Missouri’s Coal Industry Under Fire: Has the Time Come for the Regulation of Missouri’s Charcoal Producers?

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In the hills of the Ozarks in southern Missouri, charcoal is king. On certain days, all one needs to do is drive south of Jefferson City on Highway 63 toward the Arkansas border. Black smoke billows from the numerous charcoal kilns that dot the landscape, a testimony to the constant and lucrative production of charcoal. The kilns, often more than fifty years old, burn Ozark slab wood in the same manner that has been employed for decades. The slow burning of the wood releases dense clouds of waste products into the air, with the smoke and soot lingering indefinitely on calm days.

Until now, this mode of pollution has been accepted by the residents of the region as simply a way of life. The Missouri Department of Natural Resources (MDNR), in conjunction with the Air Conservation Commission, is responsible for maintaining clean air standards and regulating those industries and businesses that produce air contaminants in Missouri. However, the charcoal industry, with its large number of kilns and production plants, has always been exempted from the rules and regulations designed to limit the amount and hazardous nature of the airborne contaminants emitted by Missouri's air pollution sources. With recent discoveries as to just how toxic the nature of the emissions of the kilns and plants may be, along with pressure from residents who have come to the realization that they may be killing themselves by living in close proximity with these contaminants, the MDNR and the United States Environmental Protection Agency (EPA) are closely scrutinizing the charcoal industry and the threat of impending regulation looms on the smoky horizon.

History of the Charcoal Industry in Missouri

The charcoal industry has a long and close relationship with the state of Missouri. Ever since the opening of a charcoal plant in Belle in 1955, south-central and southeastern Missouri has been home to the bulk of the American charcoal industry, both industrial and commercial. Missouri now produces more charcoal than any other state in the nation. As a matter of fact, Missouri produces almost eighty percent of the charcoal made in the United States. Charcoal produced in Missouri is used for products ranging from charcoal briquettes for the backyard barbecue grill to microscopically-fine charcoal filters used by the scientific community. The nature of Missouri's prominence in the industry is due to economic, political, and environmental factors.

In many areas of the Missouri Ozarks, charcoal is the main industry and one of the main employers. The ready supply of slab wood and other hardwoods gives the charcoal industry easy access to the raw materials needed for production. Jobs have never been in great supply in the Ozarks, and the charcoal industry is one of the few industries that has made the region its home, becoming one of
the most dependable sources of employment in southern Missouri along the Highway 63 corridor. The remoteness of the region also allows for the emission of particulates and other pollution that probably would not be tolerated in a metropolitan area.

As far as political concerns, the entrenchment of the charcoal industry owes much to Missouri politicians who have made the industry one of the "untouchables" of each legislative session. Lawmakers with charcoal kilns and plants in their districts realize the importance of the industry to their constituents. The industry means jobs, and an abundance of jobs in a district may be critical to any reelection campaign. With often little other economic stimuli in their districts, these lawmakers are as dependent upon the charcoal industry's continued success as the industry is dependent upon these lawmakers to ensure the conditions which have allowed for such success.

But by far the major reason for Missouri's leading position in the production of charcoal has to do with the lack of environmental standards that have been applied to Missouri charcoal production over the years. Every other state requires charcoal kilns to make use of devices known as afterburners to consume the majority of the noxious particulate matter generated in the process by which charcoal is produced. Missouri is the only state that allows for charcoal production without the use of afterburners. In fact, charcoal kilns which existed prior to or at the time of the enactment of the Clean Air Act and the Missouri regulations thereunder promulgated are not subject to any restrictions as to the amount and type of air contaminants they may produce.

**Charcoal Manufacturers**

Most of the nation's major charcoal briquette manufacturers have plants in Missouri, including Kingsford Products Company, Royal Oak Enterprises Incorporated, Imperial Products, and Safeway Incorporated. Kingsford produces almost half of all the briquettes consumed nationally and maintains a plant in Belle. Imperial is Missouri's largest presence in terms of plants and charcoal kilns, while Royal Oak and Safeway both operate several kilns in the southern half of the state. While these major charcoal manufacturers operate, own, or maintain most of the more than 540 kilns that exist in Missouri, many are still operated and maintained by families or single operators.

The charcoal industry has been exempt from regulations on odor, content, and density of smokestack emissions since 1976. The Missouri Air Conservation Commission exempted all charcoal kilns built before 1971 from regulations, and the charcoal industry has zealously fought all attempts since then to bring the industry in line with other similar polluting industries. As a result of this lack of regulation, Missouri is far and away the nation's leader in charcoal production. No other state is as generous to the charcoal industry as is Missouri; therefore, Missouri charcoal producers have gone to great lengths to protect their share of the charcoal market in the

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9 Id.
10 Braun, supra note 3, at A1.
13 Id.
14 *Missouri Charcoal Maker Ordered to Cut Emissions*, OMAHA WORLD-HERALD, Nov. 24, 1996, at 6B.
15 Goodman, supra note 4, at 10.
16 Id.
17 Id.
19 Keller I, supra note 11, at 1A.
20 Id.
21 *Missouri Charcoal Maker*, supra note 14, at 6B.
United States.

Charcoal producers point to Arkansas as an example of what can happen when the high costs of containing emissions are imposed on the industry. In Arkansas, regulations were implemented that required all charcoal producers and kilns to install afterburners to consume most of the smoky residue that builds up inside the sealed chambers of the kilns. Upon implementation of the new standards, much of Arkansas' charcoal industry migrated to Missouri. While the cost per afterburner installed is around $25,000.00, some producers claim the costs can run as high as $75,000.00 to $100,000.00 per afterburner. When multiplied by the more than 540 kilns that operate in Missouri, charcoal producers claim that such regulations would effectively put them out of business, and, at the least, erode the competitive edge Missouri holds over other states in charcoal production.

In some instances, though, even the charcoal industry itself recognizes the concerns raised by the pollution caused by its plants and kilns. In 1994, Kingsford undertook a major renovation of its Belle plant, expending twelve million dollars to try and clean up the way the plant operated. Kingsford built a retort furnace at the plant that converts the sawdust and wood into charcoal, but with air pollution well below the level produced by traditional kilns. One of Kingsford's primary motivations behind the improvements was the sense of an impending increase in the amount of regulation on the industry by both federal and state agencies. Other producers in Missouri have not gone the way of Kingsford, though. The high cost of implementing emission control programs and equipment is not worth the price to those producers as long as they are not subject to any regulation for the emissions they produce. Imperial, for example, continues to buy or lease independent kilns to use in its production process. The excuses for refusing to upgrade emissions controls are several, notwithstanding the high initial costs. The vast majority of the kilns in Missouri are in rural areas and do not affect the metropolitan areas of the state, so there is little incentive to get away from kilns as long as there is such a great supply of slab wood coming from the forests of the Ozarks, and over the years the residents in the areas where the kilns are most prevalent have come to accept the soot, grime, and other by-products of the kilns as a way of life. That may be changing, though.

Permit Fees

In 1992, Missouri passed into law the new Missouri Clean Air Act. This legislation was in response to the 1990 amendments to the Federal Clean Air Act. Because the EPA delegates to Missouri the authority to enforce standards and regulations set forth by the federal government, Missouri had to take action to bring itself into compliance with the 1990 amendments. This was accomplished by legislation which, in part, created an operating permit system to regulate air polluters in Missouri.

This operating permit system requires sources which produce air contaminants to pay an
annual fee to the State based on the amount of air contaminants produced yearly. This represents a change from the prior regulatory scheme which required permits based upon construction and modifications of existing facilities which produced air contaminants. The operating permit system enacted by Missouri is funded by a fee schedule based closely on the mandate set forth in the 1990 amendments to the Clean Air Act.

The fees paid by sources within Missouri which produce air contaminants go to the MDNR to fund, implement, and carry out the operating permit system. In general, sources which produce air contaminants are required by statute to pay a fee ranging from between twenty-five dollars to forty dollars per ton of air contaminant emitted. The annual determination of the per ton rate is determined by the Missouri Air Conservation Commission based upon the reasonable costs deemed necessary to fund the permit system. Interestingly enough, though, Missouri’s charcoal industry has avoided the general imposition of the fee structure imposed on all other air polluters in Missouri.

As the Missouri legislature was contemplating the framework of the operating permits system, the Missouri charcoal industry geared up to oppose the implementation of any fees on charcoal producers. The charcoal industry claimed that the proposed fees would economically cripple the industry. The industry estimated a total annual cost of $1.1 million would result from the proposed fees, based on an estimated annual emission of 44,000 tons of air pollutants from charcoal kilns and plants. The industry claimed that numerous small charcoal kilns, operating mostly in the already economically depressed Ozarks, would not be able to afford a fee of twenty-five dollars per ton of air contaminant emitted, and that the fee would drive the majority of family-run kilns out of business. After extensive lobbying from the charcoal industry, which was strongly supported by key legislators whose districts economically relied on continued charcoal production, the legislature and the MDNR granted a specific exemption within the statute to the charcoal industry.

The compromise reached between the legislature and the charcoal industry calls for a maximum twenty-five dollars per ton fee to be imposed on the first 4,000 tons of contaminant emitted from an air contaminant source which produces charcoal from wood. Also, in the first two years of implementation of the fees system, 1993 and 1994, the fee was reduced by one hundred percent, thereby effectively waiving the fees for the charcoal industry for those years. For the years 1995 through 1997, the fee is reduced by eighty percent, and for the years 1998 through 2000, the fee is reduced by sixty percent. Finally, if the legislature does not reimpose or extend the fee schedule, no fee shall be imposed on or collected from a charcoal-producing contaminant source after the year 2000.
The entire basis for the state to enact such an operating permit system is the federal mandate that states must maintain such systems and that the states must adequately fund those systems by imposing operating fees on those industries responsible for the air contaminants. The federal regulations require the states to impose at least a base fee of twenty-five dollars per ton of contaminant regulated. While the basic fee structure for polluting industries in Missouri can be anywhere between twenty-five and forty dollars per ton, the charcoal industry, through the reductions granted by statute, is only responsible for a maximum of twenty-five dollars per ton, and that is only on the first 4,000 tons of contaminant emitted by the charcoal plant or kiln. While charcoal plants and kilns are responsible for almost one-third of the airborne contaminants in Missouri, the charcoal industry does not contribute its proportionate amount of fees to the operating permit fee system to adequately compensate the fund as mandated by the federal regulations. Failure by the state to adequately fund the permit system could result in action by the federal government to step in and impose conditions of its own on the charcoal industry in order to adequately fund the system.

Other Exemptions

Apart from a reduced fee schedule under the operating permit system, Missouri’s charcoal producers enjoy other exemptions under the regulatory system promulgated by the legislature and MDNR. Because charcoal kilns and plants are not located in or even near any of the metropolitan areas of the state, the charcoal industry is, for the most part, subject to rules and regulations which concern air pollution in outstate areas. Over the years, though, the charcoal industry has carved out specific exemptions from the regulations for itself. First, 10 C.S.R. § 10-3.050 places restrictions on the emission of particulate matters from industrial processes. Limitations are placed on the rate at which particulate matter can be emitted into the air by a polluting source. Limitations are based both upon the amount of particulate emitted per hour, as well as the total weight of the materials introduced into the process which causes the contaminant emissions. The charcoal industry, however, is not subject to such limitations. Those charcoal kilns existing as of the effective date of the regulation, as well as kilns at other charcoal-producing facilities which are subsequently repaired or replaced (so long as the repair or replacement costs do not exceed fifty percent of the repair or replacement costs to the entire facility and the repair or replacement will not result in an increase in emissions) are totally exempted from limitations on the amount of particulate matter which they are allowed to emit into the air.

Second, 10 C.S.R. § 10-3.080 places restrictions on the emissions of visible air contaminants. Limitations are placed on emissions in order to limit the pollution of the air with contami-
nants visible to the naked eye.\textsuperscript{59} The burning of wood in order to produce charcoal is omitted from coverage under this regulation, while almost all other industrial processes which produce visible air contaminants are otherwise subject to the regulation’s limitations.\textsuperscript{60} The only other outstate industrial process which enjoys this exemption is the refuse-burning industry.\textsuperscript{61}

Third, 10 C.S.R. § 10-3.090 places restrictions on the emissions of odors from processes which emit air contaminants.\textsuperscript{62} Farmers are exempted from this regulation, as well as the charcoal industry.\textsuperscript{63} All other outstate industries are subject to the regulation’s limitations placed on odorous emissions, allowing only certain quantities of such emissions.

Finally, 10 C.S.R. § 10-6.110 sets forth the requirements for submission of emission data, emission fees, and process information for all sources in Missouri which produce air contaminants.\textsuperscript{64} Charcoal kilns and plants are responsible for providing data to MDNR on the amount of particulates that each individual source emits annually, but those kilns and plants do not have to report the types of particulates emitted.\textsuperscript{65} The amounts reported in each source’s Emission Inventory Questionnaire are then used to calculate the annual fee due under the operating permit system.\textsuperscript{66} As noted earlier, though, the maximum fee for the charcoal industry is limited to twenty-five dollars per ton on only the first 4,000 tons of contaminant emitted.\textsuperscript{67} The regulation exempts the charcoal industry from the more stringent fees placed on all other air pollutants in Missouri, basically tracking the language set forth in the statute.\textsuperscript{68}

**Recent Developments**

Ever since the charcoal industry was exempted from regulation by the state upon the implementation of the Clean Air Act, the EPA has long held suspicions that the kilns were putting out emissions more hazardous than first thought or claimed by the industry.\textsuperscript{69} The ability to monitor and test these outputs, though, has been severely limited by the kilns and nearby residents. The kilns refused to provide detailed information as to their emission outputs, and the residents near the kilns refused to let the EPA monitor the air quality on their land.\textsuperscript{70} Suspicions of the federal authorities in the Ozarks, while often exaggerated, tend to have a certain truth to them.\textsuperscript{71} Two recent developments have occurred, though, which have given the EPA and MDNR the toehold needed to argue for increased regulation of the industry.

First, over two hundred residents near some kilns in southern Missouri signed a petition against further charcoal production.\textsuperscript{72} The constant black smoke, as well as the thick black dust that settled on everything in sight when there was no wind to blow the dust away, convinced many long-time residents that enough was enough.\textsuperscript{73} Subsequently, a farmer near one of those kilns allowed the EPA to install...
testing equipment on his land. The farmer’s land was adjacent to several kilns operated by the West Plains Charcoal Company. The farmer had become exasperated by the constant black fog emanating from the kilns, which left much of his land covered with soot on many days. Cars covered in grit, cows with black-powdered noses, and an unsightly dark scum on his farm pond were just some of the results of the output of the nearby kilns. Often, only the rain could remove the residue and fog from the area.

The EPA recorded incredible numbers from its monitoring of the air quality on the farmer’s land. The monitors installed by the EPA were designed to measure the density of air particles less than ten microns in diameter, compared to the width of a human hair, which is fifty to seventy microns in diameter. The EPA recorded readings ranging between 174 and 563 micrograms. On July 5, 1996, a reading of 1,061 micrograms was registered. By comparison, air particle readings from Los Angeles from 1993 showed no readings over 100 micrograms for the entire year. The federal standards state that any air particle density greater than 150 micrograms per cubic meter is considered potentially hazardous to humans, and a definite health hazard is posed by any level greater than 600 micrograms. The EPA also pointed out that the testing was done to measure for heavier particles only, and that concentrations of smaller, finer particles may have been carried by the prevailing winds for miles and miles.

The EPA and MDNR got their second break when a kiln owner near Salem decided to contest the operating permit fees he was being charged by the state. The kiln owner, a producer for Imperial Products, argued that his kiln was being overcharged for the amount of emissions it was annually producing. The MDNR agreed to hear the producer’s complaint as long as it received a sample of the kiln’s emissions for analysis. While it turned out that the producer was actually being overcharged and was producing much fewer emissions than alleged by MDNR, the results of the analysis of the sample provided by the producer gave MDNR and the EPA the silver bullet they had been looking for as evidence that stricter regulation of the charcoal industry and the kilns was necessary. The results showed that the emissions contained several toxic chemicals and carcinogens. Among other things, the sample contained eleven recognized air pollutants considered hazardous, including 4-methylphenol, a carcinogen known to corrode body tissues, and phenol, a skin and lung irritant known to cause chromosome damage. Until this time, MDNR and EPA had only suspected that the industry and the kilns were producing possibly hazardous emissions; now they had the proof they needed to seek compliance with

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74 Id. (The farmer, David Hawkins, a fourteen-year resident of the area, allowed the EPA to install air quality monitors in his pasture, commenting on the soot and smoke, “All you can do is wait for the rain.”).
75 Id.
76 Id.
77 Id.
78 Id.
79 Id.
80 Id.
81 Id.
82 Id.
83 Id.
84 Id.
85 Keller II, supra note 65, at 10A.
86 Id.
87 Id.
88 Id.
The immediate result of these findings was, first, a letter sent to the West Plains Charcoal Company by the EPA ordering it to immediately reduce the particulate emissions from the offending plant. The EPA and MDNR also scheduled a meeting with representatives of the charcoal industry and legislators concerned with the industry and possible ramifications of increased regulation. The charcoal industry showed just how much clout it carries with all levels of legislators in Missouri at this meeting on November 25, 1996. Representatives of Eighth District United States Representative Jo Ann Emerson, as well as representatives of United States Senators John Ashcroft and Kit Bond were in attendance, along with nine Missouri charcoal producers, several industry lobbyists, and state legislators. While no certain action resulted from this initial meeting, acrimony was evident on both sides of the issue. The industry felt that the EPA and MDNR slanted the testing to come up with results unfavorable to the industry in order to coerce compliance with regulations that some within the industry feel are not needed. Industry representatives claim forcing the charcoal kilns to install air quality measures such as afterburners could result in costs of up to $75,000.00 per kiln and increase the retail cost of a ten-pound bag of charcoal briquettes by almost fifteen cents. While producers such as West Plains Charcoal Company admit a greater amount of pollutants may be coming from their kilns, they still question the harmful effect, if any, of these pollutants, especially considering their remote locations. The state representative from West Plains’ district also complained that the EPA put monitors closer to the kilns than any monitors had been placed before in order to manipulate the results. He pointed out that a monitoring effort near a plant in Licking in 1992, with the monitor placed around one-half mile from the source, turned up no violations of EPA or MDNR regulations, while the testing at West Plains was done as close as thirty yards from one of the kilns in question. The EPA and MDNR refuted these claims and pointed out that the evidence spoke for itself and that there would be no reason to cause such an uproar around the industry if there was not a serious problem that needed addressing. The only agreement reached during the meeting was that the West Plains Charcoal Company would submit a list to the state of steps being taken by the producer to reduce emissions at the plant.

The EPA has now sent a letter to the West Plains Charcoal Company requesting an engineering report under the Clean Air Act as to the company’s efforts to reduce its harmful emissions. The EPA has also sent eleven information requests to several Missouri charcoal producers seeking information on those producers’ emissions and compliance with reporting requirements under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Emergency Planning and Community Right-to-Know Act.

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89 Missouri Charcoal Maker, supra note 14, at 6B.
90 Keller I, supra note 11, at 1A.
91 Id.
92 Id.
93 Id.
94 Id.
95 Id.
96 Id.
97 Id.
98 News Release: EPA Requests Additional Information from Charcoal Kilns, U.S. EPA News Release, February 11, 1997 (The release notes that West Plains had committed to conduct an engineering evaluation of emission reduction measures at its plant at the November 25, 1996, meeting with the EPA and MDNR, but that date for submission of the evaluation expired in late January with no submission from West Plains).
Also, the EPA, on February 18, 1997, sent a letter to Royal Oak Enterprises, Inc., requiring the company to perform emissions testing on its charcoal kilns for particulate matter and other emissions. This information will be used to determine if, and how, the state will develop new emissions standards and revise the current implementation plan operated by the state.103

Comment

The charcoal industry's ability to avoid the strict state and federal regulations which apply to almost all other Missouri industries has created substantial benefits for the industry. The lack of regulation has given the Missouri charcoal industry national preeminence in terms of sales, jobs, and profits. The nation's major charcoal producers flock to Missouri to take advantage of such lack of regulation. Missouri's position as the nation's leader in charcoal production, though, has come at a cost imposed not only upon the air quality of the state, but on local farmers, businesses and other economic interests. This ability of the charcoal industry to impose externalities on its neighbors and the rest of the state stems directly from the fact that Missouri is the least strict state in the nation in imposing regulations on the charcoal industry.

Farmers near charcoal kilns have their land, crops, and livestock exposed constantly to the gritty dust produced by the kilns. Lakes and ponds are often covered in a layer of black scum. The constant presence of this soot and grime detrimentally affects the farmers and nearby landowners, but is merely treated as an ordinary by-product of the production process which results in economic gains and profits to the charcoal producers. These externalities, though, are the least of those imposed by the industry.

The chief externality the charcoal plants and kilns impose may be the possible harmful effects on the human population living within the range polluted by the charcoal industry. While many people have lived nearby these plants and kilns for many years, it is possible such proximity may take a devastating toll on the residents of the surrounding areas. The emissions from the kilns and plants obviously produce large amounts of heavy black smoke containing fine, and often not so fine, particulates which may impair human respiratory functions. The amount of emissions as measured near the West Plains charcoal plant often far exceeded measures the EPA has determined to be a significant level of harm. The emissions on occasion have even outpaced the levels of particulate pollution found in Los Angeles, often considered to have this country's most polluted, smog-filled air. In addition, the emissions from charcoal kilns and plants also may contain hazardous substances harmful to human health. Substances such as 4-methylphenol and methylene chloride have been extracted from the emissions emanating from a kiln operated by a producer for Imperial Products. Only time will tell what harmful effect these emissions will have on the general public. One thing is sure: the charcoal producers have benefitted from the very lack of regulation which may at this moment be costing some citizens of Missouri their health.

Conclusion

Clearly, a new day is dawning for the charcoal industry in Missouri. Long protected by the legislature as a vital industry whose harm to the environment was far outweighed by its economic impact to the state, charcoal producers have evaded regulation for years. However, the revelation of just how harmful the industry may be to the environment has finally raised concerns to the level that may require regulatory intervention by both MDNR and the EPA. While Missouri's status as the number one charcoal producer in the nation would not seem to be put

102 News Release: EPA Requests Information from Large Charcoal Producer, U.S. EPA News Release, February 18, 1997 (the EPA chose Royal Oak because Royal Oak is now the largest charcoal producer in Missouri and has a wide variety of kilns from which to obtain test data on emissions across the industry in Missouri).
103 Id.
at immediate risk by imposition of stricter regulations on the industry, there is no doubt that some economic injury may occur. But when balanced against the toxic pollution that is being pumped into Missouri skies daily by these charcoal kilns and their exempted methods of production, a certain amount of economic loss is of little consequence considering the harmful effects on residents of the Ozarks. The time has come for the charcoal industry to succumb to the same regulatory framework as all other air contaminant sources in Missouri and for the industry to pay the price imposed by its pollution outputs if it desires to continue to adhere to out-dated modes of production that threaten the lives of both the people and the environment of the Missouri Ozarks.

EDITOR'S UPDATE:
REGULATION OF CHARCOAL INDUSTRY MAY BECOME REALITY

This Summer, leaders from Missouri's charcoal industry pledged tentative support for the industry's submission to air regulation, including the installation of pollution controls on more than 200 kilns in the state. The leaders agreed to the proposed regulation at a meeting of the Missouri Air Conservation Commission on July 24, 1997, in Bethany, Missouri.

According to articles appearing in both the St. Louis Post Dispatch and the Kansas City Star, the industry pledged to undertake the following measures:
* To work with the state and EPA to develop a rule for pollution controls, which would set limits for the density of its emissions, for specific pollutants, by September 18, 1997
* Achieve full compliance by July 1, 2005.
* Place controls on some kilns as early as April 1, 1998.
* Pay, in some cases, $50,000 penalties to the federal government for failing to comply with federal rules on reporting emissions. See Michael Mansur, Charcoal Plants Agree to Controls --- Missouri is the Only State with no Regulations for Kilns' Air Pollutants, K.C. STAR, July 25, 1997, at C1; Charcoal Firms OK Pollution Controls, ST. LOUIS P.D., July 27, 1997, at 01C.

This proposal has not been approved by either the United States EPA or the Missouri Department of Natural Resources, but it may be the first step toward meaningful regulation of the charcoal industry in Missouri.

-Laura Krasser