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Robert A. Greco

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WHEN IS ROUTINE MAINTENANCE REALLY ROUTINE? A PROPOSED MODIFICATION TO THE EPA'S NEW SOURCE REVIEW PROGRAM

I. INTRODUCTION

Emissions from coal-fired power plants are a major source of pollution in the United States. As such, there are many different rules and regulations to control or limit these emissions.\(^1\) The power plant industry struggles with the question of when an upgrade or maintenance at a power plant is significant enough to require retrofitting with pollution controls. Clearly, the United States Environmental Protection Agency ("EPA") and the industry have different viewpoints on this. There must be a balance between reducing emissions and not overburdening power plant owners and operators with expensive retrofits.

Since the earliest days of the electric utility industry, owners and operators (mainly public utilities) of coal-fired power plants have performed various maintenance activities on their plants to keep them operating in a safe, reliable, and efficient manner. Similar to automobiles and other complex mechanical devices, without proper care and maintenance, a coal-fired power plant's performance degrades over time and requires routine maintenance much like automobiles require tire rotation and oil changes. Coal-fired power plants also require periodic replacement of both minor and major portions of the generating units, just as cars require periodic replacement of transmissions, water pumps, or tires.

For the first one hundred years of power generation,\(^2\) public utilities made these repairs and replacements, and performed these maintenance activities without any undue interference from, or concern over, federal laws.\(^3\)

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2. Based on the author's education and experience, this is roughly the period from 1890–1990; 1890 is the approximate time when the electric utility industry, as we know it today, was starting and 1990 is the year of *Wis. Elec. Power Co. v. Reilly*, 893 F.2d 901 (7th Cir. 1990). The significance of this case will be discussed at length in this Comment.

3. This was mainly due to two reasons: (1) the Clean Air Act, particularly the 1970 amendments, was not effective during the majority of this period and (2) the ruling in *Wis. Elec.*, 893 F.2d 901, had not yet occurred. This Comment will address each of these issues in more depth.
Although the Clean Air Act4 ("CAA") was originally enacted in 1963,5 the period of "unregulated"6 activity started to diminish with the introduction of the Clean Air Act Amendments of 1970.7 For the first time, the federal government enacted a comprehensive set of federal regulations aimed at regulating pollution from many sources, including power plants.8

The 1970 amendments to the CAA required the EPA "to set National Ambient Air Quality Standards9 ("NAAQS") and goals [to meet these standards] with deadlines."10 The amendments also required states to prepare individual "state implementation plans" ("SIPS") to achieve, or maintain, the NAAQS.11 The main goal of these amendments was to "promote human health with an adequate margin of safety" through the primary NAAQS and

5. The first federal legislation intended to address air quality in the United States was the Air Pollution Control Act of 1955. Mamie Riddle, Comment, Interpreting the Relevance of Economic Harm in the Clean Air Act: Tennessee Valley Authority v. Environmental Protection Agency, 30 ECOLOGY L.Q. 617, 620 (2003). However, this act had a very narrow focus that was limited to "information-gathering and research." Id.
6. In reality, power plants were not "unregulated," but the applicable regulations were not nearly as comprehensive as they became with the enactment of the Clean Air Act Amendments of 1970. See supra notes 3, 5. The first truly substantive air quality regulations came with the introduction of the 1970 amendments to the Clean Air Act. These amendments identified criteria pollutants, established National Ambient Air Quality Standards ("NAAQS"), and required states to prepare plans to achieve these standards. See, e.g., Mendocino County Air Quality Management District, THE FEDERAL CLEAN AIR ACT, at http://www.co.mendocino.ca.us/aqmd/pages/CAA%20history.html (last visited Jan. 17, 2004) [hereinafter CAA History].
7. The Clean Air Act was amended a total of five times starting in 1965 (motor vehicle standards). Subsequent amendments were enacted in 1967 (fuel additives, aircraft engine emissions, and the first new source performance standards), 1970 (see infra notes 8–19 and accompanying text), and 1977 (implementation of the Prevention of Significant Deterioration ("PSD") program), with the most recent amendments coming in 1990. See CAA History, supra note 6.
8. The Clean Air Act covers many widely ranging sources of pollution, but for the purposes of this Comment, a "major emitting facility" means "fossil-fuel fired steam electric plants of more than two hundred and fifty million British thermal units per hour heat input." 42 U.S.C. § 7479(1) (2003). This definition encompasses all major coal-fired power plants in the United States.
9. The CAA defines primary and secondary NAAQS as follows:

National primary ambient air quality standards . . . shall be ambient air quality standards the attainment and maintenance of which in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health. . . . Any national secondary ambient air quality standard . . . shall specify a level of air quality the attainment and maintenance of which in the judgment of the Administrator, based on such criteria, is requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air.

10. See CAA History, supra note 6.
11. See CAA History, supra note 6.
“to promote human welfare” through the secondary and more strict NAAQS.\textsuperscript{12}

The other significant feature of the 1970 amendments was the creation of the New Source Review ("NSR")\textsuperscript{13} program for "nonattainment"\textsuperscript{14} areas.\textsuperscript{15} Congress intended the NSR program to ensure that new sources\textsuperscript{16} would not have an adverse effect on the newly created NAAQS in the region where the source is located.\textsuperscript{17} Congress intended that only "new . . . power plants were required to use modern forms of air pollution control."\textsuperscript{18} Because of this intent, the NSR regulations "[do] not generally affect existing sources, but [do] apply if they undergo a 'modification.'"\textsuperscript{19} Therein lies the rub.

This Comment will address how the EPA is interpreting the word "modification" as it applies to existing sources, and whether the maintenance activities and periodic equipment replacements, mentioned above, would (or should) be classified as modifications which would trigger the NSR regulations. The author believes maintenance activities and periodic equipment replacements should not be classified as modifications. The triggering of the NSR regulations for an existing power plant would mean having to retrofit the plant in question with state-of-the-art pollution control devices.\textsuperscript{20} This could be an extremely costly venture for many plant operators.\textsuperscript{21}


\textsuperscript{14} Nonattainment is defined as "any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant." 42 U.S.C. § 7407(d)(1)(A)(i) (2003).

\textsuperscript{15} See CAA History, \textit{supra} note 6.

\textsuperscript{16} A "new source" is "any stationary source, the construction or modification of which is commenced after the publication of regulations (or, if earlier, proposed regulations) prescribing a standard of performance under this section which will be applicable to such source." 42 U.S.C. § 7411(a)(2) (2003).

\textsuperscript{17} "The CAA does not require facilities built before 1970 to comply with the Act's new source performance standards for installing pollution control equipment. The rationale was the older facilities would be phased-out or upgraded piece by piece." \textit{ENVIRONMENTAL LAW PRACTICE GUIDE} § 17.04[1] (2003), at http://www.lexis.com. The EPA’s thinking was that as facilities underwent major modifications, the EPA would review any new emissions for compliance with the CAA. \textit{Id.} \S\S 21–22.

\textsuperscript{18} Riddle, \textit{supra} note 5, at 621–22.

\textsuperscript{19} RMRR Final Rule, \textit{supra} note 13.

\textsuperscript{20} See generally \textit{id}.

\textsuperscript{21} See \textit{infra} Part V.
Prior to 1990, power plant owners and operators made many types of repairs and replacements, or modifications, on their units without triggering the NSR regulations. However, the issue on how broadly or narrowly to interpret the term "modification" reached a bellwether moment in 1990 with the Seventh Circuit's landmark ruling in Wisconsin Electric Power Co. v. Reilly ("WEPCO"). In WEPCO, Wisconsin Electric Power Company ("WEPCO") challenged two final determinations of the EPA wherein "the EPA concluded that WEPCO's proposed renovations to its Port Washington power plant would subject the plant to certain pollution control provisions of the Clean Air Act" because the work they were proposing constituted a major modification. The EPA further concluded that the renovation of the electric power plant would "subject the plant to certain pollution control provisions [(new source performance standards and prevention of serious deterioration requirements)] of the Clean Air Act." The court ruled in favor of the EPA in a case that sent shivers throughout the industry.

The WEPCO ruling raised two key issues that the industry has been struggling with ever since. The first is how to determine what types of maintenance are routine, and therefore will not trigger NSR, and what types are not routine, and therefore will trigger NSR. The second issue is what constitutes an increase in emissions. Any project that results in an increase in emissions would trigger the NSR regulations, no matter how minor the project. This Comment will discuss each of these issues in more detail.

After the EPA's success in the WEPCO case, it began a series of investigations in the 1990s against utilities and other industries by serving them with "114 letters," requesting information on modifications and other maintenance activities that were performed at power plants across the country.

As a result of the information that was requested in these "114 letters," the EPA started a series of enforcement actions against many utilities as well as the Tennessee Valley Authority ("TVA"), alleging various violations of the

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22. 893 F.2d 901 (7th Cir. 1990).
23. Id. at 904.
25. WEPCO, 893 F.2d at 904.
26. § 7411(a)(4).
27. A 114 letter, so called because it is authorized under § 114 of the CAA, is a letter in which the Administrator of the EPA (or an authorized representative) requests specific information from an owner or operator of an emission source related to potential violations of federal law. It works much like a subpoena. Clean Air Act § 114(a)(1), 42 U.S.C. § 7414(a)(1) (2003).
28. The Tennessee Valley Authority ("TVA") is a governmental agency that owns and operates
In response, a number of utilities negotiated consent decrees with the EPA to settle the alleged violations of these rules, others chose to challenge the action in court, and still others are taking a "wait and see" attitude.

While these consent decree settlements have involved multimillion dollar civil forfeitures, the real cost to the utilities lies within the other conditions that the parties agreed to as part of these consent decrees. For example, the utilities have agreed to install expensive pollution control systems on existing units; shut down aging coal-fired units; repower existing coal-fired units with cleaner burning, more expensive gas units; and pursue other pollution abatement projects. To illustrate the cost of such conditions, the Tampa Electric Company ("TECO") consent decree will cost the utility over $1 billion dollars.

Under the current administration, the EPA changed course by apparently abandoning the continued enforcement of the rules as they were interpreted in the enforcement actions of the 1990s and promulgating new rules that attempted to clear up the discrepancies. The conundrum is that the Justice Department continues to prosecute utilities for violations of these rules as interpreted in the 1990s despite the fact that the EPA recently changed the
rules in a way that would have negated a good percentage of the prosecutions. Today, it is fair to say that the industry is in a state of uncertainty over the legality of certain types of maintenance activities because of the conflicting interpretations by the EPA over the past decade.

This Comment will analyze the history of the routine maintenance issue as applied to power plants, explain why the latest rule change that is intended to “fix” the problem will not actually fix the problem, and finally, suggest some modifications to the EPA’s Routine Maintenance, Repair, and Replacement Final Rule (“RMRR”) that will make this new rule easier for companies to see the bright line of the issue and therefore allow utilities to proceed with more certainty. Part II of this Comment will explain the permitting process for power plants and how it has evolved over the years with amendments to the original CAA. Part III will explain the WEPCO decision and its long-reaching implications for the maintenance of existing power plants. Building on the WEPCO explanation, Part IV will look at key decisions since WEPCO that have, for the most part, upheld and clarified the ruling. Part IV will also look at some settlements that have occurred in the past five years. Part V will look at the changes the current administration has recently implemented in an attempt to clarify the rules for utilities. Part V will also explain what the author feels will be continuing problems with these new rules. Finally, Part VI will contain an alternate proposal that would enable utilities to execute maintenance projects at existing power plants with a degree of certainty over the applicable rules. The proposal contains an efficiency exception and easy-to-interpret rules for determining when the NSR regulations are triggered.

II. THE MODERN PERMITTING PROCESS

The CAA regulates many areas of air quality, including emissions from major new stationary sources of pollution. Under the CAA, coal-fired power plants are classified as major stationary sources. As such, the developer of a new power plant must obtain a preconstruction permit from either the state, or if the state does not have delegated permitting authority, the EPA. The preconstruction permit is issued after the owner “demonstrate[s] that the new

35. While this Comment deals exclusively with the effect of the CAA on power plants, the issues discussed also apply to many other industries that emit regulated pollutants (e.g., refineries, printing plants, and paper mills).
36. See RMRR Final Rule, supra note 13.
37. Id.
38. Id. at 61249.
39. See supra note 8.
40. See RMRR Final Rule, supra note 13, at 61249.
source will have state-of-the-art pollution control devices." The process is generically referred to as New Source Review ("NSR").

While the NSR program is primarily aimed at new sources, it does have a provision that encompasses existing sources that are undergoing a "modification." The term "modification" is defined as "any physical change in, or change in the method of operation of, a major source which increases the actual emissions of any hazardous air pollutant emitted by such source . . . or which results in the emission of any hazardous air pollutant not previously emitted." Another key term is "major modification" which is defined as "any physical change in or change in the method of operation of a major source that would result in: (1) [a] significant emissions increase of a regulated NSR pollutant . . . and (2) [a] significant net emissions increase of that pollutant from the major stationary source." To summarize, a source (or a generating unit) undergoing a modification or a major modification must undergo NSR, which would likely result in the addition of expensive pollution controls.

The EPA has concluded that the NSR program as it existed prior to the implementation of the RMRR Final Rule "has impeded or resulted in the cancellation of projects which would maintain and improve reliability, efficiency and safety of existing energy capacity. Such discouragement results in lost capacity, as well as lost opportunities to improve energy efficiency and reduce air pollution." Routine maintenance, repair and replacement ("RMRR") is a category of activities that "do not constitute a 'physical change' under the definition of 'major modification.'" Until the 2003 RMRR Final Rule, the RMRR exclusion has never been defined within the NSR regulations. The RMRR exclusion has historically been applied on a case-by-case basis using a multifactor test for determining the applicability of this exclusion. This case-by-case determination is made in one of two ways: (1) through an applicability determination where the EPA is asked for guidance prior to work

41. Id.
42. Id.
43. Id.
46. See RMRR Final Rule, supra note 13.
48. See RMRR Final Rule, supra note 13, at 61249.
49. Id.
50. Id.
commencing or (2) through an enforcement action where the EPA challenges
the legality of an activity that has already occurred.51

Historically, an operator52 of a power plant has five choices to determine
whether an activity falls within this RMRR exclusion.53 None of these five
choices, however, is especially appealing to an operator that is seeking to
make a major investment in a power plant.54 The five choices are:

"[T]he . . . operator may simply seek an NSR permit."55 This option "will
likely result in a requirement to retrofit an existing plant with state-of-the-art
pollution controls which often is very costly."56 This process is also very
time consuming, and the combination of time and expense make this an unlikely
choice for an operator.57

"[T]he . . . operator may proceed at risk without a reviewing authority
determination."58 For any but the most minor project, the owner is not likely
to take this risk.59 The very serious downside is that, after the fact, the EPA
may determine that you were in violation of federal law.60 The penalties for
this would include substantial fines and a likely requirement to update the
generating unit with state-of-the-art pollution controls.61

"[T]he . . . operator may seek an applicability determination."62 This
option is similar to option one in that it "is time-consuming and expensive,"
although this is typically not as onerous as seeking a new or revised
permit.63

"[T]he . . . operator may forego or curtail [certain] replacements . . . and
opt to repair existing components . . . ."64 This option could result in a
decreased plant reliability, efficiency and even safety.65

"Finally, the . . . operator may curtail the plant's productive capacity by

51. Id. at 61249–50.
52. The author uses the term "operator" to mean both the owner and the operator of the electric
generating unit in question. Typically, the operator is the holder of the operating permit.
Furthermore, in most instances the owner and the operator are the same company, e.g., a public
utility.
53. See RMRR Final Rule, supra note 13, at 61250.
54. Id.
55. Id.
56. Id.
57. Id.
58. Id.
59. Id.
60. Id.
61. Id.
62. Id.
63. Id.
64. Id.
65. Id.
replacing components with less than the best technology in order to be more certain” the rules are not violated.\textsuperscript{66}

In the 1970s and 1980s, many utilities executed maintenance projects without seeking an applicability determination from the EPA.\textsuperscript{67} It was not until Wisconsin Electric Power Company decided to extend the life of one of its power plants that the industry realized the seriousness of this issue.\textsuperscript{68}

III. RMRR MODIFICATION

The NSR program has become “complex and controversial.”\textsuperscript{69} Because of this, “[i]n the mid-1990’s, the EPA launched an effort to revise the regulations.”\textsuperscript{70} This effort lay dormant for a number of years until the EPA finally adopted many of the proposed changes in late 2002.\textsuperscript{71} As part of this effort to streamline the regulations and in an attempt to bring more certainty to the process and further define what a modification is and what constitutes “routine maintenance, repair and replacement,” the EPA undertook notice and comment rulemaking by publishing a draft rule on December 31, 2002.\textsuperscript{72} After taking public comments for 120 days, the EPA finalized only the “equipment replacement provision” portion of the draft rule.\textsuperscript{73} They “decided, for now, not to take final action on the [other proposal].”\textsuperscript{74}

A. The RMRR Final Rule

In late 2003, the EPA finally formalized rules changes in an attempt to bring clarity to the term “routine maintenance, repair and replacement.” On October 27, 2003, the EPA published a final rule that modifies key portions of the NSR program in an attempt to bring some consistency to the interpretation of what is a major modification and what constitutes RMRR for the purposes of obtaining an exclusion from the NSR requirements.\textsuperscript{75}

\begin{thebibliography}{99}
\bibitem{66} Id.
\bibitem{67} Based on the author’s professional experience.
\bibitem{68} See infra Part III.
\bibitem{69} DAVID WOOLEY \& ELIZABETH MORSS, CLEAN AIR ACT HANDBOOK § 1:38 (13th ed. 2004).
\bibitem{70} Id.
\bibitem{71} Id.
\bibitem{73} See RMRR Final Rule, supra note 13, at 61251.
\bibitem{74} Id. (action was not taken on the draft rule’s other proposed rule, an annual maintenance, repair and replacement allowance).
\bibitem{75} See RMRR Final Rule, supra note 13.
\end{thebibliography}
The major change in the new rule is the addition of an “equipment replacement provision” (“ERP”) that will “specify activities that will automatically qualify for the RMRR exclusion.” An activity can be qualified as an ERP if:

1. It involves replacement of any existing component(s) of a process unit with component(s) that are identical or that serve the same purpose as the replaced component(s); (2) the fixed capital cost of the replaced component(s), plus costs of any activities that are part of the replacement activity . . . does not exceed 20 percent of the current replacement value of the process unit; and (3) the replacement(s) does not alter the basic design parameters of the process unit or cause the process unit to exceed any emission limitation or operational limitation (that has the effect of constraining emissions) that applies to any component of the process unit and that is legally enforceable.

All three of the elements above must be met for a project to qualify as an ERP under the new rule.

B. Issues with the RMRR Final Rule

The first element, which requires replacing a component with either an identical one or one that serves the same purpose, is unnecessarily open to interpretation. While it is true that in many cases, identical replacement components are available, in just as many cases, the components are not identical. Many portions of a power plant contain engineered (or custom) equipment, as opposed to an off-the-shelf component. When portions of these custom parts are replaced, often the technology in the replacement is updated from the original. When these types of components are replaced, it is very common for the owner to evaluate changes in the component to make it more efficient or durable. For example, if a component is undergoing replacement because of a premature failure, it would be quite normal for the owner to look into modifications or design changes so that the root cause of the failure would not reoccur.

The RMRR Final Rule does not set appropriate criteria, or any for that matter, for determining whether the component is serving the same purpose. Because there are no criteria, it is very easy to imagine the EPA making a determination that a component is not serving the same purpose because it is

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76. See id. at 61252.
77. Id.
78. Based on the author’s personal knowledge, examples of components that would likely be replaced with identical ones would be things such as valves, transmitters, and pumps.
designed to last longer than the one it is replacing.

On its face, the second element appears to be clear, but there is still some room for interpretation. Since the “current replacement value” can be a debatable value, the rule allows the company to use one of four methods for calculating this replacement value. This value may be determined by using any of the following: “(1) [actual] replacement cost; (2) invested cost, adjusted for inflation; (3) the insurance value . . . [for] complete replacement . . . ; or (4) another accounting procedure . . . based on Generally Accepted Accounting Principles (GAAP).” Often times the current replacement value is much higher than the original installed cost, so the owner would more likely favor the second element, the invested cost adjusted for inflation. The issue here is what the original cost was and what rates to use for inflation over the past period of time. The author feels that choosing a twenty-percent cap, or any monetary cap for that matter, for this parameter is not necessary. These may or may not be problems in the future, but the proposal that the author offers at the end of this Comment eliminates this issue altogether.

The third element is very clear in that it draws a bright line at the original or basic design parameters of the unit. The basic design parameters for an electric generating unit are “maximum hourly heat input and fuel consumption rate.” As long as the owner has the proper documentation indicating what the design parameters were for the unit, this element is very straightforward. This element will only be controversial because of the cost of the project that may bring a unit back to its basic design parameter. In other words, combining this with the second element is where the problems will crop up.

C. Legal Challenge to the RMRR Final Rule

On December 24, 2003, a three-judge panel of the United States Court of Appeals for the District of Columbia, issued an injunction keeping the new RMRR Final Rule from taking effect on December 26, 2003. A group of states led by New York (as well as other public and private entities) asked the court to stay the effective date of the RMRR Final Rule until their challenges to the rule could be heard by the court. The challengers alleged that “[the

79. See RMRR Final Rule, supra note 13, at 61252.
80. Id.
81. See discussion infra Part VI.
82. RMRR Final Rule, supra note 13, at 61252.
84. Id. The states that were party to this action were “Connecticut, Maine, Maryland, Massachusetts, New Hampshire, New Mexico, New Jersey, New York, Pennsylvania, Rhode Island,
new rule] violates the Clean Air Act by letting power plants . . . increase pollution significantly without adopting control measures, and public harm would result." This challenge is expected to last well into 2004 before the court issues its final ruling.

IV. THE WEPCO DECISION

Wisconsin Electric’s Port Washington power plant “consists of five coal-fired steam generating units that were placed in operation between 1935 and 1950.” While each generating unit had an original design capacity of 80 megawatts, “the recent performance of some of the units has declined due to age-related deterioration of the physical plant.” After extensive studies, WEPCO concluded “that extensive renovation of the five units and the plant common facilities [was] needed if operation of the plant [was] to be continued.”

WEPCO, in accordance with Wisconsin statutes, applied to the Public Service Commission of Wisconsin (“PSCW”) for authority to begin the renovation of the five units at the Port Washington power plant (“PWPP”). The PSCW consulted with the Wisconsin Department of Natural Resources (“WDNR”) as to whether a prevention of significant deterioration (“PSD”) permit was required for this work. Subsequently, the WDNR consulted with Region V of the EPA who then consulted with the EPA headquarters. The EPA ultimately determined that the proposed project would require the plant to meet New Source Performance Standards and would require a PSD permit. It is from this determination that WEPCO brought suit against the EPA. In the suit, WEPCO alleged that “the EPA ha[d] misconstrued both the

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Vermont and Wisconsin. They were joined by New York City, Washington, San Francisco, New Haven and a host of other cities in Connecticut.” Appeals Court Blocks Clean Air Act Changes, USA TODAY, Dec. 25, 2003, at http://www.usatoday.com/news/washington/2003-12-25-clean-air_x.htm (last visited Feb. 20, 2004). There is a discrepancy in the published reports as to the number of states that sued. Contrary to the USA Today article, the Environmental Protection Agency’s NSR home page refers to fourteen states. See supra note 83.

85. Appeals Court Blocks Clean Air Act Changes, supra note 84.
86. Id.
88. Id.
89. Id. (citing letter from Thomas J. Cassidy, Executive Vice President at WEPCO, to Jacqueline K. Reynolds, Secretary to the Public Service Commission of Wisconsin, at 2 (July 8, 1987)) (emphasis omitted).
90. Id. at 906.
91. Id.
92. Id.
93. Id.
Clean Air Act and its own regulations.\(^{94}\)

The work that WEPCO was planning for its PWPP was characterized by the company as a "life-extension" and an "extensive renovation."\(^{95}\) This work included replacements of equipment such as air-heaters and steam drums and repairs of other equipment such as steam turbines and common facilities.\(^{96}\) The EPA estimated that this work was valued at between 22\%-29\% of the overall value of the power plant depending on how the value is calculated.\(^{97}\) The WEPCO court ultimately determined "under the plain terms of the Act, WEPCO's replacement program constitutes a 'physical change.'"\(^{98}\)

It is important to note that the work that WEPCO was proposing was not intended to increase the plant's capacity, and therefore its emissions, above the original design of eighty megawatts.\(^{99}\) Therefore, WEPCO was being punished by the EPA for letting the plant's performance degrade over a period of years.

There were two significant outcomes in the WEPCO case. The first is the determination that an increase in emissions is to be based upon a baseline of actual emissions from a "two year period which precedes the particular date and which is representative of normal source operation."\(^{100}\) (This is as opposed to using the highest emissions in any year of operation or using the original design parameters for the unit.) The second is the determination that the cost of the project is a significant factor in determining whether an air permit modification is required.\(^{101}\)

The RMRR Final Rule that the EPA implemented on October 27, 2003 modifies the first WEPCO outcome by allowing the company to bring a unit back up to its original design parameters subject to certain limitations. However, the RMRR Final Rule continues to endorse the second WEPCO outcome by applying a 20\% cap on the cost of projects that would be exempted from the NSR rules.\(^{102}\)

\(^{94}\) Id.
\(^{95}\) Id. at 905–06.
\(^{96}\) Id. at 906.
\(^{97}\) See RMRR Final Rule, supra note 13, at 61257.
\(^{98}\) Wis. Elec. Power Co., 893 F.2d at 907.
\(^{99}\) Id. at 901.
\(^{100}\) Id. at 916 (emphasis omitted).
\(^{101}\) See RMRR Final Rule, supra note 13, at 61256 (referring to Wis. Elec. Power Co., 893 F.2d at 901).
\(^{102}\) For further discussion, see infra Part V.
In the late 1990’s, the EPA began a concerted effort to enforce and expand the rules that were upheld in the WEPCO decision. In November of 1999, the EPA filed lawsuits against seven utilities, a total of seventeen coal-fired power plants, and the TVA alleging that they “illegally released massive amounts of air pollutants, contributing to some of the most severe environmental problems facing the nation today.”

The EPA alleged that the utilities “violated the NSR provisions of the CAA by undertaking ‘major modifications’ of their plants without obtaining necessary [PSD] permits or complying with the new source performance standards (NSPS).” More specifically, they alleged “that the utilities failed to install the best available control technology” when they made other modifications to their units. In response, the utilities maintained that they did not cause emissions to increase, and “that the EPA’s legal position represents a change in the law of which they did not have fair notice.”

The EPA chose to go after a broad range of utilities across the eastern half of the Untied States. The utilities that were involved in this first wave of actions were American Electric Power, Cinergy, First Energy, Illinois Power, The Southern Company, and Southern Indiana Gas & Electric Company.

The magnitude, in terms of the economic effect on ratepayers and shareholders, of the EPA’s policy change can be seen in the few enforcement actions that have been resolved as of this writing. While many of the companies have chosen to take a wait-and-see strategy, there have been four consent decrees between the power companies and the EPA. These

104. The Tennessee Valley Authority is listed separately because unlike the utilities, the EPA sought enforcement through an administrative compliance order. Id.
106. Gaynor & Lippard, supra note 103, at 5.
107. Id.
108. Id.
109. Id.
110. The utility’s ratepayers, the shareholders of the corporation or a combination of both will pay for the hundreds of million or billion dollar settlements.
111. See supra note 30. The total of four is referring to major coal-fired power plant operators. There have also been a series of consent decrees settling similar charges in other industries such as refineries, smelting operations, and others. See, e.g., U.S. Environmental Protection Agency Cases and Settlements, at http://cfpub.epa.gov/compliance/resources/cases/civil/##CAA (last visited Feb. 21, 2004).
consent decrees have cost the utilities (and their ratepayers or shareholders) hundreds of millions or billions of dollars. In addition to these consent decrees, a few cases have gone through the court system. These will be discussed further in Part IV.B.

A. Consent Decrees

Some companies have elected to negotiate consent decrees with the EPA to resolve their enforcement actions. This strategy serves a number of purposes, not the least of which is to give the company closure of the actions and remove a cloud of uncertainty over the company's operations. By settling, the companies will avoid years of costly litigation with an uncertain outcome. They will also be able to influence the outcome more than if the decision is left to the courts.

1. Tampa Electric—The First Defendant to Blink

Within the first wave of the seven enforcement actions, Tampa Electric was the first to enter into a consent decree with the United States. Similar to WEPCO, Tampa Electric allegedly made "major modifications to [its] plants without installing equipment required to control smog, acid rain and soot." The work Tampa Electric performed was commonly thought to be routine maintenance in the industry up to this time. It undertook projects such as replacement of cyclones (coal burners), replacement of steam drum internals, replacement of waterwalls and high-temperature superheaters, and replacement of the furnace floor.

The Tampa Electric facts are similar to those in WEPCO in many respects, but the work referenced in this case arguably falls short of the work that WEPCO performed at their Port Washington units. For example, while Tampa Electric replaced steam drum internals at its Big Bend plant, WEPCO replaced entire steam drums. Tampa Electric replaced the furnace floor and cyclone at its Gannon plant, while WEPCO replaced the entire furnace section, not just the floor.

Even though Tampa Electric "denied and continues to deny" the allegations, it elected to enter into the consent decree "solely to avoid the

112. See infra Part V.
113. See Press Release, supra note 105.
114. Id.
116. See id. ¶ 27.
costs and uncertainties of litigation and to improve the environment in and around the Tampa Bay area of Florida."\footnote{118} Although the consent decree contained a civil penalty in the amount of $3.5 million, this was a very minor expenditure when compared to the projects that Tampa Electric was, and is, required to carry out on its existing power plants.\footnote{119} To illustrate, other provisions of the consent decree required Tampa Electric to do the following: (1) By 2003, convert the Gannon facility to natural gas and install appropriate pollution controls; (2) take interim pollution control steps at its Big Bend facility while final systems are designed and installed; (3) surrender significant amounts of pollution credits; (4) carry out a minimum of $5 million worth of EPA-approved projects to enhance NOx reduction technology; and (5) perform up to $2 million in research in the surrounding environment.\footnote{120}

2. Other Consent Decrees

The Tampa Electric settlement was not unique, it was just the first of a wave of multimillion (or billion) dollar settlements. PSEG Fossil LLC\footnote{121}, Virginia Electric and Power Company ("VEPCO"), and Wisconsin Electric Power Company ("WEPCO") have also entered into consent decrees with the EPA to settle similar actions brought by the EPA.\footnote{122} All three of these consent decrees contain similar provisions as the Tampa Electric Consent Decree (in other words, a civil penalty, an agreement to spend millions on new pollution controls, and other expenditures for research and development efforts or pollution-offsetting projects).

The PSEG Fossil LLC Consent Decree has a civil penalty of $1.4 million and requires the company to "spend over $337 million to install state-of-the-art pollution controls to eliminate the vast majority of sulfur dioxide and

\footnote{118. \textit{See} TECO CONSENT DECREE, \textit{supra} note 30, at 2.}
\footnote{119. \textit{See generally} \textit{id.}}
\footnote{120. \textit{Id.}}
\footnote{121. PSEG Fossil LLC owns and operates power plants it acquired from Public Service Electric and Gas Company.}
\footnote{122. \textit{See} PSEG Consent Decree, \textit{supra} note 30; Consent Decree between the United States of America (joined by the States of New York, New Jersey, Connecticut, West Virginia and the commonwealth of Virginia) and Virginia Electric Power Co., \textit{at} http://www.epa.gov/compliance/resources/decrees/civil/CAA/VEPCOCD.pdf (last visited Feb. 21, 2004); WEPCO Consent Decree, \textit{supra} note 30.}
nitrogen oxide emissions from" two of its power plants. In addition, the consent decree requires the company to spend a minimum of $6 million on projects that "will partially offset the impact of past emissions."

The VEPCO Consent Decree carries a civil penalty of $5.3 million and requires the company to spend $1.2 billion to reduce SOx and NOx emissions from eight of its power plants by 2013. As with the PSEG Fossil LLC agreement, VEPCO also agreed to spend $13.9 million to "offset the impact of past emissions."

The WEPCO Consent Decree carries a civil penalty of $3.2 million. In addition, it requires the company to spend $600 million on pollution controls at five of its power plants and to spend a minimum of $20 million on a mercury reduction demonstration project.

B. Civil Cases

Some of the utilities with pending enforcement actions have chosen to fight the allegations in court instead of entering into settlement discussions with the EPA. As of this writing, only a few of these cases have made it through or partially through the court system. Analysis of the early results of these actions reveals a split in authorities. The EPA prevailed in United States v. Ohio Edison Co., but lost "an equally significant pretrial ruling" in Duke Energy Corp. v. United States. The Eleventh Circuit's decision in Tennessee Valley Authority v. Whitman also dealt a blow to the EPA's enforcement power by ruling that the "CAA was unconstitutional to the extent

124. Id.
126. Id.
131. 336 F.3d 1236 (11th Cir. 2003).
that it authorized the EPA to issue unilateral compliance orders . . .".

The *Ohio Edison* court had to address two major issues: (1) an interpretation of the rule exempting (from the NSR requirements) routine maintenance, repair and replacement projects, and (2) whether Ohio Edison’s projects increased emissions. Significantly, these were the two issues that were the most contentious in the *WEPCO* case.

The *Ohio Edison* court agreed with the *WEPCO* court by adopting a very narrow interpretation of the term “routine maintenance.” It gave significance to the fact that the proposed projects would extend the life of the generating units, require several months of outage to complete, and were large capital projects, which would only be done once or twice during the unit’s life. The court did not agree with Ohio Edison’s argument that a key factor should be the “prevalence of a particular activity throughout an industry,” as opposed to “how often an activity is performed at a particular facility.” The latter was the EPA’s argument.

The *Ohio Edison* court, while rejecting the EPA’s favored “actual to potential” test, upheld the “actual to actual” test from *WEPCO*. This test allows the EPA to take into account increased operating hours of the generating unit when calculating future actual emissions. Ohio Edison argued that an increase in operating hours should not be considered when calculating future emissions “since the regulations expressly exclude ‘increases in hours of operation’ from triggering NSR.” The court apparently did not give much deference to the statutory language as its ruling ultimately holds that an increase in operating hours could trigger NSR.

In stark contrast to the *WEPCO* and *Ohio Edison* decisions, in *United
States v. Duke Energy Corp., the Middle District Court of North Carolina “issued a thoughtful opinion that in most respects is the exact opposite” of the previous decisions. In the court’s preliminary decision, it addressed the issues of what is “routine maintenance” and what is the proper method for calculating an increase in emissions.

In the first part of the decision, the Duke Energy Corp. court held that “the question of whether a given activity is routine is to be determined based on what is routine for the entire source category.” The types of projects discussed in the above cases would probably be considered routine maintenance with this standard. While a specific project (e.g. replacing a boiler surface) might only occur once in a specific plant’s lifetime, it occurs on an annual basis in the utility industry as a whole.

In the second part of the decision, the court held that for PSD purposes “there is an emissions increase caused by a project only if the project increases the short-term/hourly emissions rate from the facility.” This type of analysis would make increased hours of operation inconsequential. As compared to the Ohio Edison court, this court apparently gave great deference to the plain language of the statute.

WEPCO (7th Circuit Court of Appeals), Ohio Edison (Southern District of Ohio) and Duke Energy (Middle District of North Carolina) were all decided in different jurisdictions. In addition, the ruling in Duke Energy was a preliminary ruling on cross motions for summary judgment, as opposed to a final ruling by the court. There will be more challenges to the EPA’s actions in the coming months or years that will lead to more rulings that will, hopefully, clarify the issues further. If there are enough contradictory or inconsistent rulings at the circuit court level, maybe the Supreme Court will, once and for all, clarify the issue.

VI. CONCLUSION

As the EPA acknowledges, “[t]he NSR program is by no means the primary regulatory tool to address air pollution from existing sources.” The current administration’s changes to the Clean Air Act’s interpretation of the

142. See Gaynor & Lippard, supra note 103, at 8.
143. Id.
144. Id. at 9 (emphasis added).
145. Based on the author’s knowledge and experience.
147. See New Source Review, supra note 47, at 3.
terms "major modification" and "routine maintenance, repair and replacement" are positive for the industry in that they will allow utilities to proceed with plant betterment and maintenance projects with more certainty. The problem, however, is that the rules are still open to interpretation and leave unanswered issues such as how long a plant may operate under its existing air permit without having to renew and update the emissions control systems to current state-of-the-art technology.

The author recommends that the EPA simplify the rules that govern maintenance and upgrade activities at power plants with the primary goal of removing the uncertainty from the process. A secondary, although important nonetheless, goal would be to promote upgrades that increase efficiency. Corporations that build, own and operate power plants that are worth hundreds of millions or billions of dollars are entitled to a clear and concise set of rules by which they are regulated and should be allowed to, and encouraged to, increase the efficiency of their plants without concern over triggering new regulations. These recommended changes are the following:

1. Make very clear to the industry that efficiency improvements that will result in less emissions per unit of energy produced are to be encouraged. The rules should allow owners and operators some flexibility to implement such projects.

2. Grant a facility an air permit with a fixed duration of forty years. Once a facility receives an air permit, it should be allowed to operate for the duration of the permit's life as long as it stays within the bounds of the air permit. The recommendation of forty years would make the air permit match the design life of most pieces of major equipment. It is approximately at the forty-year mark of a power plant's operation that extensive renovations or life extensions are required to enable it to run for an extended period of time. It is at this time that it would be appropriate to subject the facility to the New Source Review provisions of the CAA.

3. Allow the owners and operators of the facility to perform any maintenance activities (including equipment replacements) the power plant requires to allow it to keep operating within the conditions set forth in the air permit. As long as the facility stays within its air permit, it should not be subject to the twenty-percent cost limitation in the RMRR Final Rule.

148. While most of this Comment deals exclusively with power plants, some of these recommendations would be equally applicable to refineries, printing plants, cement plants, and other major industries that must comply with the CAA.

149. Typically, a power plant will be designed for a useful life of forty years. This is not to say that the plant will only be able to operate for forty years, but typically, the major systems would need to be reviewed to determine if they can be operated past the original design life.

150. Based on the author's personal knowledge.
(4) Allow the owners and operators to implement capital projects that entail replacement of major pieces of equipment with similar or enhanced designs as long as the plant will keep operating within the conditions set forth in its air permit and each project does not exceed the twenty-percent cost limitation. This change must come with appropriate controls to ensure that owners and operators do not parse up projects solely to get around the regulations.

(5) Prosecute capital projects that will increase the efficiency of the power plants within the initial forty years of the plant's life. These efficiency improvement projects should not be subjected to the twenty-percent cost limitation as a major goal of the EPA should be to promote, not inhibit, increasing the efficiency of coal-based power plants. Increased efficiency results in lower emissions of pollutants per unit of electricity produced. If an owner feels that it is beneficial and a good business decision to spend a large amount of capital on a project that will increase the efficiency of a power plant, the EPA should be supportive, as a more efficient use of resources is good for the environment.

If adopted, these recommended changes will maintain the spirit of the RMRR Final Rule modifications that were published in 2003 and give power plant owners and operators a rule that they can reasonably interpret when determining what types of maintenance activities or plant improvements to perform on their plants.

ROBERT A. GRECO, P.E.*

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The author is a third-year law student at Marquette University. He holds a Bachelors Degree in Mechanical Engineering from the University of Wisconsin-Milwaukee and is a registered Professional Engineer in the State of Wisconsin. In addition, he has over eighteen years of power plant engineering, maintenance, and design experience in the electric utility industry.