 through 1998 (thousand short tons)

Year	1940	1950	1960	1970	1980	1990	1996	1998
All sources	7,374	10,093	14,140	20,928	24,384	24,049	24,676	24,454

- Volatile Organic Emissions continued to decrease after experiencing their highest emission loading in 1970. 1998 data indicates that VOC emissions have been cut nearly in half since 1970.
- Total National Emissions of Volatile Organic Compounds, 1940 through 1998 (thousand short tons)

Year	1940	1950	1960	1970	1980	1990	1996	1998
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Discussion

Interestingly enough, as the emissions of NO_x and VOCs between 1970 and 1998 in the U.S. have shown positive downward trends, pressures likely to increase emissions have shown dramatic increases. For example, population and total fuel consumption increased by nearly 30% and Gross Domestic Product (GDP) and Vehicle Miles Traveled (VMT) increased nearly 150%. We are using more natural resources and producing more than ever, and doing so without increasing NO_x and VOCs emissions. Unfortunately, these results have not come without tremendous political, administrative and technical struggle and effort. The most recent actions surrounding the ozone rulings are indicative of the environmental stewardship efforts of the EPA and associated organizations to improve and maintain ambient air quality that protects our health and welfare.

The Ozone National Ambient Air Quality Standards

According to General Seth P. Waxman, Department of Justice representing the EPA, "The Clean Air Act prescribes that the EPA must set National Ambient Air Quality Standards (NAAQS) to protect public health with an adequate margin of safety. They must be based on criteria that reflects the latest scientific knowledge about the identifiable effects of the pollutant in the ambient air, and the administrator must consult an independent body of scientific experts and explain any significant departure from its recommendations. For 30 years, successive administrators have applied the Act's terms consistently." The term "requisite" used in the rule, means sufficient, but not more than necessary to protect public health within an adequate margin of safety. Public health has been defined as addressing not all biological effects, and not even all medical effects, but only those adverse health effects that threaten populations. The effects must be identifiable, meaning those that are shown to actually exist, not hypothesized.

In 1979, EPA established an ozone NAAQS of 0.12 ppm averaged over one hour. The 1990 Clean Air Amendments sought not to adjust the NAAQS for ozone, but instead revise the Clean Air Act's implementation process in certain respects, creating a new procedure for classifying nonattainment areas based upon pertinent factors (such as the severity of the nonattainment problem) and revising the method for setting attainment dates. The Amendments established mandatory classifications and attainment dates for the primary one-hour ozone standard.

In July 1997, EPA found that the 1979 one-hour ozone NAAQS was inadequate to protect public health based on clinical studies and other evidence linking prolonged ozone exposures (from six to eight hours) to numerous adverse health effects. These effects included decreases in lung function, coughs and chest pain, potential aggravation of asthma, lung inflammation, increased susceptibility to respiratory infection, increased doctor and emergency room visits and hospitalizations, and possible permanent lung damage from repeated exposure. After extensive rulemaking proceedings, EPA issued revised NAAQS for both particulate matter and ozone in light of this new scientific knowledge.

In response to the EPA NAAQS revisions, numerous industry groups challenged the revised standards through a petition filed by the Alliance of Automobile Manufacturers (later to be known as the American Trucking Association). A three-judge panel in the United States Court of Appeals from the District of Columbia heard the petition and issued opinions on May 14, 1999.

The Court stated that "the factors EPA uses in determining the degree of public health concern associated with different levels of ozone and PM are reasonable." However, the portion of the case less publicized, but providing a greater impact to all rulemaking bodies, resided in the Court's opinion that challenged the constitutionality of laws written by congress empowering administrative agencies to develop and enforce rules. The Court addressed the constitutionality of the CAA stating that the EPA's interpretation of Section 109 of the CAA "effects an unconstitutional delegation of legislative power."

According to legal experts, the Court's decision departs from established law designed to preserve the separation of powers by ensuring that Congress has not relinquished, by delegating to another Branch or to private parties, its power to "make laws." These views believe the Appellate Court ruling transformed the non-delegation doctrine by establishing the necessity for judicial supervision.

As expected, on June 28, 1999 the EPA filed a petition for a rehearing. The petition requested the original three-judge panel reconsider and modify portions of its May 14 decision. The petition also asked that the entire D.C. Circuit (11 active judges) rehear several key issues and reverse the original panel's decision. The EPA was specifically interested in reversing the decision regarding the constitutionality of legislative authority as it related to the CAA.

The Court's October 29, 1999 response maintained its original decision as issued on May 14 with a paradoxical opinion that allowed the EPA to revise the ozone standard, but stated that the revised ozone standard can only be implemented in areas that have attained the old standard. On the key constitutional issue, of the nine judges who voted, five voted in favor of granting the petition for a rehearing. (Two judges did not participate in the decision for unspecified reasons.) Therefore, although the EPA won the majority of the participating judge votes, the petition for rehearing was denied because the court rules require a majority of the 11 active judges. As expected, the EPA appealed the lower court's 1999 decision to the Supreme Court.

The Supreme Court granted the hearing of *Carol Browner v. American Trucking Associations*, which was followed up by a number of briefs filed on behalf of both parties throughout 2000. On November 7, 2000 the case was argued with compelling arguments from both sides. General Seth Waxman represented Browner (USEPA) and Edward Warren and Judith French (Respondents) along with over 50 additional attorneys, many who commented and participated in the development of briefs from a variety of associations and States, represented and argued on behalf on the American Trucking Association.

The Supreme Court Argument

On behalf of Browner and the EPA, Waxman argued the case on two issues. The first addressed the issue as to whether the Clean Air Act violates the nondelegation doctrine. Waxman argued that EPA acted within the direction of Congress by reviewing the NAAQS and adjusting the standards as required to protect public health. Because the foundation of his argument involved the protection of public health much discussion between the Supreme Court Justices and Waxman consisted of the interpretation of risk and the process the Agency must go through every time the Administrator has to modify a standard. This included clarification of when EPA is required to assess economic costs associated with the introduction of new standards.

When setting the standards for ambient air the EPA is not permitted to include cost in the analysis. This is done for obvious reasons, primarily because the Congress wanted to ensure that the process of identifying risk and creating standards is not effected or skewed by cost analysis. Costs become an issue when the EPA considers the implementation processes. It is in within this activity that costs and other technological constraints are used to determine what's reasonable.

Waxman explained that 0.08 ppm averaged over 8 hours was chosen because (1) there was no demonstrated health effect below 0.08; (2) the average responses at .08 were typically small or mild; (3) the most certain effects at or below 0.08 were transient and reversible; (4) 0.07 is at or slightly above peak background levels in some cases; and (5) all the member of the Scientific Advisory Committee that reviewed the data recommended 0.08. Justice Scalia, however, demanded that the Agency have criterion for determining "the line" at which the "things above it are bad and below are not so bad."

On behalf of American Trucking Associates and others (Respondents), both Edward Warren and Judith French argued that the EPA is acting outside of the authority delegated to them from Congress because Congress never intended to delegate to an administrative agency power of such great economic and political significance. While Warren argued detrimental cost and economic impact to the American economy, French's argument was extremely compelling. According to French, "In 1990, Congress rewrote the law that applies to ozone. Congress rejected the old and failed one-size-fits-all approach to ozone attainment. Congress implemented instead a comprehensive and unique scheme that combines realistic expectations with measures of progress." French further argued that under section 181 of the Act, the very first sentence specifically states that the methodology that EPA had in place most recently before November 15, 1990 must be used without modification to establish the NAAQS for ozone. Meaning, the 1990 ozone standard must last forever or until the Act is reauthorized. As French stated, "Congress left no room for EPA to promulgate a different standard."

The NOx SIP Call and Section 126

In August 1997, eight northeastern states (Connecticut, Maine, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island, and Vermont), citing section 126 of the Clean Air Act, filed petitions with EPA to reduce the transport of ground level ozone. The petitions identified 22 states plus the District

of Columbia as containing sources that significantly contribute to regional transport of ozone. On November 7, 1997, The EPA proposed the NO_x State Implementation Plan Call (NO_x SIP Call) requiring the identified states and the District of Columbia to submit state implementation plans that address the regional transport of ground level ozone. In April 1999, EPA issued their first of many final rules and determined that six of the eight petitions could be approved based solely on technical considerations under the 1-hour and/or 8-hour ozone standards. During that same time, several of the 22 states identified as impacting the northeastern states petitioned EPA to be removed from the program. Three won (Missouri, Georgia, and Wisconsin) and were removed from the NO_x SIP Call reducing the impact to sources in 19 states and the District of Columbia.

In relation to this NO_x SIP case, the U.S. Court of Appeals for the District of Columbia ruled that the final decision on the 8-hour NAAQS for ozone was unenforceable due to the complexity of the NAAQS arguments and a decision was made to stay the NO_x SIP. At first, this ruling appeared to the outside observer to be significant to the NO_x SIP Call rule because certain technical aspects used by the EPA to determine the acceptability of the section 126 petitions received by the States were based on the 8-hour ozone standard. However, because EPA reviewed most of the petitions on both the 1-hour and 8-hour ozone standard, the NO_x SIP Call was unaffected and only certain states were impacted by the Court's ruling.

On May 25, 1999 the court granted a motion to stay the SIP submission deadlines established under the NO_x SIP Call and allow the Agency time to re-adjust their final rule to reflect the 1-hour standard. The Agency's re-adjustment of the rule to focus only on the 1-hour standard resulted in the reduction of Section 126 effected States from 19 to 12 and the District of Columbia. This review had no impact on the original NO_x SIP Call requirements for the 19 states and the District of Columbia. Meaning, even when considering upwind state impact based exclusively on the 1-hour standard, it was determined and confirmed by the Court that all 19 states do have a significant impact to downwind ozone formation and therefore, would be required to comply with the NO_x SIP Call rule.

On January 18, 2000, EPA finalized the revisions to the May 25, 1999 final rule. The revised rule, amongst other issues, removed the trigger mechanism. The trigger mechanism, written into the original rule, provided states flexibility to comply with both the NO_x SIP Call and Section 126 Federal Regulated sources if the States remained on target with the NO_x SIP Call deadlines. If a State did not remain on target with SIP Call deadlines, the 126 Federal Rules would automatically be triggered. Because the NO_x SIP Call legislation was impacted by the NAAQS ruling that had yet to be finalized, EPA eliminated the trigger mechanism that linked the SIP Call with the section 126 Federal Rule. (Note, States that do choose to voluntarily implement a NO_x SIP Call plan by 2003 are automatically withdrawn from section 126 requirements).

The revised rule indefinitely stayed the portion of the May 25, 1999 rule that is based on the 8-hour standard. In addition, the revised rule included a Federal NO_x Budget Trading Program as the control remedy for sources subject to section 126 findings under the 1-hour standard.

On March 3, 2000, the U.S. Court of Appeals for the D.C. Circuit issued an opinion largely upholding the NO_x SIP Call. In the opinion, the Court:

- Upheld EPA's basic approach to determine how much a state needs to cut NO_x emissions to reduce its significant contribution to downwind air quality problems.
- The Court upheld the rule for 19 states and D.C, but vacated it for Wisconsin, Georgia and Missouri, sending the portions of the rule focusing on those states back to EPA for further rulemaking.
- On June 22, 2000, the court lifted the stay thus requiring the 19 states to submit SIPs in two phases to meet appropriate NO_x reductions. The first phase was due on Oct. 30, 2000. Based on an August 30, 2000 ruling from the Court, the compliance date for implementation of Phase I will be May 31, 2004.

New Source Review and the Utilities

New Source Review (NSR) permitting requirements effect major sources of pollution in both attainment (areas achieving baseline air quality standards) and non-attainment (areas not achieving baseline air quality standards) regions of the U.S. Of primary concern to the EPA are areas not meeting the NAAQS or contributing to ozone formation within the Ozone Transport Region (OTR). This region comprises most of the eastern United States and some midwestern states. In areas achieving attainment or for which

there is insufficient information to determine whether they meet the NAAQS (unclassified areas), the prevention of significant deterioration (PSD) program applies. In areas not meeting attainment, the best achievable control technology (BACT) designed for the lowest achievable emission rate (LAER) programs apply along with EPA's emission offset program. The offset program was created with the objective to reduce the amount of nonattainment emission pollutant emitted in a region by requiring new sources of pollution to work with existing sources in the region to ensure no net increases of pollution resulted. In fact, the goal was to move nonattainment area toward attainment; therefore, net emission decreases were often required based on the degree or severity of the area's nonattainment status. This dynamic has made it very difficult for new sources in nonattainment areas to acquire permits.

Both PSD and BACT-LAER programs require pre-construction review and permitting of new or modified existing major stationary sources emitting certain regulated air pollutants. A new source in a nonattainment area is subject to NSR if its potential to emit exceeds 100 tons per year (tpy); the threshold can be as low as 10 tpy in extreme ozone nonattainment areas. In addition, existing major sources that make modifications, which increase emissions above significant levels (e.g. 40 tpy VOC), trigger NSR review. In other words, if an existing facility changes or expands its operations in a manner that increases its emissions of air pollution and the change meets the definition of a major modification, it must undergo NSR.

EPA has routinely found several types of violations resulting from improper interpretation of the NSR rule. These are identified as either "front-end" or "back-end" violations. Front-end violations lead to avoidance of NSR review altogether, whereas back end violations usually involve sources that go through the NSR process, but provide inaccurate or insufficient information.

Typical front-end violations may include the following:

- Improper use of exemptions. For example, the "routine maintenance, repair and replacement" exemption was meant to cover frequent, traditional and comparatively inexpensive repairs to maintain existing equipment. According to EPA, however, some sources have misinterpreted this definition to also include infrequent activities such as the replacement of equipment and/or altering of design or function of equipment that require significant capital investment.
- Failure to recognize a change as a modification. The EPA has discovered that some sources failed to treat certain activities as modifications under the NSR regulations.
- Improper Emission Estimates. A source is required to list all pollutants emitted at the facility to the best knowledge of the company. Several sources have been found in violation for incorrectly calculating potential emissions and using USEPA AP-42 emission factors either incorrectly or instead of source specific emission data.
- Improper netting. (Netting is the process of combining emissions from several sources to achieve reductions at a single facility. This program was designed to allow facilities more flexibility to comply with the new permitting rules.) Improper netting results when sources using netting calculations involve emission decreases previously accounted for in an earlier netting exercise.

Typical back-end violations may include the following:

Conducting an improper or invalid LAER or BACT

- Failure to achieve sufficient emission offsets, perhaps due to improper emission estimating or invalid data.
- In 1999, EPA believed that excessive abuse of the NSR program had resulted in less than acceptable reductions in NO_x and in response increased enforcement of the NSR requirements. In an internal EPA document, coal-fired power plants were identified as sources contributing significantly to NO_x, SO₂, and CO₂ emissions. Furthermore, The Agency noted that few facilities had been retired and that 30-year old plants were operating longer than planned, yet few had ever admitted to modifications.

NSR Enforcement Activity

Legal action taken against coal fired powered plants is best summarized by the USEPA press release on December 21, 2000:

U.S ANNOUNCES CLEAN AIR SETTLEMENT WITH CINERGY

Actions Are Part of National Initiative to Stop Illegal Pollution From Coal-Fired Power Plants

WASHINGTON, D.C. In an ongoing initiative to stop air pollution released illegally from coal-fired power plants, the Justice Department and the EPA today announced a settlement of a lawsuit with Cinergy Corporation, an electric utility based in Cincinnati. The enforcement action, valued at \$1.4 billion, is the largest ever taken by the U.S. EPA under the Clean Air Act.

“Today, I am announcing the largest enforcement settlement ever reached by the U.S. Environmental Protection Agency under the Clean Air Act. It is the Clinton-Gore Administration's latest action to provide cleaner air for all Americans,” said EPA Administrator Carol M. Browner. “Today's action will help ensure that the health of millions of citizens throughout the Eastern United States is protected from harmful levels of air pollution.”

Coal-fired power plants collectively produce more pollution than any other industry in the United States. Nearly four years ago, EPA began an investigation of coal-fired power plants, including those owned by Cinergy. The federal government in November 1999 filed suit against several electric utilities including Cinergy, charging that they violated the law by making major modifications to their power plants without installing equipment required to control smog, acid rain and soot. Since that time a number of states and environmental groups including those involved in today's settlement, have joined in EPA's efforts, including in this case Connecticut, New York and New Jersey.

The states and several citizen groups joined the agreement in principle with Cinergy Corporation and its two operating companies -- PSI Energy and Cincinnati Gas & Electric Company -- that requires the companies to significantly reduce harmful air pollution from 10 coal-fired power plants, perform \$21.5 million in environmental projects, and pay an \$8.5 million fine.

The agreement with Cinergy will result in substantial pollution reduction from one of the largest and most coal-dependent utilities in the nation. About 95 percent of Cinergy's generating units use coal to produce electricity to serve more than one million customers in Indiana, Ohio, and Kentucky. Under the agreement, sulfur dioxide emissions ultimately will be reduced by 400,000 tons per year and nitrogen oxide by 100,000 tons per year.

Under the agreement, Cinergy will spend an estimated \$1.4 billion to install permanent emissions-control equipment to meet stringent pollution limits; implement a series of interim pollution-reduction measures to reduce emissions while the permanent controls are designed and installed; decrease the amount of pollution released from its plants; and retire pollution emission allowances that Cinergy could have otherwise used to emit additional pollution. The agreement gives Cinergy flexibility in meeting its pollution reduction requirements and the ability to efficiently plan for future energy demands.

Although the enforcement action against Cinergy targeted six of its plants, the agreement limits emissions from all 10 of the company's coal-fired plants in Ohio and Indiana.

The sulfur dioxide and nitrogen oxides produced by power plants in the Ohio River Valley and the Southeast affect air quality near the facilities and also far downwind of the plant. These pollutants also contribute to acid rain in the Northeast. The Attorneys General of New York, New Jersey, and Connecticut, as well as the Hoosier Environmental Council, the Citizen Action Coalition of Indiana, and the Ohio Environmental Council, joined federal officials in working with Cinergy to reach the agreement.

The agreement in principle will form the basis of a consent decree to be filed in Indianapolis that will settle federal claims that Cinergy violated the Clean Air Act. Specifically, federal regulators said that over the past 15 years, Cinergy has undertaken at least 38 substantial modifications to these plants, increasing pollution output, without applying for a Clean Air Act permit and without taking steps to minimize these increased emissions.

In addition to Cinergy, the United States has brought legal actions for Clean Air Act violations against American Electric Power, FirstEnergy, Illinois Power, Southern Indiana Gas & Electric Company, the Southern Company, and the Tampa Electric Company. The EPA has brought a related administrative action against the Tennessee Valley Authority, a federal agency that owns and operates many coal-fired power plants.

With the exception of the Tampa Electric Company, these lawsuits continue. In February 2000, the Justice Department and the EPA reached an agreement to settle Clean Air Act claims with the Tampa Electric Company. Also as part of the initiative, the United States reached an agreement in principle with Virginia Electric Power Company, which calls for the Richmond-based utility to undertake major environmental improvements.

Conclusions

“When children have trouble breathing because of pollution from a utility plant hundreds of miles away, something must be done” Attorney General Janet Reno.

The Supreme Court Ruling on NAAQS

Because this ruling is extremely consequential to the other issues discussed in this paper, both public and private entities are watching closely. It is the opinion of this author that the Supreme Court is facing the single most significant ruling impacting the EPA's authority to administer a program to protect the environment since the EPA was formed in 1970.

At the time of this writing (January 18, 2001), the U.S. Supreme Court has not ruled on the November 7th NAAQS ozone arguments. It is anticipated that the court will rule sometime in spring 2001. In any case, if the Supreme Court rules in favor of the Respondents, EPA's authority to make regulation under the Clean Air Act will be dramatically weakened. A response in this vein will have a proverbial “domino effect” to all agencies accustomed to creating rules based on implied, determined and historically acted upon congressional delegated authority.

More than likely, the Supreme Court will require the Agency to revisit their rule making process, particularly the scientific evidence used to determine risk when establishing NAAQS. Thereby sending the 8-hour ozone decision back to the Scientific Advisory Boards and attorneys. Because the EPA will be under the influence of a new Administrator, it is feasible to assume that the 0.08 ozone standard averaged over 8-hrs will be delayed for several more years or may never be promulgated in the near future.

What does the revised final NOx SIP Call rule mean?

EPA is using section 126 and the NOx SIP Call to reduce interstate transport of ozone, as required by section 126. Under section 126 of the CAA, Congress purposely placed provisions for downwind states to petition the EPA and require them to conduct evaluations to determine if upwind states are detrimentally effecting a downwind State's ability to meet attainment. The rule requires EPA to act on petitions within 60 days. If violations are found, EPA is then required to establish provisions extending between 3-months and no longer than 3-years for upwind States to reduce pollution.

The original NOx SIP Call rule was an attempt made by EPA to allow the States to identify and reduce NOx pollution without direct federal-to-source rules. Section 126 establishes a direct federal-to-source rule, whereas the NOx SIP Call allows for States to determine the best approach to reduce NOx. It was EPA's intention to combine the NOx SIP Call with the Section 126 rule to address the downwind transport problems, which have been identified by the States and technically confirmed by EPA's scientific studies.

The dual program combining NOx SIP Call and section 126 requirements failed (in the rule making process) for two primary reasons. First of all, the stay issued on the NAAQS 8-hour standard segregated the States effected by the NOx SIP Call (19 states and D.C.) and Section 126 (12 states and D.C.). This lack on continuity between the States and the questions regarding the Supreme Court ruling made pressing this issue to risky for both the States and the EPA. Both entities appeared to feel more comfortable in a “wait-and-see” position rather than committing (gambling) through the rule what the Supreme Court may decide.

Secondly, companies (primarily utilities) felt uneasy with trusting their States to stay on-time with the NOx SIP Call deadlines, this being the only way to avoid federal involvement through section 126. As mentioned, under the old trigger mechanism, section 126 would be triggered should a State miss a NOx SIP Call deadline.

Most States have met the October 30, 2000 SIP Call requirement. Several States have submitted plans to achieve compliance by March 31, 2003 and therefore will be automatically withdrawn from section 126. In December 2000, The Court once again heard arguments on section 126 and is expected to rule in mid

to late spring 2001. Should the court find in favor of the EPA, the section 126 requirements effecting electrical generating units, boilers and turbines identified by the petitioning states will be required to comply with established emission limits. The section 126 ruling is expected to impact 392 facilities in 12 states and the District of Columbia.

Effects of NAAQS on NSR

The recent settlements between the EPA and several major coal-fired utilities may be indicative of the additional enforcement expected from EPA under the NSR program. The Supreme Court NAAQS ruling will have a significant impact on NSR in relation to NSR triggers, LAER and the emission offset programs. The ruling will not have a significant impact to areas that are in attainment with the 8-hour ozone standard. The NSR-PSD program is not expected to be impacted. However, should the Supreme Court rule in favor of EPA and approve the 8-hour ozone standard numerous counties currently designated in attainment under the existing 1-hour ozone standard are expected to be reclassified as nonattainment. These counties will once again be facing NSR-LAER and emission offset permitting.

Multi-tiered Attack

The multi-tiered approach to attacking ground-level ozone has raised awareness regarding ozone and its relationship to public health and welfare. Many industries and States effected by the ozone program must cautiously prepare strategic cross-sectional plans that address NAAQS, NOx SIP Call and Section 126, and NSR. The interpretation and implementation of these rules by the Federal and State Agencies, the Judicial System, and industry continuously compound the complexity of these programs. As a result, these same entities are forced to develop several strategic scenarios to be acted upon simultaneously in order to minimize detrimental impact and reduce risk. Scenario management, although beneficial, is often costly and risky in itself.

As a new administration under President George Bush assembles, one need only listen to the confirmation hearings of the EPA Administrator, the Energy Secretary, the Interior Secretary and the Attorney General to realize that, if the Senate truly does represent the voice of the public, environmental stewardship will continue to be an agenda item on our Nation's list of actions. The Supreme Court ozone ruling is by no means an exception as these issues continue to test how serious America is about protecting the environment.

References

1. Office of Air Quality Planning and Standards, *National Air Pollutant Emission Trends, 1900-1998*. Research Triangle Park, NC., 1999.
2. Liebsch, Edward. *Best Available Control Technology (BACT) Implementation Issues*; AWMA National Conference Paper, 2000.
3. Brubaker, Robert. *Environmental Symposium Presentation on NSR*; 9th Annual Business and Industry Environmental Symposium, Cincinnati Ohio, 2000.
4. USEPA Home Page. <http://www.epa.gov/ttn/rto/126>, *Findings of Significant Contribution and Rulemaking on Section 126 Petitions for Purposes of Reducing Interstate Ozone Transport*, 1999.
5. USEPA Home Page. <http://www.epa.gov/otc>. The Ozone Transport Commission.
6. USEPA Home Page. <http://www.epa.gov/airlinks>. The NOx SIP Call
7. USEPA Home Page. <http://www.epa.gov/oar>. New Source Review, Section 126 and NOx SIP Call.