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When the Clean Air Act Fails a Public Nuisance May Help

*North Carolina ex rel. Cooper v. Tennessee Valley Authority*¹

I. INTRODUCTION

What would you do if your neighbor was creating noxious fumes that drifted onto your property, causing your health to deteriorate and your once magnificent view to be hidden in a haze? As an individual you really have only two options: relocate or file a nuisance action against the neighbor and request an injunction. States generally have the Federal Clean Air Act (hereinafter “CAA”) to turn to, but having exhausted that option with no positive results, and with no choice to relocate, the State of North Carolina was left with only one option—a return to the roots of environmental law utilizing a common law nuisance claim.² This strategy paid off and the Western District of North Carolina Court ordered the Tennessee Valley Authority (hereinafter “TVA”) to take action to reduce the noxious fumes it was spewing across state lines.³ The implications of this decision could be far reaching and could empower individual states to take action against interstate polluters, but these implications are far from clear. This note will deal with the implications this type of action could have on Missouri.

II. FACTS AND HOLDING

In January 2006, North Carolina’s Attorney General filed suit against TVA on behalf of its citizens.⁴ This suit alleged that the coal burning power plants operated by TVA in states neighboring North Carolina were polluting the air, and that this pollution was migrating to North Carolina where it threatened the health of millions of people, the economic viability of the region, and the state’s ecosystem.⁵ North

¹ 593 F. Supp. 2d 812 (W.D.N.C. 2009).

² *Id.* at 816.

³ *Id.* at 831-832.

⁴ *Id.* at 815.

⁵ *Id.*

Carolina brought this action under the state common law tort of public nuisance seeking an injunction that would force TVA to implement pollution control measures to mitigate the effect of the pollution produced by the offending plants.⁶ In support of this injunction, North Carolina alleged that the air pollution was costing the government and its citizens billions of dollars every year due to expenditures on healthcare and sick days, as well as the revenue lost from reduced tourism due to the pollution.⁷

TVA acknowledged that some emissions from its power plants entered North Carolina; however, it did not believe the emissions from its plants were to blame for the community health or the environmental issues that affected the citizens.⁸ Instead, TVA alleged that North Carolina's pollution problem stemmed from its own electric utilities and other industries, as well as pollution caused by automobile emissions.⁹ TVA further defended itself by noting its actions were reasonable in light of the need for reliable, inexpensive sources of energy for its customers.¹⁰ In furtherance of this defense, TVA cited steps it had taken to reduce the pollutants emitted by its power plants as evidence that whatever emissions reached North Carolina did not do so in unreasonable amounts.¹¹

Coal burning power plants burn coal to heat water and produce pressurized steam.¹² The pressurized steam turns a turbine, which generates electricity.¹³ The coal used in this process contains, among other elements, nitrogen, sulfur, and mercury.¹⁴ When the coal is burned, it releases these elements which then form both primary pollutants, those directly emitted by the process, and secondary pollutants, those formed through a chemical change in the atmosphere.¹⁵

⁶ *Id.*

⁷ *Id.*

⁸ *Id.*

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.* at 818.

¹³ *Id.*

¹⁴ *Id.* at 819.

¹⁵ *Id.*

Nitrogen, sulfur, and mercury are all released as primary pollutants. Nitrogen and sulfur combine with oxygen in the air to produce nitrous oxide (NO_x) and sulfur dioxide (SO₂) respectively.¹⁶ Mercury is released either by attaching to particulate matter (hereinafter “PM”), a very small airborne particle, or as a vapor.¹⁷ All of these are emitted directly from the smokestacks as a result of the coal burning process.¹⁸

Secondary pollutants are those pollutants that develop as a result of primary pollutants undergoing chemical changes in the Earth’s atmosphere.¹⁹ Both nitrous oxide and sulfur dioxide develop into secondary pollutants.²⁰ When exposed to sunlight, nitrous oxide is stripped of oxygen atoms, which then combine to form ozone (O₃).²¹ The Environmental Protection Agency (hereinafter “EPA”) has been given authority to regulate the amount of ozone levels in the atmosphere and has set the national ambient air quality standard (hereinafter “NAAQS”) for ozone at an average of 0.075 parts per million (hereinafter “ppm”) during an eight hour period.²² This was set in March 2008 and the EPA has yet to determine which, if any, counties in North Carolina will be considered “non-attainment,” in excess of the NAAQS, for ozone.²³ Both nitrous oxide and sulfur dioxide undergo chemical changes in the atmosphere forming nitrates and sulfates respectively.²⁴ Nitrates and sulfates are part of a class of airborne particles with a cross section of 2.5 microns or smaller, commonly referred to as PM_{2.5}.²⁵ PM_{2.5} is another pollutant regulated by the EPA through NAAQS with a maximum allowable concentration of 15 micrograms per cubic meter averaged over a year.²⁶

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.* at 819-20.

²¹ *Id.* at 819.

²² *Id.*

²³ *Id.* at 820.

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.*

Currently, three counties in North Carolina have a concentration of $PM_{2.5}$ greater than that allowed by the NAAQS.²⁷

These secondary pollutants can have a significant impact on human health. Breathing air containing $PM_{2.5}$ is 90-100% certain to shorten a person's life expectancy.²⁸ It causes pulmonary inflammation, which in turn leads to general system-wide inflammation; this inflammation can cause changes in the vascular system and reduces blood flow to areas of the body such as the heart and brain.²⁹ $PM_{2.5}$ can also affect the beating rhythm of the heart, sometimes leading to arrhythmia and increases the frequency of cardiopulmonary illnesses such as asthma and chronic bronchitis.³⁰ Ozone exposure can cause immediate pain, normally lasting a couple of hours, which makes it hard to take a deep breath.³¹ It also increases inflammation in the airway, which can amplify the effects of asthma and allergies.³²

In addition to the health effects, these pollutants are detrimental to the environment.³³ $PM_{2.5}$ contributes to what is commonly referred to as acid rain.³⁴ Sulfates deposited as a result of acid rain increase the acidity of soil mobilizing aluminum, which can "clog" root systems and ultimately kill plant life by interfering with the absorption of water and minerals from the soil.³⁵ In addition to making it more difficult for plant life to absorb nutrients from the soil, sulfates actually deplete necessary nutrients such as magnesium, calcium, and potassium from the soil.³⁶ Since North Carolina has naturally low levels of these nutrients, the effects are amplified.³⁷ $PM_{2.5}$ also diffuses light causing a haze, similar to fog.³⁸

²⁷ *Id.* Counties in North Carolina considered by the EPA to be "non-attainment" are Catawba, Davidson, and Guilford. *Id.*

²⁸ *Id.* at 821.

²⁹ *Id.* at 821-22.

³⁰ *Id.* at 822.

³¹ *Id.* at 824.

³² *Id.*

³³ *See id.* at 823-825.

³⁴ *Id.* at 823.

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.*

Ozone can also impact vegetation by damaging cell walls causing dark spots to develop on the leaves of plants.³⁹

Since air pollution disperses so quickly into the atmosphere, it is inherently more efficient to control the pollutants at the source and there are several different technologies for doing this. Nitrous oxide can be removed using either selective catalyst reduction (hereinafter "SCR") or selective non-catalyst reduction (hereinafter "SNCR").⁴⁰ The SCRs use a catalyst to break nitrous oxide down into nitrogen and water, neither of which contributes to air pollution, thereby removing approximately ninety percent of the nitrous oxide.⁴¹ The SCRs, however, are very large and very costly.⁴² The SNCR's, on the other hand, only remove twenty to forty percent of the nitrous oxide, but are much smaller and less expensive. Sulfur dioxide can be controlled using a flue gas desulfurizer, normally referred to as a "scrubber."⁴³ A scrubber utilizes a chemical process to remove sulfur dioxide from the flue gas and can be either a dry scrubber, which removes approximately ninety percent of the sulfur dioxide, or a wet scrubber, which removes approximately ninety-eight percent of the sulfur dioxide.⁴⁴ On the other hand, scrubbers are large, sometimes as large as the power plant itself, and very expensive.⁴⁵

TVA operated eleven coal-fired power plants consisting of a total of fifty-nine electrical generating units (hereinafter "EGU") in three different states; seven in Tennessee, two in Kentucky, and two in Alabama.⁴⁶ In the instant case the court held that the plants within 100 miles of the North Carolina border contributed enough pollution to be considered a public nuisance when being judged by the law of the source state.⁴⁷ It also held that the appropriate remedy was an injunction to force

³⁹ *Id.* at 824.

⁴⁰ *Id.* at 821.

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.* at 818. The plants in Tennessee are Bull Run, Kingston, John Sevier, Gallatin, Johnsonville, Cumberland, and Allen. *Id.* The plants in Kentucky are Paradise and Shawnee. *Id.* The plants in Alabama are Widows Creek and Colbert. *Id.*

⁴⁷ *Id.* at 826-828.

the TVA to install available pollution control measures in order to abate the pollution from these plants.⁴⁸

III. LEGAL BACKGROUND

The tort of nuisance can trace its lineage back as far as the twelfth century.⁴⁹ When first implemented, a nuisance was a criminal action that could only be brought by the King, mainly used in response to obstructions of public roads and waterways, or for non-trespassory intrusions on the King's land.⁵⁰ This theory of nuisance continued until the sixteenth century when an English court recognized that if a public nuisance causes harm particular to an individual, that individual can bring a tort claim to recover damages for that harm.⁵¹

In the United States, nuisance has split into two main categories, according to the Restatement (Second) of Torts.⁵² These two categories are private and public nuisances.⁵³ A private nuisance is conduct that interferes with another's use and enjoyment of land, while a public nuisance is an unreasonable interference with a right shared by the general public.⁵⁴ Here we are mainly concerned with the theory of public nuisance. The Restatement goes on to list several scenarios where a public nuisance might be found, including:

- (a) Whether the conduct involves a significant interference with the public health, the public safety, the public peace, the public comfort or the public convenience, or
- (b) whether the conduct is proscribed by a statute, ordinance or administrative regulation, or
- (c) whether the conduct is of a continuing nature or has produced a

⁴⁸ *Id.* at 830.

⁴⁹ Denise E. Antolini, *Modernizing Public Nuisance: Solving the Paradox of the Special Injury*, 28 *ECOLOGY L.Q.* 755, 767 (2001).

⁵⁰ RESTATEMENT (SECOND) OF TORTS § 821B cmt. a (1979).

⁵¹ *Id.*

⁵² *See id.* § 821A.

⁵³ *Id.*

⁵⁴ *Id.* §§ 821B, D.

permanent or long-lasting effect, and, as the actor knows or has reason to know, has a significant effect upon the public right.⁵⁵

As early as the seventeenth century the theory of public nuisance was being used to secure environmental protection, however it was not until the nineteenth and twentieth centuries that environmental law really began to develop.⁵⁶ *Georgia v. Tennessee Copper Comp.* (hereinafter “*Tennessee Copper*”) represents a major turn of the century air pollution case and is indicative of the early uses of nuisance law to try and combat environmental pollution.⁵⁷ In *Tennessee Copper*, the State of Georgia filed a nuisance action seeking an injunction against copper companies in Tennessee to prevent the continued discharge of noxious fumes migrating across state lines.⁵⁸ The noxious fumes complained of were from sulfur dioxide, which developed into acid rain.⁵⁹ The defendants did not dispute this.⁶⁰ Georgia alleged that this acid rain was destroying forests, orchards, and crops.⁶¹ Because Georgia did not own much of the polluted land, one main issue resolved was whether or not the state could bring a cause of action on behalf of its citizens.⁶² In resolution of this issue, Justice Holmes, writing the majority opinion, stated that Georgia was actually suing for an injury to its “quasi-sovereign” capacity and concluded that Georgia had an “interest independent of and behind the titles of its citizens, in all the earth and air within its domain. It has the last word as to whether its mountains shall be stripped of their forests and its inhabitants shall breathe pure air.”⁶³ This reasoning clearly established that Georgia had suffered an injury sufficient to establish standing to pursue its cause of action.⁶⁴ Having established that Georgia did indeed

⁵⁵ *Id.* § 821B.

⁵⁶ Jason J. Czarnezki & Mark L. Thomsen, *Advancing the Rebirth of Environmental Common Law*, 34 B.C. ENVTL. AFF. L. REV. 1, 3 (2007).

⁵⁷ 206 U.S. 230 (1907).

⁵⁸ *Id.* at 236.

⁵⁹ *Id.* at 238.

⁶⁰ *Id.*

⁶¹ *Id.* at 236.

⁶² *Id.* at 237.

⁶³ *Id.*

⁶⁴ *Id.* at 238.

have standing to bring this action for an injunction, the court then considered what harm was done by the noxious fumes.⁶⁵ In the court's opinion, a preponderance of the evidence established that the forests and vegetation were subject to significant harm, and that the alleged harm was sufficient to order the required injunction.⁶⁶

The common law approach to what we now consider environmental law lasted until the middle of the twentieth century when Congress began passing measures to try and combat pollution. In 1955, the first small step was taken towards the statutory scheme that we have today with the passage of the Air Pollution Control Act (hereinafter "APCA").⁶⁷ While significant, the APCA, only provided for research of air pollution and did not seek to implement any control over air pollution sources.⁶⁸ It was not until 1963 that Congress passed the first air pollution control measures in the CAA, which authorized the states to implement their own pollution control measures.⁶⁹

The federal government did not begin taking an active role in the enforcement of environmental law until the Air Quality Act of 1967.⁷⁰ The 1970's saw a transformation of the environmental law regime starting with three major developments in federal environmental law.⁷¹ First, the National Environmental Policy Act (hereinafter "NEPA") was signed into law.⁷² The NEPA implemented a national policy with respect to the environment, and, among other things, sought to have governmental officials consider the impact their actions would have on the environment.⁷³ In addition, NEPA also implemented a Council on Environmental Quality to advise the President.⁷⁴ Second, through an

⁶⁵ *Id.* at 238-239.

⁶⁶ *Id.*

⁶⁷ Air Pollution Control Act of 1955, Pub. L. No. 84-159, 69 Stat. 322.

⁶⁸ *See id.* § 2(a)-(b).

⁶⁹ Clean Air Act of 1963, Pub. L. No. 88-206, 77 Stat. 392.

⁷⁰ Air Quality Act of 1967, Pub. L. No. 90-148, 81 Stat. 485.

⁷¹ RICHARD J. LAZARUS, *THE MAKING OF ENVIRONMENTAL LAW* 67-68 (2004).

⁷² National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (1970).

⁷³ *Id.*

⁷⁴ *Id.*

executive order by President Nixon, the EPA was born.⁷⁵ Finally, the CAA was instituted, which, among other things, required the promulgation of NAAQS by 1975 to protect health and welfare.⁷⁶ All of these changes represent just a few of the early developments that led to the comprehensive environmental law regime that exists today.⁷⁷

Despite these statutory developments, nuisance law has continued to be a potential weapon to combat pollution.⁷⁸ However, there has been a shift from the early federal common law to an application of the state law where the pollution originates.⁷⁹ This shift is partly due to the United States Supreme Court case of *International Paper Co. v. Ouellette* (hereinafter "*Ouellette*").⁸⁰ In *Ouellette*, the Court was presented with the problem of whether state law was preempted by the Clean Water Act (hereinafter "CWA"), and if not, what law should apply to instances of interstate pollution: the law of the state where the injury took place or the law of the state where the pollution originated.⁸¹ The Court determined that if the law of the state where the injury occurred prevailed then any pollution source would have to worry not only about federal regulations surrounding the pollutants, but also the law of any state where that pollution could conceivably cause harm.⁸² The Court determined that such an outcome would frustrate the purpose of the CWA and its apportionment of the responsibility between the source-state and the EPA.⁸³ Therefore, the Court determined that in applying the source-state law, any sources of pollution would only have to worry about the regulations implemented by the federal government and those

⁷⁵ Reorganization Plan No. 3 of 1970, 3 C.F.R. 199 (1970), reprinted in 5 U.S.C. app. at 184-89 (2000).

⁷⁶ Clean Air Act of 1970, Pub. L. No. 91-604, 84 Stat. 1676 (codified as amended at 42 U.S.C. §§ 7401-7671q (2006)).

⁷⁷ See LAZARUS *supra*, note 71, at 47-166, for a more thorough history of the regulatory developments.

⁷⁸ Czarnezki & Thomsen, *supra* note 56, at 6.

⁷⁹ *Id.*

⁸⁰ See 479 U.S. 481 (1987).

⁸¹ *Id.* at 483.

⁸² *Id.* at 495.

⁸³ *Id.* at 496.

implemented by the source-state.⁸⁴ *Ouellette* concerned the law surrounding the CWA's savings clause, however the CAA's savings clause has also been deemed not to preempt state law through very similar wording.⁸⁵

Recent developments in the law of nuisance have caused some scholars to think that nuisance claims against corporate defendants are no longer a risk.⁸⁶ One example, is the Missouri Supreme Court's decision in *City of St. Louis v. Benjamin Moore and Co.* (hereinafter "*Benjamin Moore*").⁸⁷ In *Benjamin Moore*, the City of St. Louis (hereinafter "the City") filed a claim of public nuisance against Benjamin Moore, and other paint manufacturers, alleging that it had contributed to the use of lead paint.⁸⁸ The City had paid to remediate buildings containing lead paint in the interest of public health, and as a result sought damages for the cost of the remediation from Benjamin Moore.⁸⁹ The Court determined that although Benjamin Moore could have contributed to the lead paint problem, there was no evidence indicating any specific properties that had to be remediated as a result of paint produced by the defendant. Thus, the charges against the defendant were dismissed as based on mere speculation.⁹⁰

In 2005, the EPA passed the Clean Air Interstate Rule (hereinafter "CAIR").⁹¹ CAIR was an attempt to control upwind sources of pollution in order to reduce pollution crossing into neighboring states, thereby contributing to downwind states' non-attainment status for PM_{2.5} or O₃.⁹²

⁸⁴ *Id.* at 498-99 .

⁸⁵ See, e.g., North Carolina *ex rel.* Cooper v. Tenn. Valley Auth. 549 F. Supp. 2d 725, 729 (W.D.N.C. 2008) (discussing cases concerning state law pre-emption by the CAA); see also Czarnecki & Thomsen, *supra* note 56, at 9-10 (discussing preemptive effect of the CAA).

⁸⁶ R. Trent Taylor, *State of North Carolina v. TVA – A New Era in Public Nuisance Law?*, 24 TOXICS L. REP. 352, 355 (2009).

⁸⁷ See 226 S.W.3d 110 (Mo. 2007).

⁸⁸ *Id.* at 113.

⁸⁹ *Id.* at 112-13.

⁹⁰ *Id.* at 116-17.

⁹¹ EPA: Clean Air Interstate Rule, <http://www.epa.gov/cair/index.html> (last visited Aug. 21, 2009).

⁹² North Carolina v. EPA, 531 F.3d 896, 903 (D.C. Cir. 2008).

In order to do this, CAIR required the upwind states to revise their respective State Implementation Plans (hereinafter “SIP”) to reduce emissions, and in the absence of a SIP all upwind states were subject to a cap and trade program.⁹³ CAIR was vacated recently by the D.C. Circuit in *North Carolina v. EPA*, leaving regulatory control of interstate pollution in limbo.⁹⁴

IV. INSTANT DECISION

A. *Preliminary Matters*

The Western District of North Carolina Court began its analysis by noting that a theory of public nuisance “is not ordinarily the means by which such major conflicts among governmental entities are resolved in modern American governance.”⁹⁵ The court commented that as far back as 1955, the federal executive branch would normally resolve this type of conflict through authority granted.⁹⁶ North Carolina tried the normal approach, as noted by the court, but, although it “ha[d] borne some interesting fruit,” the issue of interstate pollution remained unresolved.⁹⁷ The court then indicated that although the CAA is a “comprehensive scheme for the adjudication of interstate pollution disputes,” the power to bring a state action, such as public nuisance, was specifically preserved in the Act.⁹⁸

The court next began the task of assessing which, if any, plants would be considered to be a public nuisance.⁹⁹ The controlling law cited by the court indicated that a public nuisance is to be determined by the law

⁹³ *Id.*

⁹⁴ *See id.* at 929.

⁹⁵ *North Carolina ex rel. Cooper v. Tenn. Valley Auth.*, 593 F. Supp. 2d 812, 815 (W.D.N.C. 2009).

⁹⁶ *Id.*

⁹⁷ *Id.* at 816; *see also* *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008) (striking down the Clean Air Interstate Rule, which the court later remanded CAIR to the EPA for changes in *North Carolina v. EPA*, 550 F.3d 1176 (2008)).

⁹⁸ *North Carolina ex rel. Cooper*, 593 F. Supp. 2d at 816; *see also* 42 U.S.C. § 7604(e) (2006).

⁹⁹ *North Carolina ex rel. Cooper*, 593 F. Supp. 2d at 829.

of the state in which the nuisance is produced; therefore the court needed to look at Alabama, Kentucky, and Tennessee law concerning public nuisance to make its determination.¹⁰⁰

B. Alabama

In Alabama, a public nuisance is “anything that works hurt, inconvenience or damage to another. The fact that the act done may otherwise be lawful does not keep it from being a nuisance.”¹⁰¹ The court noted that Alabama courts had liberally interpreted its nuisance statutes, and that a nuisance could be the result of intentional, unintentional or negligent conduct or could even result from acts conducted legally in a careful manner.¹⁰² In Alabama, causation can be shown by demonstrating that “the party charged with creating and maintaining a nuisance has engaged in a course of conduct, or has permitted to exist a set of circumstances, that, in its natural and foreseeable consequences, proximately caused the hurt, inconvenience, or damage complained about.”¹⁰³ Utilizing this standard, the court held that the TVA plant located in Widow’s Creek was a public nuisance in accordance with Alabama law.¹⁰⁴ The court reached this conclusion by looking to the harm caused by the ozone and the PM_{2.5} which developed as a result of the emission of nitrous oxide and sulfur dioxide.¹⁰⁵ In addition, the court viewed TVA’s failure to install readily available pollution controls as a proximate cause of the harm because the consequences of not installing the controls were “natural and foreseeable.”¹⁰⁶ The court then found that North Carolina had not presented sufficient evidence to show that the TVA facility located in Colbert, Alabama had a measurable impact on North Carolina’s air quality.¹⁰⁷ In fact, the court found that the evidence

¹⁰⁰ *Id.* at 829-31.

¹⁰¹ *Id.* at 829.

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ *Id.* at 830 (quoting *Tipler v. McKenzie Tank Lines*, 547 So. 2d 438, 440-41 (Ala. 2001)).

¹⁰⁷ *Id.*

presented showed that the pollution from the Colbert plant had very little impact in North Carolina.¹⁰⁸

C. Kentucky

In Kentucky, a public nuisance exists when a right common to the general public is unreasonably interfered with.¹⁰⁹ Some examples given by the court of an unreasonable interference with a public right were “whether the conduct involve[d] a significant interference with the public health, the public safety, the public peace, the public comfort or the public convenience, whether the conduct [was] proscribed by a statute, ordinance or administrative regulation, or whether the conduct [was] of a continuing nature or ha[d] produced a permanent or long-lasting effect.”¹¹⁰ The court determined that North Carolina had not produced sufficient evidence to find that either of the two plants in Kentucky emitted pollutants that unreasonably interfered with the rights of the citizens of North Carolina, and that the impact of these two plants were too attenuated to have had a significant impact on its air quality.¹¹¹ The court, using the same reasoning as it did for the Colbert plant in Alabama, found that the effect of the pollution from the Kentucky plants was too insignificant to rise to the level of a public nuisance.¹¹²

D. Tennessee

A public nuisance in Tennessee is “an act or omission that unreasonably interferes with or obstructs rights common to the public.”¹¹³ The court noted the key element of a nuisance is whether the conduct was reasonable under the circumstances.¹¹⁴ The court found that while the social utility of having inexpensive power was high, it was outweighed by

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ *Id.*

the extent of the harm caused in North Carolina by the untreated pollutants.¹¹⁵ The court specifically found that Kingston, Bull Run, and John Sevier, the three plants closest to North Carolina, unreasonably interfered with the rights of the citizens of North Carolina.¹¹⁶ Under these circumstances, the court found the failure to install pollution control technology was unreasonable conduct.¹¹⁷ In reference to the other four plants located in Tennessee, the court found that North Carolina had not provided sufficient evidence to support the conclusion that these plants were interfering with the rights of its citizens, because North Carolina had failed to establish a causal connection between those four plants and its environmental concerns.¹¹⁸

E. Outcome

As a result of these findings, the court ordered that the plant located in Widow's Creek, Alabama, and the plants located in Tennessee at Kingston, Bull Run, and John Sevier, must install pollution control technology to be utilized year round.¹¹⁹ For Widow's Creek, the Court ordered SCRs be installed on six of the eight units, the other two already had SCRs installed, at a cost of \$158,024,000.¹²⁰ Widow's Creek also had to install a single scrubber to cover the six units, at a cost of \$178,232,000.¹²¹ At John Sevier, the court ordered installation of SCRs and scrubbers for all four units at a cost of \$132,792,000 and \$175,326,000, respectively.¹²² Kingston was ordered to complete installation of two scrubbers that would cover nine units at a cost of \$359,251,000.¹²³ Bull Run was merely ordered to complete installation of one scrubber, which was already being constructed at the time of trial.¹²⁴

¹¹⁵ *Id.* at 831.

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ *Id.* at 832.

¹²⁰ *Id.* at 826.

¹²¹ *Id.*

¹²² *Id.*

¹²³ *Id.*

¹²⁴ *Id.*

V. COMMENT

A. *Missouri Nuisance Law*

Missouri has adopted the Restatement (Second) of Torts view of a public nuisance in that “[it] is an unreasonable interference with a right common to the general public.”¹²⁵ The rights that give rise to a nuisance, if unreasonably interfered with, are public health, safety, peace, comfort, and convenience.¹²⁶ In addition, Missouri requires a causal connection between the conduct by the defendant and the public nuisance.¹²⁷ At least one Missouri court has also indicated that the legal operation of a business does not preclude an action for nuisance;¹²⁸ this formulation of a nuisance is quite similar to that of Tennessee, Alabama, and Kentucky.¹²⁹ Because the nuisance standards are so similar, it is conceivable that a court following the same analysis could conclude that the coal-fired power plants in Missouri are nuisances, in the event a claim is filed against them.

Benjamin Moore might be considered by some to be a saving grace in this instance. After all, if the City of St. Louis was not allowed to pursue a nuisance action without identifying houses containing lead paint that the defendant was specifically responsible for, then a neighboring state should not be allowed to do so, without being able to pinpoint exactly what sources are polluting its air. However, when comparing the different circumstances, it is useful to note that the Court in *Benjamin Moore* specifically restricted its decision to actions seeking damages and did not address the requisite identification criteria when seeking injunctive relief.

¹²⁵ *Baker v. Empire Dist. Elec. Co.*, 24 S.W.3d 255, 264, (Mo. Ct. App. S.D. 2000) (quoting *State ex rel. Dresser Indus., Inc. v. Ruddy*, 592 S.W. 2d 789, 792 (Mo. 1980)).

¹²⁶ *City of St. Louis v. Varahi, Inc.* 39 S.W.3d 531, 536 (Mo. Ct. App. E.D. 2001) (quoting RESTATEMENT (SECOND) OF TORTS § 821B(2)(a) (1979)).

¹²⁷ *City of St. Louis v. Benjamin Moore*, 226 S.W.3d 110, 113-14 (Mo. 2007) (quoting *Callahan v. Cardinal Glennon Hosp.*, 863 S.W.2d 852, 862 (Mo. 1993) (en banc)).

¹²⁸ *Racine v. Glendale Shooting Club, Inc.*, 755 S.W.2d 369, 372, (Mo. Ct. App. E.D. 1988) (noting that noise from a lawful business may be so excessive as to constitute a nuisance)

¹²⁹ See *supra* Part IV.B-D.

B. *Missouri Coal-Fired Power Plants*

The implications of the instant case could have a significant impact on Missouri. Missouri ranks ninth in the use of coal to produce power with approximately eighty-five percent of the power generated produced by coal-fired power plants.¹³⁰ This disparity inherently makes Missouri more susceptible to a public nuisance claim from a neighboring state.

In the instant case, the court ruled that only those power plants within 100 miles of the North Carolina border could be shown to have affected the air pollution levels in North Carolina.¹³¹ Missouri boasts twenty-four coal-fired power plants. Of these twenty-four only two are farther than 100 miles from any of its borders, both of which are located in Columbia, Missouri.¹³² This leaves twenty-two Missouri power plants susceptible to lawsuits from neighboring states, based solely on the proximity of those plants to the state border.

In North Carolina four plants were found to be polluting to the point that the court imposed an injunction forcing the plants to install pollution control measures.¹³³ In doing this, the court looked at two main primary pollutants: nitrous oxide and sulfur dioxide.¹³⁴ In the instant case, the plant that emitted the least nitrous oxide on an annual basis was John Sevier, at 9,621 tons.¹³⁵ In Missouri, two plants emit more nitrous oxide on an annual basis than John Sevier, those being Thomas Hill and New Madrid, emitting 16,471 and 32,239 tons, respectively.¹³⁶ When examining annual production of sulfur dioxide, John Sevier emitted the lowest amount in the instant case, at 30,468 tons.¹³⁷ Only two Missouri

¹³⁰ EPA, EGRID2007 VERSION 1.1 YEAR 2005 SUMMARY TABLES 2 (2008), available at http://www.epa.gov/cleanenergy/documents/egridzips/eGRID2007V1_1_year05_SummaryTables.pdf.

¹³¹ North Carolina *ex rel.* Cooper v. Tenn. Valley Auth., 593 F. Supp. 2d 812, 825-26 (W.D.N.C. 2009).

¹³² Based off calculation of plant location and Missouri border (The two plants outside the radius are highlighted in Table of Missouri Coal-Fired Power Plants *infra*).

¹³³ North Carolina *ex rel.* Cooper, 593 F. Supp. 2d 812, 825-26 (W.D.N.C. 2009).

¹³⁴ *Id.* at 819-21.

¹³⁵ See data cited *infra* note 144.

¹³⁶ See Table of Missouri Coal-Fired Power Plants *infra*.

¹³⁷ See data cited *infra* note 144.

plants emitted a higher total quantity annually: Sioux and Labadie, which emitted 51,261 and 55,502 tons, respectively.¹³⁸

Looking at these figures, it would appear that most of the Missouri plants would be safe; however, a possibly more appropriate measure of the emission is what quantity of the primary pollutant is emitted for every megawatt hour (hereinafter "MWh") of electricity produced. Applying this measure, the numbers begin to look much more detrimental. With respect to nitrous oxide, Kingston had the lowest emissions, in the instant case, at 3.0208 lbs/MWh.¹³⁹ Sixteen Missouri plants emit more than this amount, as illustrated in the table below.¹⁴⁰ Of these sixteen plants, only one, New Madrid, has any sort of pollution control measure installed to reduce output of nitrous oxide. This leaves fifteen plants, comprised of a total of thirty-six EGUs and thirty-six boilers, most susceptible to possible nuisance litigation for the nitrous oxide output.¹⁴¹ When examining sulfur dioxide emissions in this same way, the results are only marginally better, with fourteen of Missouri's power plants¹⁴² having greater emissions than the lowest producer from the instant case, Widow's Creek at 6.9796 lbs/MWh.¹⁴³ Of these fourteen plants, only two have any sort of sulfur dioxide control measures, those being Iatan and Montrose, leaving twelve plants, comprised of twenty-eight EGUs and twenty-six boilers, most susceptible to possible nuisance litigation for sulfur dioxide output.

¹³⁸ See Table of Missouri Coal-Fired Power Plants *infra*.

¹³⁹ See data cited *infra* note 144.

¹⁴⁰ See Table of Missouri Coal-Fired Power Plants *infra*.

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ See data cited *infra* note 144.

Table of Missouri Coal-Fired Power Plants¹⁴⁴

Power Plant Name	Coal - Fired EGU's	Coal- Fired Boilers	Annual NOx (tons)	NOx lb/MWh	Annual SO2 (tons)	SO2 lb/MWh	Boilers with SO2 Scrubber	Boilers with NOx SCR/SNCR
Anheuser-Busch Inc	3	4	193.34	3.7088	870.87	16.7062	0	0
Asbury Empire District Electric Co	2	1	5,532.28	8.0783	11,964.93	17.4714	0	0
Blue Valley Independence	4	3	1,146.69	6.9183	11,499.11	69.3769	0	0
Chamois Central Electric Power Coop	2	2	2,118.75	10.1687	5,351.48	25.6838	0	0
City of Columbia	9	2	278.39	7.6434	993.41	27.2742	0	0
Hawthorn Kansas City Power & Light Co	1	1	1,548.74	0.7526	2,141.97	1.0409	1	1
Hercules Missouri Chemical Works	2	3	230.76	5.9283	1,226.20	31.5010	0	0
Iatan Kansas City Power & Light Co	1	1	8,347.96	3.4077	19,217.22	7.8446	1	0
James River Power Station City of Springfield City	7	5	4,085.26	4.8796	5,073.08	6.0595	0	0
Labadie AmerenUE	4	4	9,528.40	1.0225	55,502.39	5.9560	0	0
Lake Road Aquila Networks-Missouri	7	2	3,197.09	10.5551	3,124.64	10.3159	0	0
Marshall Marshall City of	9	2	348.91	14.4134	2,004.53	82.8061	0	0
Meramec AmerenUE	6	4	7,753.56	2.7244	18,013.69	6.3295	0	0

¹⁴⁴ This table is comprised of data obtained from U.S. EPA, Clean Energy, <http://www.epa.gov/cleanenergy/energy-resources/egrid/index.html> (last visited Aug. 23, 2009) (follow the "eGRID2007 Version 1.1 (ZIP)" hyperlink; then open eGRID2007V1_1_year05_plant.xls) (boiler information was taken from BLR05 worksheet, EGU information was taken from GEN05 worksheet, all emissions data was taken from PLNT05 worksheet); *see also* eGRID2007TechnicalSupportDocument.pdf (located in the same zip file for additional information on the data contained in eGRID2007V1_1_year05_plant.xls).

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Power Plant Name	Coal - Fired EGU's	Coal- Fired Boilers	Annual NOx (tons)	NOx lb/MWh	Annual SO2 (tons)	SO2 lb/MWh	Boilers with SO2 Scrubber	Boilers with NOx SCR/SNCR
Missouri City City of Independence	2	2	629.07	14.0135	3,801.50	84.6848	0	0
Montrose Kansas City Power & Light Co	3	3	6,535.93	3.9103	15,703.53	9.3951	2	0
New Madrid Associated Electric Coop Inc	2	2	32,239.91	9.2101	13,700.16	3.9138	0	2
Rush Island AmerenUE	2	2	4,069.38	0.9121	28,385.15	6.3625	0	0
Sibley Aquila Networks-Missouri	3	3	9,100.32	6.3196	13,794.96	9.5797	0	0
Sikeston Power Station	1	1	2,687.14	2.7118	7,564.87	7.6344	0	0
Sioux AmerenUE	2	2	8,476.57	2.5545	51,261.46	15.4484	0	0
Southeast Missouri State University	1	1	47.24	5.2011	145.17	15.9832	0	0
Southwest Power Station City of Springfield	3	1	2,689.79	4.2133	3,208.06	5.0251	1	0
Thomas Hill Associated Electric Coop Inc	3	3	16,471.38	4.2255	17,247.26	4.4246	0	0
University of Missouri Columbia	9	8	254.58	3.5230	3,185.24	44.0788	0	0

C. Potential Impact on Missouri

The potential impact of nuisance litigation against Missouri coal-fired power plants could be very costly. Based on the calculations above, there are fourteen plants that could be ordered to install scrubbers to reduce the emissions of sulfur dioxide. In the instant case, four scrubbers were ordered to be installed at a total cost of \$712,809,000, which

averages out to \$178,202,250 per scrubber.¹⁴⁵ Making the assumption that each plant would only need one scrubber, this would come to a total cost of \$2,494,831,500 to install scrubbers on all fourteen plants. The total output of the fourteen plants is 39,136,929,000 KWh.¹⁴⁶ When these two figures are considered together, the additional cost per KWh comes out to approximately \$0.0637.

Based on the aforementioned analysis, fifteen Missouri plants could be susceptible to litigation over nitrous oxide output; these plants are composed of thirty-six EGUs. The SCR's ordered by the court, in the instant decision, cost a total of \$290,816,000 for ten EGUs, coming out to an average cost of \$29,081,600 per SCR.¹⁴⁷ For installation on the thirty-six EGUs in Missouri, the total cost would come out to \$1,046,937,600. The total output of the plants that would be forced to install these controls is 44,111,334,000 KWh.¹⁴⁸ This would make the additional cost per KWh approximately \$.0237.

The average Missouri household utilizes 1053 KWh each month.¹⁴⁹ So, the average Missouri household receiving power from one of the plants subject to sulfur dioxide pollution control could be subject to an additional \$67.08 per month to recoup the cost incurred for control measures, while the nitrous oxide pollution controls would cost on average \$24.96 per month for each household. The average family that would be unlucky enough to get power from one of the plants that would have to implement both forms of pollution control would be looking at a total increase of around \$92.04 per month. This cost assumes paying off the additional pollution control measures in one year, but even if the cost were spread out over a ten-year period, the increase per household would amount to at least \$9.20 per month, along with the interest that would be accrue from financing the updates. While the \$9.20 per month may not seem like much, some families are already living on the edge of survival

¹⁴⁵ North Carolina *ex rel. Cooper v. Tenn. Valley Auth.*, 593 F. Supp. 2d 812, 826 (W.D.N.C. 2009).

¹⁴⁶ See data cited *supra* note 144.

¹⁴⁷ *North Carolina ex rel. Cooper*, 593 F. Supp. 2d at 826.

¹⁴⁸ See data cited *supra* note 144.

¹⁴⁹ CLEAN ENERGY WORKS FOR MO., MISSOURI CLEAN ENERGY INITIATIVE: CONSUMER COST SAVINGS ANALYSIS 4 n.2 (2008).

and every little bit pushes them closer to that edge. However, when this additional expense is compared to the potential environmental return it may be a small price to pay.

VI. CONCLUSION

The holding in *North Carolina v. TVA* may revitalize the roots of environmental law and add more interest to a fading area of law, public nuisance. The instant decision could have major impacts with respect to coal fired power plants. Whether these impacts are positive has yet to be seen, and it is not clear what the true implications of this decision are. One thing is certain, if this type of lawsuit gains traction, the coal-burning power plants could be forced to implement pollution control measures at a substantial cost. This substantial cost would be passed along to consumers and could significantly impact utility bills in areas of the country that rely heavily on coal-fired power plants.

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