

Lawsuits, Property, and the Environment: Measuring the Impact of Regulatory Takings Litigation on Surface Coal Mining Regulations

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INTRODUCTION

Enacted in 1977, the Surface Mining Control and Reclamation Act (SMCRA) is unique among mining laws. “Whereas other forms of mining are subject to a mix of federal and state requirements on both private and public lands, coal mining is regulated under...a comprehensive federal law that applies on all lands throughout the United States.”¹ The law was created, among other reasons, to fix the lack of uniformity among state efforts to regulate surface coal mining.² The end result was a law that required that all surface mining of coal in the United States be done so under a permit to guarantee that the end effects of the mining would cause irreparable damage to the environment, agriculture, or the public. When thinking of such permits, it is best to not think of a driver’s learning permit or any other permit that fits on one piece of paper. SMCRA permits can be large, filling a few large three-ring binders. This is because the requirements placed upon surface coal mining are numerous, scientific in nature, and exact. Some mining operations “were especially vociferous in their opposition because compliance costs posed significant economic hardships for their marginally profitable mines.”³

Miners who have been confronted by the restrictions and requirements of SMCRA have occasionally resorted to regulatory takings litigation. Such litigation is based on the Fifth Amendment requirement for “just compensation” when private property is taken for public use.⁴ Although the government does not physically take coal from mining operations when mining activities are restricted, the plaintiffs in a regulatory takings case argue that a particular right or value in the property has

¹ Rasband, James, James Salzman, and Mark Squillace. *Natural Resources Law and Policy*. New York: Foundation Press. 2004. p. 1136.

² Scheberle, Denise. *Federalism and Environmental Policy: Trust and the Politics of Implementation*. Washington, D.C.: Georgetown University Press. 2004. p. 166.

³ *Id.* at 165.

⁴ U.S. Constitution. Am. V.

effectively been taken through regulation and the government should, therefore, compensate the mining operation for the value of the coal lost to regulation. Given the size of some coal mining operations, the financial strain placed upon the government when it regulates coal mining has the potential to be great. As the Justice Holmes has stated: “Government hardly could go on if to some extent values incident to property could not be diminished without paying for every such change in the general law.”⁵ The question that emerges is to what extent could such litigation impose such a cost on the regulatory government that it, in turn, reduces its implementation of public-serving statutes?

This paper investigates that question by measuring the impact of regulatory takings litigation on the policy outputs of state and federal agencies charged with the implementation of SMCRA. This paper begins by explaining the statutory framework of SMCRA and discussing the case history of regulatory takings challenges to the Act. Next, the issue of measuring the impact of judicial decisions is considered and then the impact of such decisions are measured in the context of SMCRA through the use of time-series cross-sectional (TSCS) regression analysis. Finally, the results of those regressions are evaluated in the context of what is known about SMCRA implementation, knowledge which has been gained through research interviews with regulatory personnel in state and federal coal mining agencies. Ultimately, although the regression analyses demonstrate a chilling effect on regulation through an increase of surface mining permits issued brought on by successful regulatory takings challenges, those conclusions remain suspect due to issues of stationarity and covariance and evidence from the interviews. This does not, however, mean that such litigation cannot have a chilling effect on regulation, although particular features of SMCRA seem to insulate the Act from such challenges.

STATUTORY FRAMEWORK OF SMCRA

Enactment of the Surface Mining Control and Reclamation Act (SMCRA) in 1977 only occurred after a tragic collapse of a coal waste dam in West Virginia in 1972, killing 125 people, the introduction of more than 100 bills in Congress on surface mining, and two vetoes by President Ford of similar, previous legislation.⁶ Although it is a product of a moment in American political history which produced

⁵ *Pennsylvania Coal v. Mahon*, 260 U.S. 393, 413 (1922)

⁶ Scheberle, *supra* note 2 at 164.

the foundational statutes of the environmental regulatory regime, SMCRA does not enjoy the same recognition of other environmental laws, such as the Clean Air Act; the Clean Water Act; the Comprehensive Environmental Response, Compensation, and Liability Act (a.k.a. Superfund); and the Endangered Species Act. Such ambivalence to SMCRA, however, is undeserved; the law broadly covers the environmental, aesthetic, health, safety, cultural, and historical impacts of the production of the nations largest source of domestic energy, regulates it across all lands of the United States, and “contains inspection and enforcement provisions, which, in many ways, are more progressive than those found in any other major environmental statute.”⁷

SMCRA is comprised to two main parts. Title IV contains the provisions of the Abandoned Mine Lands (AML) program, which uses a tax on coal production to reclaim lands on which coal mining had occurred prior to enactment of SMCRA and had since been abandoned.⁸ Title V provisions of the Act deal with the regulation of active surface coal mining and the surface effects of underground coal mining.⁹ The dangers associated with abandoned coal mines are tremendous; not only are abandoned mines a continued environmental risk due to such harms as erosion or acid mine drainage (AMD), but they also pose a risk to the safety of individuals who could drown in dangerous pools or fall off of crumbling high-walls. However, the focus of this research is on the active regulatory component of SMCRA, which has significantly more intersections with regulatory takings litigation than the AML program.

“Like many environmental laws, congressional architects chose a partial-preemption regulatory approach for implementing SMCRA.... (T)his approach returns regulatory control to the states, but only after the states adopt enforcement programs that meet national standards.”¹⁰ Having assumed the power to regulate surface coal mining from the states, SMCRA only allows the states to reassume regulatory authority upon approval of the Secretary of the Interior, which requires that the state establish a surface mining regulatory program which “provides for the regulation of surface coal mining and reclamation operations in accordance with the requirements of” the federal law.¹¹ Even after primacy has been

⁷ Rasband, *supra* note 1 at 1137.

⁸ 30 U.S.C. § 1231-1241

⁹ *Id.* at § 1242-1279

¹⁰ Scheberle, *supra* note 2 at 155.

¹¹ 30 U.S.C. § 1253(a)(1)

achieved by a state, SMCRA provides significant federal oversight powers to ensure compliance with federal standards. The Secretary is empowered to “make those investigations and inspections necessary to insure compliance with”¹² SMCRA, and is further empowered to provide for federal enforcement if the state program is determined to not be effectively enforcing the law in a manner consistent with the requirements of SMCRA.¹³

Central to the Title V regulatory provisions, and central to potential regulatory takings challenges, are the permitting practices used to implement the law. To insure that surface coal mining is conducted in a manner that balances environmental, agricultural, and energy interests,¹⁴ SMCRA requires that any surface coal mining operation, or underground coal mining operation with surface effects, be conducted with an approved permit, granted by either the federal Office of Surface Mining (OSM) or the state regulatory authority. Issuance of such a permit is conditioned upon the ability of the surface mining operator to conduct such operations in a manner which insures the ability of the operator to reclaim the land, i.e. “to restore the approximate original contour of the land;”¹⁵ “minimize the disturbances to the prevailing hydrologic balance;”¹⁶ “control or prevent erosion and siltation, pollution of water, damage to fish or wildlife or their habitat, or public or private property;”¹⁷ “assume the responsibility for successful revegetation;”¹⁸ “restore the land affected to a condition capable of supporting the uses which it was capable of supporting prior to any mining or higher or better uses;”¹⁹ and “conduct surface coal mining operations so as to maximize the utilization and conservation of the solid fuel resource being recovered so that re-affecting the land in the future through surface coal mining can be minimized.”²⁰ To guarantee post-operations reclamation will occur, operators must post a reclamation bond which will be forfeited if reclamation efforts are abandoned.²¹

¹² *Id.* at § 1211(c)(1)

¹³ *Id.* at § 1254(b)

¹⁴ *Id.* at § 1202(f)

¹⁵ *Id.* at § 1265(b)(3)

¹⁶ *Id.* at § 1265(b)(10)

¹⁷ *Id.* at § 1265(b)(17)

¹⁸ *Id.* at § 1265(b)(20)(A)

¹⁹ *Id.* at § 1265(b)(2)

²⁰ *Id.* at § 1265(b)(1)

²¹ *Id.* at § 1259

In addition to establishing a number of requirements which must be met by any surface coal mine operator, SMCRA also places upon regulatory personnel a strict set of inspection and enforcement requirements. Regulatory authorities are required to conduct, on average, monthly partial inspections and annual full inspections of all surface coal mining operations, and are further required to conduct such inspections irregularly and without prior notice.²² In the event that the regulatory authority observes a violation of the permit which “can reasonably be expected to cause significant, imminent environmental harm to land, air, or water resources,” or “creates an imminent danger to the health or safety of the public,” the agent is required to immediately issue a cessation order (CO), which halts all relevant mining or reclamation practices until the violation is rectified.²³ If the violation does not present an imminent risk, the issuance of a notice of violation (NOV) is required, which, if the violation is not corrected within the time-frame established by the NOV, will result in the issuance of a CO.²⁴

Surface coal mining operators, facing the broad requirements of SMCRA placed upon their planned mining activity, have occasionally brought regulatory takings challenges against the regulatory actions of either OSM or state regulatory authorities. Such challenged actions generally restrict the areas from which operators may legally attempt to extract coal, areas which can be considered the property of the operators, who have acquired either mineral rights or property rights in fee simple. These access restrictions are either the product of a determination by regulatory decision-makers that particular practices, which result in leaving some coal behind, must be a condition of a permit to protect environmental or other interests, or the area has been declared as land unsuitable for mining (UFM). Under the UFM designation provisions of SMCRA, individuals may petition the regulatory to designate a particular area as unsuitable for surface mining if mining activities in the area would result in significant damage to natural, historic, aesthetic, cultural, scientific, or resource values, or result in an unacceptable risk to public safety due to increased flooding or geological instability.²⁵ Furthermore, Congress declared certain areas to be unsuitable for surface mining, including lands in the National Parks System and other

²² *Id.* at § 1267(c)

²³ *Id.* at § 1271(a)(2)

²⁴ *Id.* at § 1271(a)(3)

²⁵ *Id.* at § 1272(a)(3)

federal lands programs and lands within specified buffer zones of public roads, occupied dwellings, public buildings, schools, churches, community or institutional buildings, public parks, and cemeteries.²⁶ These unsuitability designations, however, are subject to valid existing rights (VERs). These rights are defined by OSM regulations as “a set of circumstances under which a person may, *subject to regulatory authority approval*, conduct surface mining operations on lands” on which Congressional designations “prohibit such operations.”²⁷ The existence of a VER is determined through OSM’s “Good Faith/All Permits” standard, which allows for the possibility of surface mining operations when “all permits and other authorizations required to conduct surface coal mining operations had been obtained, or a good faith effort to obtain all necessary permits and authorizations had been made, before the land came under the protection of” SMCRA.²⁸

SMCRA AND REGULATORY TAKINGS

The determination of the extent of property rights in the form of coal lease or ownership rights is not only a component of the surface coal mining permitting regime, but it is also the first step used by federal courts to determine whether restrictions placed upon surface coal mining to protect the environment and insure the possibility of reclamation result in a compensable taking of the operator’s property due to the resultant inaccessibility of some coal. Over nearly the last two decades, several challenges to regulatory decisions under SMCRA and its corresponding state statutes have been heard by the U.S. Court of Federal Claims and the U.S. Court of Appeals for the Federal Circuit. These decisions comprise an important piece of the larger legal context in which the regulation of coal mining and regulatory takings litigation meet.

In fact, the telling of the legal history of regulatory takings litigation almost always begins with a case involving the regulation of coal mining. In its 1922 *Pennsylvania Coal*²⁹ decision, the Supreme Court for the first time ruled that a regulation of property effected a compensable taking under the Fifth Amendment. Well before SMCRA, Pennsylvania sought to control subsidence under private property

²⁶ *Id.* § 1272(e)

²⁷ 30 C.F.R. § 761.5 (emphasis added)

²⁸ *Id.* § 761.5(b)(1)

²⁹ *Pennsylvania Coal*, *supra* note 5.

caused by anthracite coal mining by enacting the Kohler Act, which required coal mining operators to leave behind enough coal to support the surface structure supporting private property.³⁰ Although the Court in *Pennsylvania Coal* recognized that “government hardly could go on if to some extent values incident to property could not be diminished without paying for every such change in the general law,”³¹ the Court ruled that the Kohler act went “too far”³² in that regard.

Sixty-five years later, the Supreme Court issued its decision in *Keystone*,³³ a case involving another Pennsylvania statute controlling for subsidence and with facts very similar to those of *Pennsylvania Coal*.³⁴ While the facts of *Pennsylvania Coal* and *Keystone* were indeed quite similar, the Court in *Keystone* argued “that the similarities are far less significant than the differences, and that *Pennsylvania Coal* does not control this case.”³⁵ In this case, the Court held that the Subsidence Act, which “prohibits mining that causes subsidence damage to three categories of structures,”³⁶ the Court demonstrated “hesitance to find a taking when the State merely restrains uses of property that are tantamount to public nuisances....”³⁷ Central to the Court’s argument was the characterization of the Subsidence Act as a statute protecting the common good and the Kohler Act as protecting the property of a privileged few.³⁸ Given the high demand for the cleaner burning anthracite coal, the State of Pennsylvania sought to increase revenues through the Fowler Act. “The Fowler Act, adopted on the same day as the Kohler Act, enacted tax on anthracite coal. It was not an ordinary tax, though. Coal mining companies did not have to pay it *unless they wanted relief from the obligations of the Kohler Act.*”³⁹ The presence of the Kohler Act had less to do with the protection of public safety and more to do with persuading anthracite coal miners to pay the tax. “Because many cities banned the burning of the smoky

³⁰ *Id.* at 412-413.

³¹ *Id.* at 413.

³² *Id.* at 415.

³³ *Keystone Bituminous Coal Assn. v. DeBenedictus*, 480 U.S. 470 (1987)

³⁴ Benjamin, James Reginald, Jr. “The Best of Both Worlds: Use of Common Law and Statutory Law Together in Applying the Nuisance Exception to Defend a Takings Claim.” 11 Fed. Cir. B.J. 855, 862 (2002); Fischel, William A. *Regulatory Takings: Law, Economics, and Politics*. Cambridge: Harvard University Press. 1995. p. 47.

³⁵ *Keystone*, *supra* note 33 at 481.

³⁶ *Id.* at 476.

³⁷ *Id.* at 491.

³⁸ *Id.* at 483.

³⁹ Fischel, *supra* note 34 at 33.

bituminous coal, demand for anthracite was inelastic. Much of the burden of the regulation and tax would thus be shifted forward to consumers in other states.”⁴⁰

The nuisance exception, which holds that the “right to compensation...of private property taken for public uses is foreign to the subject of preventing or abating public nuisances,”⁴¹ as stated in *Keystone* would be a common component of regulatory takings decisions involving SMCRA. Such challenges would begin with the first major takings challenge to SMCRA, the Supreme Court’s 1981 *Virginia Surface Mining* decision.⁴² This case involved a facial challenge to SMCRA’s Title V performance requirements, with plaintiffs arguing that the Act itself was “an uncompensated taking of private property by requiring operators to perform the ‘economically and physically impossible’ task of restoring steep-slope surface mines to their approximate original contour.”⁴³ The Court’s decision upheld the constitutionality of SMCRA, stating that “constitutionality of statutes ought not be decided except in an actual factual setting that makes such a decision necessary,”⁴⁴ but still allowed for the possibility that a particular case of SMCRA implementation could require a compensation for a taking of private property.

Given such a legal possibility, several regulatory takings challenges have been brought before the U.S. Court of Federal Claims and, on appeal, to the Court of Appeals for the Federal Circuit. In 1989, *Whitney Benefits* challenged application SMCRA restrictions on its long-held mining interests in 1327 acres of coal under an alluvial valley floor (AVF) in the Powder River Basin in Wyoming.⁴⁵ Surface mining of coal under AVFs west of 100th meridian is prohibited by SMCRA if such activity would “interrupt, discontinue, or preclude farming.”⁴⁶ After seeking to take advantage of a SMCRA exchange program, which permitted the Secretary to exchange available federal coal deposits for restricted AVF deposits if “substantial financial and legal commitments were made by an operator prior to January 1, 1977,”⁴⁷ but, ultimately being unsatisfied with the government’s offer,⁴⁸ sued under a takings claim. The

⁴⁰ *Id.* at 35.

⁴¹ *St. Louis v. Stern*, 3 Mo. App. 48, 53 (1876); see also *Mugler v. Kansas*, 123 U.S. 623, 667 (1887)

⁴² *Hodel v. Virginia Surface Mining and Reclamation Association*, 452 U.S. 264 (1981)

⁴³ *Id.* at 293.

⁴⁴ *Id.* at 294-295.

⁴⁵ *Whitney Benefits, Inc. v. United States*, 18 Cl. Ct. 394, 396 (1989) [*Whitney Benefits I*]

⁴⁶ 30 U.S.C. § 1260(b)(5)(A)

⁴⁷ *Id.* § 1260(b)

⁴⁸ *Whitney Benefits I*, *supra* note 45 at 398.

United States claimed that the property in coal was valueless,⁴⁹ given the difficulty in mining beneath AVFs, but the Claims Court countered that “(p)laintiffs adequately showed dealing with alluvial water as a mining cost and that it would be taken care of in normal mine operations.”⁵⁰ The Appeals Court upheld the finding of a taking, stating that “(b)efore SMCRA was enacted, Benefits had a property right it could expect to exercise, i.e., to surface mine the Whitney coal. The moment SMCRA was enacted, Benefits no longer had that property right, for it had no permit and could not possibly under the statute obtain one for a mine that would obviously violate the conditions expressly set forth in SMCRA.”⁵¹ The Appeals Court, therefore, ruled that Whitney Benefits was “entitled to \$60,296,000, plus pre-judgment interest....”⁵²

Subsequent regulatory takings challenges to SMCRA if the federal courts were more likely to find rulings against plaintiffs and supporting the government’s regulatory actions without compensation. The U.S. Court of Federal Claims has been apt to rule that regulatory restrictions on coal mining “represented an exercise of regulatory authority indistinguishable in purpose and result from that to which plaintiff was always subject under...nuisance law.”⁵³ Even in situations where the Claims Court does find a compensable taking in the implementation of SMCRA, the U.S. Court of Appeals for the Federal Circuit has traditionally overturned such decisions.⁵⁴ A number of observable consistencies have emerged from this body of federal rulings, which might be considered surprising, given the “essentially ad hoc, factual”⁵⁵ nature of regulatory takings jurisprudence. When confronted with a regulatory taking challenge to SMCRA, the federal courts have consistently utilized a two-tiered approach. “First, a court should inquire into the nature of the land owner’s estate to determine whether the use interest proscribed by the governmental action was part of the owner’s title to begin with.”⁵⁶ This inquiry asks whether such uses were already limited by “the restrictions that background principles of the State's law of property and

⁴⁹ *Id.* at 400.

⁵⁰ *Id.* at 403.

⁵¹ *Whitney Benefits, Inc. v. United States*, 926 F.2d 1169, 1172 (1991) [*Whitney Benefits II*]

⁵² *Id.* at 1178.

⁵³ *Rith Energy, Inc. v. United States*, 44 Fed. Cl. 108, 115 (1999) [*Rith I*]; see also *M&J Coal Company v. United States*, 30 Fed. Cl. 360 (1994) [*M&J Coal I*]; *Apollo Fuels, Inc. v. United States*, 54 Fed.Cl. 717 (2002) [*Apollo Fuels I*]

⁵⁴ *Wyatt v. United States*, 271 F.3d 1090 (2001); *The Stearns Company, Ltd. v. United States*, 396 F.3d 1354 (2005) [*Stearns II*]

⁵⁵ *Penn Central Transp. Co. v. New York City*, 438 U.S. 104, 124 (1978)

⁵⁶ *M&J Coal Company v. United States*, 47 F.3d 1148, 1154 (1995) [*M&J Coal II*]

nuisance already place upon land ownership.”⁵⁷ If the owner never possessed a property right in the restricted use, then the court need not undertake the second tier of the analysis. If, however, “the claimant can establish the existence of such an interest, the court must then determine whether the governmental action at issue constituted a compensable taking....”⁵⁸ This generally involves determining whether there was a categorical, per se taking, involving a loss of “all economically beneficial uses in the name of the common good,”⁵⁹ or engaging in a *Penn Central* analysis, weighing the economic impact, interference with reasonable investment-backed expectations, and the nature of the government action.⁶⁰

When the federal courts have considered takings challenges to SMCRA, their first tier inquiries into the nature and extent of the property rights of the owner of the particular interest in coal have focused on the nuisance exception to regulatory takings. If the purpose of restrictions placed on coal mining is to prevent a nuisance to the public, then such a restriction—“even a restraint barring all such use--cannot become the basis of a compensable taking,”⁶¹ because such a regulation would be considered nothing more than “a traditional exercise of police power to protect public safety, health and welfare from the 'unacceptable risks' that coal mining operations...would pose.”⁶²

A clear example of a court’s use of the nuisance exception can be found in the Claims Court’s decision in *M&J Coal*. Little dispute was present as to what was owned by whom: the coal rights in central West Virginia obtained by M&J were originally purchased through mineral severance deeds which severed the underground mineral estate from the surface estate, and freed the owner of the mineral estate from liability “for any injury or damage done to the overlying surface, or to anything therein or thereon.... (M&J) assumed they could subside structures where the surface owners had conveyed the right to subjacent support, and as to those structures required by law to be protected, the angle of draw would be 15 degrees.”⁶³ Eventually, but suddenly, M&J’s mining practices began to subside the Dingus and Tarley residences:

⁵⁷ *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1029 (1992)

⁵⁸ *M&J Coal II*, *supra* note 56 at 1154.

⁵⁹ *Lucas*, *supra* note 57 at 1019.

⁶⁰ *Penn Central*, *supra* note 55 at 124.

⁶¹ *Rith I*, *supra* note 53 at 113.

⁶² *Cane Tennessee, Inc. & Colten, Inc. v. United States*, 57 Fed. Cl. 115, 127 (2003) [*Cane II*]

⁶³ *M&J I*, *supra* note 53 at 361-62. The angle of draw is the angle from the vertical line, marking the edge of allowed underground mining, to the edge of an area on the surface where subsidence is to be prevented.

“When it happened, my daughter was taking a bath and I was working in the kitchen starting dinner,” said Margaret Tarley. “It sounded like a gunshot. I went down into the basement. When I came back up into the kitchen, I could see the walls pulling apart. It was scary. We moved in three hours. We were lucky. We had mine subsidence insurance.” The Dingus family next door wasn’t as lucky.... “We spent the next 12 days in a motel. Charles Sorbello, who owns the company, handed me six \$50 bills and paid our motel bill of \$739. That’s all we got.” Dingus had no subsidence insurance.⁶⁴

After the state refused to engage in any enforcement actions against M&J, OSM issued a CO against the company and required the creation of a new subsidence control plan, which increased the angle of draw from 15 to 30 degrees and prohibited M&J from damaging single family dwellings.⁶⁵ Even after OSM took enforcement action against M&J, subsidence continued as damage was caused to a section of a public road and town’s new water tower began to tilt, which were damages prohibited by West Virginia state law.⁶⁶

Given the new mining restrictions placed upon the company, M&J “alleged that OSM’s enforcement actions which required plaintiffs to increase the draw angle under protected structures and to protect single family dwellings deprived plaintiffs of 99,700 tons of coal they otherwise would have mined, and resulted in \$580,000 in lost profits.”⁶⁷ In other words, M&J argued that OSM actions took their property in the support estate, which was part of their severance deed, and transferred it to the surface estate owners, a property taking which should be compensated. The Claims Court disagreed and focused on the first hand accounts of the subsidence provided by Mr. Tarley, which described a severed gas line, which could have exploded, deep cracks in the yard, which had already claimed the life of a dog and could easily do the same to child, and electric lines from the house, which were “stretching tight as a fiddle string.”⁶⁸ It was OSM’s response to the need for public safety which separated the case from facts of *Whitney Benefits*,⁶⁹ and insulated the enforcement actions from regulatory takings claims. On appeal, the Appeals Court upheld the finding of no taking, stating that, although the deed possessed by M&J

⁶⁴ Nyden, Paul. “Collapsing Mine Land Still Takes Toll in Homes.” *The Charleston Gazette*. Jan. 11, 1987. p. 1B.

⁶⁵ *M&JI*, *supra* note 53 at 364.

⁶⁶ *Id.* at 364-65.

⁶⁷ *Id.* at 365-66.

⁶⁸ *Id.* at 363.

⁶⁹ *Id.* at 370.

included the support estate, “M&J's acquisition of rights by deed did not give it the right to mine in such a way as to endanger the public health and safety.”⁷⁰

In other cases involving nuisance determinations, the Claims Court has sought to ground a particular nuisance in something more referential than a declaration of a threat to public safety. In particular, the Claims Court has looked for definitions of nuisance in state common law, heading Justice Scalia’s requirement that nuisance restrictions “inhere in the title itself, in the restrictions that background principles of the State's law of property and nuisance already place upon land ownership.”⁷¹ “Thus, if the Government shows that the activity it was regulating constituted a nuisance in the state's common law, it can avoid paying compensation because the right to engage in the activity was excluded from the owner’s title.”⁷² In its 1999 *Rith Energy* and 2002 *Apollo Fuels* decisions, the U.S. Court of Federal Claims ruled that certain coal mining operations “constitute(d) an enjoined nuisance under state law.”⁷³ In *Rith*, although initial testing by the company demonstrated a low risk of AMD, subsequent testing demonstrated a 500% variance in the tests⁷⁴ and OSM determined that the mining activities presented too great a risk of contaminating the Sewanee Conglomerate aquifer.⁷⁵ In *Apollo Fuels*, OSM designated an area unsuitable for surface mining (although it allowed for underground mining from outside the area) due to the risk that AMD posed to the endangered blackside dace, the Cumberland Gap Historical Park, and, most importantly (according to OSM), the water supply aquifer for the town of Middleboro.⁷⁶ In both cases, the Claims Court looked to Tennessee common law and the Tennessee Water Quality Control Act (TWQCA) to determine that water pollution was an actionable nuisance under state law.⁷⁷ Ironically, in both cases, the Appeals Court upheld the findings of no takings, but ignored the nuisance question, engaging instead in *Penn Central* analyses, which will be described below.⁷⁸

⁷⁰ *M&J II*, *supra* note 56 at 1154.

⁷¹ *Lucas*, *supra* note 57 at 1029.

⁷² *Apollo Fuels I*, *supra* note 53 at 734.

⁷³ *Rith I*, *supra* note 53 at 115; see also *Apollo Fuels I*, *supra* note 53 at 735.

⁷⁴ *Id.* at 111.

⁷⁵ *Id.* at 114.

⁷⁶ *Apollo Fuels I*, *supra* note 53 at 720.

⁷⁷ *Rith I*, *supra* note 53 at 114; *Apollo Fuels I*, *supra* note 53 at 735.

⁷⁸ *Rith Energy, Inc. v. United States*, 247 F.3d 1355, 1362 (2001) (*Rith II*); *Apollo Fuels, Inc. v. United States*, 381 F.3d 1338, 1347 (2004) (*Apollo Fuels II*)

A final note on the nuisance exception in regulatory takings challenges to SMCRA: despite the substantial impacts that can be caused by coal mining, the nuisance exception has not always been sufficient to insulate SMCRA enforcement from a takings claim, much less from the necessity to engage in *Penn Central* or categorical taking analyses. The nuisance exception seems to be weakest when the courts subject the act of mining itself to nuisance criteria instead of the externalities of mining. In the cases described above, the Claims Court looked to issues such as subsidence of property and AMD as the potential nuisances. In *Whitney Benefits*, the Appeals Court looked at the provisions of SMCRA and observed that “Congress expressly permitted, in the grandfather clause, the continued mining beneath AVFs of all grandfathered mines and all mines found by State Authorities to have minimal AVF involvement, hardly the action of one out to abate a ‘nuisance.’”⁷⁹ Likewise, in *Eastern Minerals*, the Claims Court has stated that mining itself does not constitute a nuisance.⁸⁰ In this case, OSM denied a permit to the company due to concerns about noise and hydrological impacts on a nearby public park, which is protect by SMCRA from adverse effects of mining.⁸¹ The Claims Court read these concerns as speculative, which coupled with the historical presence of mining on the property, led to court to conclude that the government had not demonstrated that the plaintiffs proposed mining activities would constitute a nuisance.⁸²

When a court determines that a proposed mining activity would not result in the creation of a nuisance, or elects not to consider making that determination, and the proposed activity is, therefore, part of the owner’s bundle of property, the courts then determine whether a compensable taking of that property has occurred. As stated above, the court first considers whether a categorical taking has occurred; just as when the restriction involves prevention of a nuisance not inherent in the owner’s title, a more detailed consideration of the extent of the property value’s diminution is not necessary if the diminution is total or the property is physically invaded by the government.⁸³ If the owner is left with some viable use of his or her property, i.e. in the absence of a categorical taking, the court then utilizes

⁷⁹ *Whitney Benefits II*, *supra* note 51 at 1177.

⁸⁰ *Eastern Minerals International, Inc. v. United States*, 36 Fed. Cl. 541, 551 (1996); overturned by *Wyatt*, *supra* note 54.

⁸¹ *Id.* at 545.

⁸² *Id.* at 551.

⁸³ *Rith II*, *supra* note 78 at 113.

the three-pronged *Penn Central* analysis, which considers the economic impact of the restriction, interference with investment-backed expectations, and the nature of the governmental action.⁸⁴

The test for a categorical taking and the economic impact prong of the *Penn Central* test are essentially the same; if the impact is not a total loss, hence, not a categorical taking, then the impact is considered and balanced with the remaining two *Penn Central* prongs. The Claims Court has found a particular implementation of SMCRA to result in a categorical taking,⁸⁵ and given the large scale on which surface coal mining can occur, the potential compensatory liability of the government is significant. Therefore, the role of courts in determining the relevant parcel to be considered in a takings analysis should be considered a key plot point in any storytelling of takings cases. Furthermore, determination of the relevant parcel is essential; to determine the economic impact of a particular regulatory restriction, one must first determine the total property interest or, as the Supreme Court has put it, “the proper denominator in the takings fraction.”⁸⁶ This property fraction exists both spatially and temporally, and plaintiffs in takings cases involving SMCRA have argued that, for purposes of a takings analysis, the relevant parcel should only be considered to be the area restricted by regulation⁸⁷ and property value should only be evaluated by the court from the date of regulation forward.⁸⁸ Federal courts, however, have been reluctant to follow plaintiffs’ lead, heading the Supreme Court, which “has counseled against labeling the property subject to the regulation as the appropriate parcel, noting that “[t]o the extent that any portion of property is taken, that portion is always taken in its entirety,”⁸⁹ further noting that “defining the property interest taken in terms of the very regulation being challenged is circular.”⁹⁰

Since the Claims and Appeals Courts hearing SMCRA takings cases have been hesitant to view the regulated parcel, spatially and temporally, as the relevant denominator parcel, findings of categorical

⁸⁴ *Penn Central*, *supra* note 55 at 124.

⁸⁵ *Whitney Benefits I*, *supra* note 45 at 406.

⁸⁶ *Palazzolo v. Rhode Island*, 533 U.S. 606, 631 (2001).

⁸⁷ *Cane II*, *supra* note 62; *Apollo Fuels I*, *supra* note 53.

⁸⁸ *Rith II*, *supra* note 78.

⁸⁹ *Apollo Fuels I*, *supra* note 53 at 723; citing *Concrete Pipe and Products of California v. Construction Laborers Pension Trust for Southern California*, 508 U.S. 602, 644 (1993)

⁹⁰ *Apollo Fuels II*, *supra* note 78 at 1346; *Tahoe-Sierra Preservation Council v. Tahoe Regional Planning Agency*, 535 U.S. 302, 331 (2002)

takings have been rare. This still leaves the possibility, however, of a less-than-total diminution in value that, when balanced with the other *Penn Central* factors, can result in a taking. In evaluating the economic impact of regulations on the parcel as a whole, courts have been forced to consider the remaining value of other interests in coal, as well as the remaining value of non-coal interests. In *Rith*, the company was able to extract substantial amounts of coal under its permit, prior to the discovery of excessive AMD and subsequent regulation by OSM.⁹¹ In *Cane and Colten*, both companies possessed separate tracts of coal-bearing lands, which the Claims Court determined were treated by both companies as single investment opportunities.⁹² Additionally, the presence of non-coal values to the regulated land, in such areas as timber and development, have generally been considered by court, in evaluating both the economic impact of regulation and the possibility of a categorical taking.⁹³

On this last issue, courts have been more hesitant about adding non-coal value to the relevant parcel than additional, accessible coal value. In *Whitney Benefits*, the government argued that the presence of surface rights, on which one could engage in agricultural activities, should prevent the company from making a claim of a total taking. The Claims Court disagreed, stating that the surface rights were purchased merely as a means to facilitate access to the company's property in coal and, since the company was only claiming that their property in coal was taken, the surface property should not be considered in the relevant parcel.⁹⁴ "Courts have been willing to designate the area subject to government regulation as the appropriate denominator if the area contains the whole of a claimant's viable economic interests."⁹⁵ Only if the separate property parcel has been rendered valueless by the regulation of the main parcel or the owner can demonstrate that the separate parcel was purchased as a separate investment⁹⁶ will such separate parcels be omitted from the property denominator.

The Courts have not provided a set figure or percentage for determining whether an economic impact exceeds an acceptable level and, therefore, constitutes a taking. In *Cane and Colten*, the Claims

⁹¹ *Rith II*, *supra* note 78 at 1362.

⁹² *Cane II*, *supra* note 62 at 121-122, 130.

⁹³ *Cane Tennessee, Inc. and Colten, Inc. v. United States*, 54 Fed. Cl. 100, 106-108 (2002) (*Cane I*); *Apollo Fuels I*, *supra* note 53 at 729.

⁹⁴ *Whitney Benefits I*, *supra* note 45 at 405.

⁹⁵ *Apollo Fuels I*, *supra* note 53 at 727; see also *Florida Rock Industries v. United States*, 45 Fed. Cl. 21 (1999)

⁹⁶ *Cane II*, *supra* note 62 at 122.

Court has stated that the ability of the owner to recoup his or her investment “can sometimes be relevant. For example, if a party were able to recoup its investment after the government action, it is less likely that a taking has occurred.”⁹⁷ However, the Claims Court immediately cautioned against the overuse of such a determinant, stating that the opposite, ruling for a taking if investments cannot be recouped, “would reward parties who make bad investments.”⁹⁸

The preceding dictum regarding bad investments is a component of the federal courts’ regulatory takings jurisprudence that recognizes the inherent risk involved in coal mining and increases the burden placed upon plaintiffs alleging takings by SMCRA implementation. Although the second prong of the *Penn Central* test requires the court to judge something subjective, i.e. the expectations of the plaintiff, a reasonableness standard has been applied to those expectations, since behavior that may indicate an expectation of a lesser regulatory presence “could serve equally well as evidence of an improvident investment.”⁹⁹ In assessing the investment-backed expectations of coal mining operators, the Courts have recognized that coal mining is quite complex and operators must be aware of the potential risks that may limit their activities as to avoid causing public nuisances. In *M&J*, the Court of Appeals ruled that any permit issued by the state was always conditioned by the need to protect public safety.¹⁰⁰ The Courts in the *Rith* decisions observed that the company had been made aware of the presence of the aquifer.¹⁰¹ Therefore, “when Rith purchased its coal leases it did not have any reason to expect that it would be permitted to mine in a way that was likely to produce acid mine drainage;”¹⁰² such activity would have violated state nuisance law.¹⁰³

In addition to the complexities of coal mining, the Courts have also pointed to the historical presence of a regulatory regime surrounding coal mining. The presence of a regulatory agency, with the vested power to use its discretion to determine whether particular coal mining activities will be permitted, is part of the economic environment in which operators initially pursue mining investments. Part of that

⁹⁷ *Id.* at 123.

⁹⁸ *Id.*

⁹⁹ *Id.* at 127.

¹⁰⁰ *M&J II*, *supra* note 56 at 1154.

¹⁰¹ *Rith I*, *supra* note 53 at 110.

¹⁰² *Rith II*, *supra* note 78 at 1362.

¹⁰³ *Rith I*, *supra* note 53 at 115.

environment must include “an uncertainty that was part of the business risk that plaintiffs took when they made their investment.”¹⁰⁴ Therefore, the reasonable investment-backed expectations of individuals and companies entering into or continuing business in the heavily regulated coal mining industry must account for potentially restrictive regulations as “easily foreseen, not necessarily as a certainty, but as a reasonable possibility.”¹⁰⁵

The Courts have paid particular attention in these cases to the chronology of property acquisition and regulatory enactment. Referred to by some as the notice rule,¹⁰⁶ the Courts have stated that “if at the time of sale an existing law or regulation precluded a certain use, that use was never a ‘stick’ in the purchaser’s ‘bundle of rights.’”¹⁰⁷ In the major Claims Court case that awarded compensation due to SMCRA restrictions, *Whitney Benefits*, plaintiffs acquired mining rights prior to the enactment of SMCRA.¹⁰⁸ Furthermore, evidence of congressional history that indicated that Congress directly considered the impact on *Whitney Benefits* coal resulted in a decision by the Claims Court that the plaintiff’s property in coal was taken on the date of the enactment of SMCRA.¹⁰⁹ In cases where plaintiffs acquired their coal rights after the enactment of SMCRA, mining operators and investors have not fared as well. In *Cane and Colten*, the Claims Court drew special attention to the investor’s lack of experience in coal mining¹¹⁰ and stated that “(a) reasonably prudent individual investing \$5 million would, in the court’s view, become acquainted with all of these regulations, as well as the possible impact of the adjacency of a major state park. *Cane* did not do so in this case. Because a reasonably prudent investor could not have believed that its investment was without regulatory risk, *Cane* cannot now claim that it had reasonable investment-backed expectations that were unexpectedly impacted by government action.”¹¹¹

There are, however, limits to the notice rule acknowledged by the Courts. In *Eastern Minerals*, the predecessor case to the eventual *Cane and Colten* cases, the Claims Court found a taking in the

¹⁰⁴ *M&J I*, *supra* note 53 at 368.

¹⁰⁵ *Apollo Fuels II*, *supra* note 78 at 1350.

¹⁰⁶ Burling, James S. “Private Property Rights and the Environment After *Palazzolo*.” 30 B.C. Envtl. L. Rev. 1 (2002)

¹⁰⁷ *M&J I*, *supra* note 53 at 367; see also *Rith II*, *supra* note 78 at 1364; *Lucas*, *supra* note 57; *Presault v. Interstate Commerce Commission*, 494 U.S. 1 (1990)

¹⁰⁸ *Whitney Benefits I*, *supra* note 45 at 396-97.

¹⁰⁹ *Id.* at 407

¹¹⁰ *Cane II*, *supra* note 62 at 119.

¹¹¹ *Id.* at 127.

restrictions placed upon the plaintiffs. The Claims Court stated that “(m)ere awareness that Eastern’s permits could be affected by future regulations does not destroy plaintiffs’ property interests. Plaintiffs who choose to do business in a heavily regulated industry do not forfeit all property interests.”¹¹²

Although the case was eventually overturned by the Court of Appeals for the Federal Circuit, it did mirror the Supreme Court’s eventual ruling in its 2001 *Palazzolo* decision, in which the Court considered whether “(a) purchaser or a successive title holder like...is deemed to have notice of an earlier-enacted restriction and is barred from claiming that it effects a taking.”¹¹³ In the majority decision, Justice Kennedy refused to “put so potent a Hobbesian stick into the Lockean bundle”¹¹⁴ by stating, if such post-enactment restrictions were the rule, “(a) State would be allowed, in effect, to put an expiration date on the Takings Clause. This ought not to be the rule. Future generations, too, have a right to challenge unreasonable limitations on the use and value of land.”¹¹⁵ Of particular significance to this ruling was Justice O’Connor’s concurring opinion:

Today's holding does not mean that the timing of the regulation's enactment relative to the acquisition of title is immaterial to the *Penn Central* analysis. Indeed, it would be just as much error to expunge this consideration from the takings inquiry as it would be to accord it exclusive significance. Our polestar instead remains the principles set forth in *Penn Central* itself and our other cases that govern partial regulatory takings. Under these cases, interference with investment-backed expectations is one of a number of factors that a court must examine. Further, the regulatory regime in place at the time the claimant acquires the property at issue helps to shape the reasonableness of those expectations.¹¹⁶

Justice O’Connor’s interpretation of *Palazzolo*’s holding, that the chronology of property acquisition and regulatory enactment is neither irrelevant nor deterministic in a takings decision, remains present in the takings jurisprudence as it relates to SMCRA. The appeal of the Claims Court’s decision in *Rith*, which relied heavily on the fact that “SMCRA was enacted eight years before Rith purchased the coal leases...(and, therefore,) Rith could not reasonably have expected that it would be free from regulatory oversight,”¹¹⁷ was decided almost two months before the Supreme Court handed down its decision in *Palazzolo*. The case was appealed back to the Court of Appeals so that the case could be

¹¹² *Eastern Minerals*, *supra* note 80 at 549.

¹¹³ *Palazzolo*, *supra* note 86 at 626.

¹¹⁴ *Id.* at 627.

¹¹⁵ *Id.*

¹¹⁶ *Id.* at 633. (O’Connor concurring)

¹¹⁷ *Rith I*, *supra* note 53 at 1364.

decided again, this time in the light of *Palazzolo*. The Court of Appeals upheld its previous finding of no taking, interpreting the *Palazzolo* decision as having “rejected the argument that when governmental action regulates the use of property, a person who purchases property after the date of the regulation may never challenge the regulation under the Takings Clause.... In rejecting such a ‘blanket rule,’ however, the Court did not suggest that the reasonable expectations of persons in a highly regulated industry are not relevant to determining whether particular regulatory action constitutes a taking.”¹¹⁸ Although the acquisition of mining rights in the regulatory presence of SMCRA may not eliminate takings claims in reaction to regulatory restrictions, the well established presence of SMCRA within an industry that is heavily regulated indicates that “investment-backed expectations are an especially important consideration in the takings calculus. A party in Rith’s position necessarily understands that it can expect the regulatory regime to impose some restraints on its right to mine coal under a coal lease.”¹¹⁹

The final prong of the *Penn Central* test focuses on the nature of the government action. While the explanation of this test in the *Penn Central* decision focused on such criteria as whether the regulation involved a public use or a physical invasion,¹²⁰ a broader set of questions asked by the Courts targets the timeliness and completeness of the government’s regulatory actions. When the Courts consider such questions, they are working to protect the property rights of coal operators from potential stall and delay tactics of regulatory personnel. In regulatory takings jurisprudence the issues of temporary takings and ripeness are closely related. The ripeness doctrine protects the separation of powers by preventing courts, “through avoidance of premature adjudication, from entangling themselves in abstract disagreements over administrative policies, and also to protect the agencies from judicial interference until an administrative decision has been formalized....”¹²¹ The general rule for ripeness in a regulatory takings case is the

¹¹⁸ *Rith II*, *supra* note 78 at 1350.

¹¹⁹ *Id.* at 1351.

¹²⁰ *Penn Central*, *supra* note 55 at 124.

¹²¹ *Abbott Laboratories v. Gardner*, 387 U.S. 136, 148 (1967); see also Nichol, Gene R., Jr. “Ripeness and the Constitution.” 54 U. Chi. L. Rev. 153, 161 (1987); Hitchcock, Michael B. “*Suitum v. Tahoe Regional Planning Agency*: Applying the Takings Ripeness Rule to Land Use Regulations and Transferable Development Rights.” 28 Golden Gate U.L. Rev. 87, 93-94 (1998); Mixon, John, and Justin Waggoner. “The Role of Variances in Determining Ripeness in Takings Claims Under Zoning Ordinances and Subdivision Regulations of Texas Municipalities.” 29 St. Mary’s L. J. 765, 773 (1998); Hof, *supra* note 39 at 833-834; Strachan, Gordon C., and Adam Strachan. “The Ripeness Doctrine in Regulatory Takings Litigation.” 22 J. Land Resources & Envtl. L. 19, 21 (2002).

requirement of a final decision by the regulatory agency, thus preserving the possibility that property can still be used profitably through variances of approved re-submittals.¹²² The requirement for repeated submittals of permit applications is tempered by the futility exception, which removes the requirement of re-submittal to reach a final administrative decision by recognizing that there may be situations “in which there was no indication that upon application the property owner would not be allowed to develop his [sic] property in some economically beneficial manner, and...further application would allegedly be futile.”¹²³ In addition to the futility exception, the property owner is protected by being allowed to issue a challenge of a temporary taking. If the administrative delay is excessive, courts can rule that such delays took plaintiff’s property for the period of time during which the permitting process prevented the owner from using his or her property. Such delays, however, must be “extraordinary” in nature to amount to a compensable taking.¹²⁴

The ripeness requirement has been used by the Courts to insulate implementation of SMCRA from takings claims. In the *Stearns* decisions, a coal company sold surface rights to the U.S. Government for the creation of a national forest, well before enactment of SMCRA, but retained its mineral rights.¹²⁵ After the eventual enactment of the “good faith, all permits” requirement for VER, it was determined by OSM that the company did not satisfy the test and, therefore, did not have VER.¹²⁶ However, OSM stated that the plaintiff could still apply for a permit to mine and, referencing the historical presence of mining in the area and the general good track record of the plaintiff, stated that this permitting process “was essentially a rubber stamp.”¹²⁷ In the trial, the Claims Court stated that the VER determination had “reversed the basic structure of rights between surface and subsurface owners” and a focus on the possibility of still receiving a permit “misses the point. Ownership and use are not synonymous. The fact that my neighbor always lets me use his lawnmower does not mean I own it.”¹²⁸

¹²² *Williamson County Planning Commission v. Hamilton Bank*, 473 U.S. 172 (1985)

¹²³ *MacDonald, Sommer & Frates v. Yolo County*, 477 U.S. 340, 359-360 (1986) (White dissenting).

¹²⁴ *Boise Cascade Corp. v. United States*, 296 F.3d 1339, 1349-50 (2002); *Tahoe-Sierra*, *supra* note 90 at 332.

¹²⁵ *Stearns I*, *supra* note 54 at 447.

¹²⁶ *Id.* at 449.

¹²⁷ *Id.* at 451.

¹²⁸ *Id.* at 447.

This decision, however, was overruled by the Court of Appeals for the Federal Circuit, which declared the case to be unripe. The decision hinged on defining the conflict as a regulatory takings case, not a physical invasion of property. “Here, the government has not occupied Appellee’s mineral property or the accompanying implied appurtenant easement. . . . Appellee’s argument to the contrary is little more than an incredible attempt to transform a regulatory taking claim into a per se physical taking. Under Appellee’s theory, the implied appurtenant easement that attends the mineral estate creates a power in Appellee to be free from regulation that addresses the circumstance of access to that mineral estate.”¹²⁹ Once the Appeals Court determined the issue at hand to belong to a regulatory takings inquiry, the simple absence of a final administrative decision, leaving the possibility of profitable use of the property open, rendered the case unripe.¹³⁰

Whereas the ripeness doctrine protects OSM and the various state regulatory authorities from premature takings claims, the futility doctrine has been used to limit that protection. In the *Whitney Benefits* case, the government argued that the case was not ripe since it had not been able to effectively evaluate the AVF overlying the company’s property in coal. “The Government (did) not suggest, and did not suggest at trial, any basis whatever on which a permit could be legally granted to surface mine Whitney coal. . . . Indeed, the record is clear that any such application was obviously and absolutely foredoomed on the day SMCRA was enacted.”¹³¹ By deciding that any attempt on the part of Whitney Benefits to secure a surface mining permit for the coal underlying the AVF would be futile and that the regulatory takings challenge was, therefore, ripe for consideration, the Court of Appeals judged the regulatory behavior of the government by stating that it had “carried its attempt to deny the impact of SMCRA on Whitney coal to unreasonable lengths in an apparent hope of postponing the day of reckoning into eternity.”¹³² (1173)

In the various cases arising out of the regulatory restrictions placed upon the coal properties at issue in *Eastern Minerals*, the ripeness of the takings claims and the behavior of the regulating agency

¹²⁹ *The Stearns Co., Ltd. v. United States*, 396 F.3d 1354, 1357 (2005) (*Stearns II*)

¹³⁰ *Id.* at 1358.

¹³¹ *Whitney Benefits II*, *supra* note 51 at 1171-72.

¹³² *Id.* at 1173.

were constantly in question. This issue begins with the fact that Eastern Minerals allowed its lease to expire, wishing to avoid rent liabilities during the regulatory process.¹³³ The Claims Court stated that this action was caused by the government's delay in the permitting process¹³⁴ and any further permit-seeking actions on the part of the company would have been futile.¹³⁵ On appeal, however, the Court ruled that such reasoning was "speculatory,"¹³⁶ and "the futility exception can never excuse the prerequisite that there exist a valid property interest for all takings cases."¹³⁷

In addition to its ruling that the case brought by Eastern Minerals lacked a property interest, the Appeals Court also considered whether delays in the actions of the government took plaintiffs' property temporarily prior to them abandoning their lease. The Court ruled that the delays were not extraordinary, and further stated that "it is the rare circumstance that we will find a taking based on extraordinary delay without a showing of bad faith."¹³⁸ The bad faith requirement also excused a lengthy decision-making process over a subsequent UFM petition on the property.¹³⁹ Proving that regulatory delays were extraordinary due to bad faith may prove quite difficult for coal mining operators. The courts are apt to defer to the decision-making expertise of regulatory agencies, especially "when the permitting process requires detailed technical information necessary to determine environmental impacts."¹⁴⁰ Furthermore, there always remains the possibility "that delay in the permitting process may be attributable to the applicant as well as the government."¹⁴¹ The Appeals Court ruled that the delays encountered in Eastern Minerals' application process were at least partially caused by failures to properly respond to technical deficiency letters (TDLs) and administrative violations on the part of the investor.¹⁴²

In addition to federal cases involving regulatory takings challenges to the implementation of SMCRA, a few cases from state courts are also worth mentioning. In 1998, a Pennsylvania Commonwealth Court ruled that a UFM designation by the state's Department of Environmental

¹³³ *Eastern Minerals*, *supra* note 80 at 545.

¹³⁴ *Id.* at 550.

¹³⁵ *Id.* at 547.

¹³⁶ *Wyatt*, *supra* note 54 at 1097.

¹³⁷ *Id.*

¹³⁸ *Id.* at 1098.

¹³⁹ *Cane II*, *supra* note 62 at 133.

¹⁴⁰ *Wyatt*, *supra* note 54 at 1098.

¹⁴¹ *Id.*

¹⁴² *Id.* at 1098-99.

Regulation had taken a mining company's property in the mineable coal within the designated area.¹⁴³

The decision turned on the Commonwealth Court's declaration of the separated coal estate as the relevant parcel for the takings denominator, despite the facts, as pointed out by a dissenting judge, that alternative uses of the property existed, and only a portion of the land was affected.¹⁴⁴ The Pennsylvania Supreme Court reversed and remanded the decision, taking issue with the Commonwealth Court's determination of the property denominator. The Court observed that property can be conceptualized vertically, horizontally, and temporally,¹⁴⁵ and then noted that the U.S. Supreme "Court has refused to allow: vertical severance of the mineral estate in *Keystone*; vertical segmentation of air and surface rights in *Penn Central*; or temporal division of property in *Tahoe-Sierra*. Thus, in this case, the relevant parcel cannot be vertically segmented and must be defined to include both the surface and mineral rights."¹⁴⁶ The Court then considered whether the restrictions placed on plaintiffs' property was necessary to prevent a nuisance, namely, the potential AMD that the state sought to prevent through its UFM designation. Just as with the federal courts, the Pennsylvania Supreme Court ruled against the finding of a taking by considering whether the externalities of mining ("pollution of public waterways"), as opposed to the mining itself constituted a taking.¹⁴⁷ Additionally, the Court considered the level of burden placed upon the state in proving its finding of a nuisance; the Court stated, "We see no reason to require the Commonwealth to prove that the alleged pollution is practically certain to occur. It is enough if the Commonwealth can prove what its technical study found, that further mining in the UFM area had a 'high potential to cause... (AMD) that would adversely affect the use of the stream as an auxiliary water supply.'"¹⁴⁸

Most recently, the Ohio Supreme Court heard a takings challenge to a UFM designation by the state Department of Natural Resources to protect a sole-source aquifer for the Village of Pleasant City.¹⁴⁹ Unlike the Pennsylvania Supreme Court, the Ohio Supreme Court ruled that the designation constituted a

¹⁴³ *Machipongo Land and Coal Co., Inc. v. Commonwealth*, 719 A.2d 19 (Pa. Cmwlth. 1998) [*Machipongo I*]

¹⁴⁴ *Machipongo Land and Coal Co., Inc. v. Commonwealth*, 799 A.2d 751, 760 (Pa. S.C. 2002) [*Machipongo II*]

¹⁴⁵ *Id.* at 766.

¹⁴⁶ *Id.* at 768.

¹⁴⁷ *Id.* at 774.

¹⁴⁸ *Id.* at 775.

¹⁴⁹ *R.T.G. v. Ohio*, 98 Ohio St. 3d 1 (Oh S.C. 2002)

categorical taking of the company's coal estate property. In determining the relevant parcel in the vertical context, the Court stated that "mineral rights are recognized by Ohio law as separate property rights" and the company "acquired all the property at issue herein, whether in fee or through coal leases or purchases, for the sole purpose of surface-mining the coal from these premises."¹⁵⁰ Horizontally, the Court ignored the 1/5 of the property outside the UFM area, stating "when the UFM designation prevented (the company) from mining a majority of its coal reserves within the regulated area, it made mining those minimal reserves outside the UFM-designated area economically impracticable."¹⁵¹ Although this determination of the relevant parcel relies on precedent from U.S. Claims and Appeals Courts, it runs counter to the U.S. Supreme Court's reluctance to regard only the regulated property as the relevant parcel.¹⁵² Therefore, instead of utilizing a *Penn Central* analysis, under which the Court still could have found the economic impact to be so great as to warrant the finding of a taking, a categorical analysis was used, and resulted in the finding of a total taking.¹⁵³ Additionally, the Court still had to determine whether an uncompensated, total taking would be permitted under the nuisance exception, but in making that determination, analyzed whether mining itself was the nuisance, as opposed to the AMD the state sought to prevent. The Court "concluded that coal mining is not an absolute nuisance, because it can be conducted safely when care is taken" and the company "had acted in a reasonable manner in mining the property and until the UMF designation was issued was allowed to mine the property pursuant to permits."¹⁵⁴ Absent from the opinion and, in particular, the very short section dealing with the nuisance question, was any discussion about whether the Court considered factual evidence about the feasibility of safe mining practices in the UFM area.

THE QUESTION OF IMPACT

The attempt to answer questions of judicial impact is one fraught with difficulties. The institutional structure of the U.S. judiciary is set up in a manner counter to a structure designed to impact; limits on rights, constraints from other branches, and a lack of implementation powers all may act to

¹⁵⁰ *Id.* at 11; see also *Whitney Benefits I*, *supra* note 45.

¹⁵¹ *Id.* at 12; see also *Florida Rock*, *supra* note 95.

¹⁵² *Concrete Pipe*, *supra* note 89.

¹⁵³ *R.T.G.*, *supra* note 149 at 12.

¹⁵⁴ *Id.* at 13.

constrain courts.¹⁵⁵ Even when a court can overcome such constraints, the academic is still left considering the question of causality. “In a case where an agency reconsiders and changes an individual decision following a successful judicial review application by the person directly affected by the decision, the causal link may be easily enough established. But, where the impact is a change in more general modes of working, the contribution of judicial review may be much harder to trace.”¹⁵⁶ Given the complex interstate nature of both coal production and SMCRA implementation, and the interest held by environmentalists, communities, farmers, and mining operators in the outcomes of such implementation, measuring the impact of regulatory takings litigation on the whole implementation regime will be not only more significant but also more difficult than simply determining the outcome of particular conflicts.

Such measurements are especially difficult to determine given the particularly complex relationship between the U.S. judiciary and environmental regulatory agencies. Robert Kagan has described such a condition as one of adversarial legalism, wherein the lines of separation of powers are not as boldly drawn and “policymaking, implementation, and dispute resolution [are] characterized by frequent resort to highly adversarial legal contestation.”¹⁵⁷ The origins of adversarial legalism lie in institutions as old as the nation itself: “a politically selected judiciary, with powers to make policy through common law and constitutional adjudication, and a highly entrepreneurial, politically engaged legal profession.”¹⁵⁸ Additionally, the U.S.’s environmental regulatory regime developed during a “vast expansion of government programs and bureaucracy” aimed at nationalizing regulatory power due to “differences among the states...hav[ing] become suspect.”¹⁵⁹ Given the interwoven relationship between environmental agencies and the courts, and since “one cannot understand the nature of the impact of judicial review on administrative procedures without first understanding the nature of administrative

¹⁵⁵ Rosenberg, Gerald N. *The Hollow Hope: Can Courts Bring About Social Change?* Chicago: University of Chicago Press. 1991. pp. 10-21.

¹⁵⁶ Cane, Peter. “Understanding Judicial Review and Its Impact.” *Judicial Review and Bureaucratic Impact: International and Interdisciplinary Perspectives*, Marc Hertogh and Simon Halliday, eds. New York: Cambridge University Press. 2004. pp. 33-34.

¹⁵⁷ Kagan, Robert A. “American Courts and the Policy Dialogue: The Role of Adversarial Legalism.” *Making Policy, Making Law: An Interbranch Perspective.* Mark C. Miller and Jeb Barnes, eds. Washington, D.C.: Georgetown University Press. 2004. p. 14.

¹⁵⁸ *Id.*, at 25.

¹⁵⁹ Melnick, R. Shep. “Courts and Agencies.” *Making Policy, Making Law: An Interbranch Perspective.* Mark C. Miller and Jeb Barnes, eds. Washington, D.C.: Georgetown University Press. 2004. p. 90.

procedures,¹⁶⁰ inquiry into such judicial impact will involve an array of potential events and targets, some with more obvious causal links than others.

One type of impact that could be caused by a body of litigation is a behavioral adjustment on the part of the agency based upon the agency's overall level of acceptance of the judicial decision.¹⁶¹ Such evidence is often easiest to identify. For example, official statements by OSM personnel that the agency will not follow through on particular plans due to a court decision, despite the agency's belief in its own interpretation of would be a fairly clear example of an agency adjusting its behavior due to a judicial decision. A procedural change in regulations to circumvent such a decision would also be such an example of impact.

Agency behavior might also change in "unofficial" ways, i.e. in ways which do not directly attribute changed behavior to a case, but nonetheless, "*actions changed* in such a way as to conform with the Court, regardless of what was said...."¹⁶² This sort of impact is most consistent with the impacts allegedly association with regulatory takings litigation. If a regulatory takings case is ruled upon in such a manner as to require compensation for a regulatory action commonly engaged in by a particular agency, the "the mere threat of challenge may exert an inhibiting effect on policy and influence decision-making, and the degree to which it does so is likely to vary depending on the precision of the threatened challenge, the nature of the litigant and the sensitivity of the issues involved."¹⁶³ The conclusion of such behavior as observable impact cannot be made simply upon correlation, but must be theoretically explained, i.e. "the mechanisms or links of influence must be clearly specified."¹⁶⁴ Therefore, decision-making models should remain a part of efforts to study judicial impact.

Such clear examples of impact, however, are rare. Bureaucratic reaction to a judicial decision, or the reaction of any other governmental entity, often occur across multiple levels of political division,

¹⁶⁰ Sunkin, Maurice. "Conceptual Issues in Researching the Impact of Judicial Review on Government Bureaucracies." *Judicial Review and Bureaucratic Impact: International and Interdisciplinary Perspectives*, Marc Hertogh and Simon Halliday, eds. New York: Cambridge University Press. 2004. p. 45.

¹⁶¹ Canon, Bradley C. "Studying Bureaucratic Implementation of Judicial Policies in the United States: Conceptual and Methodological Approaches." *Judicial Review and Bureaucratic Impact: International and Interdisciplinary Perspectives*, Marc Hertogh and Simon Halliday, eds. New York: Cambridge University Press. 2004. p. 80.

¹⁶² Rosenberg, *supra* note 155 at 109.

¹⁶³ Sunkin, *supra* note 160 at 48.

¹⁶⁴ Rosenberg, *supra* note 155 at 108-109.

across longer periods of time, and sometimes leave less obvious causal calling cards. Consider, for example, the Supreme Court's 1992 *Lucas* decision, which established the per se, categorical taking rule, applied when all economic value is lost to regulation.¹⁶⁵ The reaction to this decision from the environmentalist community was one of concern, which "anticipated that a state or local environmental protection agency would reduce its regulatory efforts if it thought that the Supreme Court had dramatically increased the government's obligation to compensate owners of property subject to environmental protection laws."¹⁶⁶ While the case had nothing directly to do with surface coal mining, and there is no obvious evidence that state SMCRA regulatory authorities officially altered their procedures in reaction to the case, *Lucas* was followed by an apparent spike in takings litigations against state surface mining offices in state courts.¹⁶⁷ An increase in litigation, out of heightened expectation on the part of surface coal mining operators, may have stretched the human resources of state regulatory authorities, and may have, albeit indirectly, impacted the policy outputs of those agencies.

Finally, extra-judicial forms of impact should be considered. Several examples of such impact exist outside of the SMCRA case study. A highly visible court decision may alter public consciousness about a particular legal question in a manner fully unrelated to the facts of the case. The Supreme Court's 1978 decision in *TVA v. Hill*¹⁶⁸ order the construction of the nearly completed Tellico Dam halted to protect the snail darter, a small fish. Despite the eventual, but relatively quick, completion of the dam,¹⁶⁹ the image of the fish that stopped the dam, a dam which was not stopped, serves as a powerful cultural icon portraying the Endangered Species Act in a particularly, politicized way.¹⁷⁰ A more recent example can be found in the Supreme Court's recent decision in *Kelo*,¹⁷¹ a case which did little to nothing to

¹⁶⁵ *Lucas*, *supra* note 57.

¹⁶⁶ Lazarus, Richard J. "Putting the Correct 'Spin' on *Lucas*." 45 Stan. L. Rev. 1411, 1412 (1993)

¹⁶⁷ See *Iowa Coal Mining Co. v. Monroe County*, 494 N.W.2d 664 (Iowa S.C. 1993); *Ward v. Harding*, 860 S.W.2d 280 (Ky S.C. 1993); *Natural Resources Commission v. AMAX*, 638 N.E.2d 418 (Ind. S.C. 1994)

¹⁶⁸ 437 U.S. 153 (1978)

¹⁶⁹ For a retelling of this complex story of pork-barrel politics, see Peterson, Shannon. *Acting for Endangered Species: The Statutory Ark*. Lawrence: University of Kansas Press. 2002.

¹⁷⁰ For a few examples of the use of the snail darter as a symbol of ESA run amuck, see these varied examples: Johnson, Jenny. "Environmentalists fight to save 'species over people' law that infuriates land developers." *Financial Times*, April 21, 2006. p. 6; Balko, Radley. "Property Rights Form Foundation of Freedom." *Fox News*, March 25, 2004; "Land Use and Endangered Species Insurance." *California Insurance Law & Litigation Alert*, November 30, 2005. p. 15.

¹⁷¹ *Kelo v. New London*, 125 S. Ct. 2655 (2005).

change the law regarding the use of eminent domain. However, public reaction to that decision has been very measurable. Reference to newspaper editorials alone finds the decision referred to as “disturbing,”¹⁷² “a decision that makes it too easy for the government to seize your bedroom,”¹⁷³ and “another giant step toward classical corporatism or fascism in America.”¹⁷⁴ SMCRA has been free from such public cases, if for no other reason than the relative obscurity of surface mining law.

When considering the larger political, social, and cultural impacts of a judicial decision, one observes “that the impact of decisions is not necessarily directly linked to the legal success or otherwise of the challenge.... Moreover, it cannot be assumed that a failure in the courts will necessarily be altogether unwelcome.”¹⁷⁵ Even unsuccessful litigation can serve a larger political purpose of rights mobilization and redirect political energies, so that “legal mobilization may contribute in different ways and with varying impacts at different points in ongoing struggles.”¹⁷⁶ Such questions involve institutionalism and interpretivism as they “try to reconstruct intentional states of mind and cultural or political contexts in the hope that [they] can induce with some confidence the reasons that led a particular person to adopt a particular course of conduct.”¹⁷⁷ Lawsuits can do more than alter the official rules of implementation for a particular statute or regulatory program; lawsuits can also shift the way people, from the public at large to key decision-makers to members of a specific regulated community, perceive the spirit, purpose, or value of the law as well as the rights possessed in relation to that law. “Rights can only be operative as constituents of a strategy of social transformation as they become part of an emergent ‘common sense’ and are articulated within social practices.”¹⁷⁸ Through the forging of “common sense,” as it is “questioned, disputed, affirmed, developed, formalized, contemplated, even taught,”¹⁷⁹

¹⁷² Trigaux, Robert. “Your Home Could Be up for Grabs.” *St. Petersburg Times*, June 24, 2005. D1.

¹⁷³ Saunders, Debra J. “Your Home Could Be Pfizer’s Castle.” *San Francisco Chronicle*, June 30, 2005. B9.

¹⁷⁴ Hudgins, Edward. “Your Castle No More.” *Washington Times*, June 27, 2005. A20.

¹⁷⁵ Sunkin, *supra* note at 52-53.

¹⁷⁶ McCann, Michael W. *Rights at Work: Pay Equity Reform and the Politics of Legal Mobilization*. Chicago: University of Chicago Press. 1994. p. 11; see also Scheingold, Stuart A. *The Politics of Rights: Lawyers, Public Policy and Political Change*. New Haven: Yale University Press. 1974.

¹⁷⁷ Gillman, Howard. “The Court as an Idea, Not a Building (or a Game): Interpretive Institutionalism and the Analysis of Supreme Court Decision-Making.” *Supreme Court Decision-Making*. Chicago: University of Chicago Press. 1999. p. 78.

¹⁷⁸ Hunt, Alan. *Explorations in Law and Society: Toward a Constitutive Theory of Law*. New York: Routledge. 1993. p. 247.

¹⁷⁹ Geertz, Clifford. *Local Knowledge: Further Essays in Interpretive Anthropology*. New York: Basic Books, Inc. 1983. p. 76.

understandings of how SMCRA operates and to what property owners are entitled in the face of SMCRA, media accounts and even anecdotal experiences may exert a greater impact on the eventual political course taken to shape the Act.¹⁸⁰ This is particularly true for regulatory takings law, where “two or more legal systems coexist in the same social field,”¹⁸¹ creating a legally pluralistic environment. Regulatory takings jurisprudence involves not only a balancing of public and private interests, but a confrontation between different bodies of law: common law notions of nuisance (themselves coming from multiple and conflicting sources),¹⁸² a public trust doctrine originating in Roman Law,¹⁸³ and a constitutional protection of private property. Thinking about regulatory takings law should “involve a shift away from functionalist thinking about law...and a shift toward hermeneutic thinking about it—as a mode of giving particular sense to particular things in particular places.”¹⁸⁴

BEHAVIORAL ADJUSTMENTS

One of the simplest pieces of evidence, conceptually speaking, that one could find in a study of judicial impact is a measurable change in the behavior of a regulatory agency that was, directly or indirectly, the subject of litigation. Measuring such an impact involves developing an assessment of a policy output trend both prior to and after a significant judicial decision. Such an approach is quasi-experimental in nature and is referred to as an interrupted time-series analysis. Simply observing the number of policy outputs before and after a judicial decision may lack internal validity, however, due to “the possibility of a maturation alternative interpretation, ... [in which a] self-improvement trend [could be] visible before the treatment which we assume could have continued even without the change....”¹⁸⁵ Therefore, through the use of time-series regression, the trend, or slope, of policy outputs is measured, helping to control for maturation. Additionally, since SMCRA is implemented by the states, policy outputs can be measured for each state, enabling the use of time-series cross-sectional (TSCS) analysis.

¹⁸⁰ Haltom, William, and Michael McCann. *Distorting the Law: Politics, Media, and the Litigation Crisis*. Chicago: University of Chicago Press. 2004. p. 9.

¹⁸¹ Merry, Sally Engle. “Legal Pluralism.” *Law and Society Review*, 22:5 (1988). p. 870.

¹⁸² Bone, Robert G. “Normative Theory and Legal Doctrine in American Nuisance Law: 1850-1920,” 59 S. Cal. L. Rev. 1101 (1986).

¹⁸³ Parenteau, Patrick A. “Unreasonable Expectations: Why Palazzolo Has No Right to Turn a Silk Purse Into a Sow’s Ear,” 30 B.C. Envtl. L. Rev. 101 (2002).

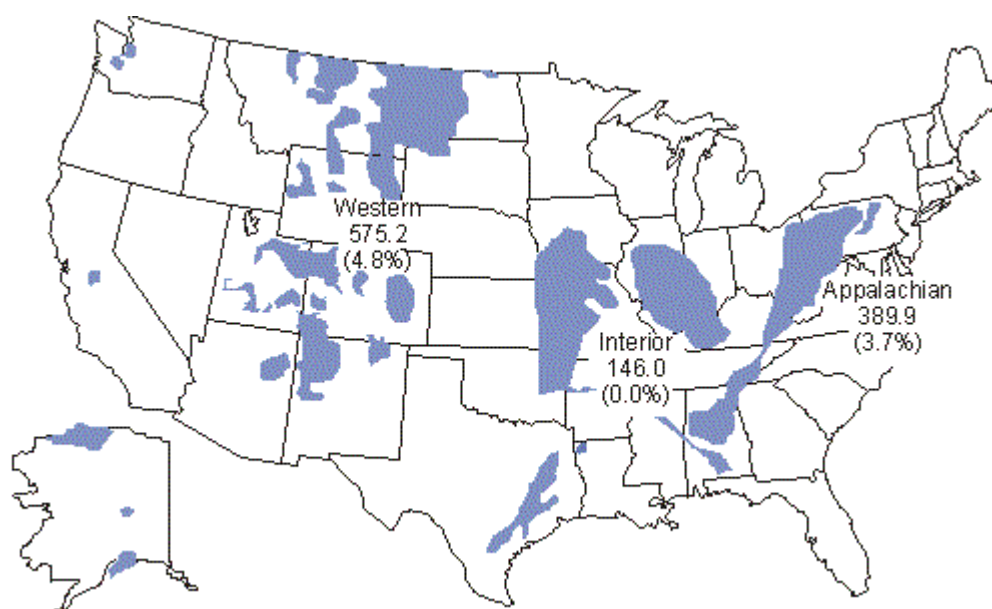
¹⁸⁴ Geertz, *supra* note at 232.

¹⁸⁵ Cook, Thomas D., and Donald T. Campbell. *Quasi-Experimentation: Design & Analysis for Field Setting*. Boston: Houghton Mifflin Company. 1979. p. 209.

Not only does this provide more observations, so that variance can more accurately be explained, but it also enables the researcher to control for particular regions and other important independent variables.

The dependent variable in this study is the number of surface mining permits issued by OSM and the various state regulatory authorities. A sample of 21 states was selected, focusing on the historically productive states of the three coal producing regions of the United States: the Appalachian, the Interior, and the Western regions.¹⁸⁶ This geographical dispersal introduces several independent variables that

Figure 1: Coal Producing Regions of the United States

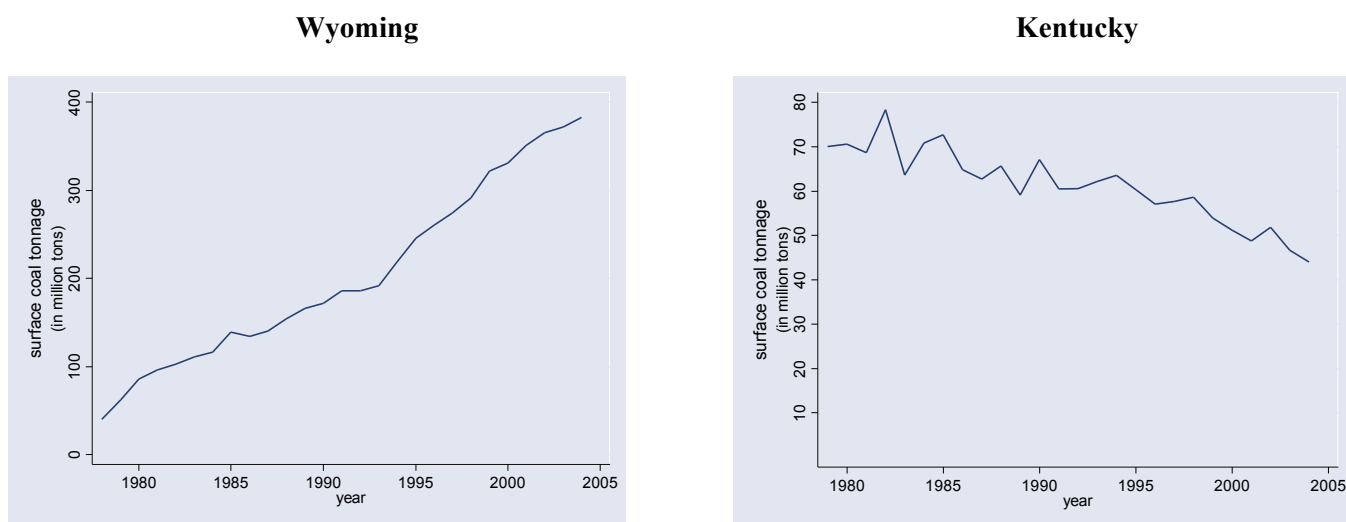


¹⁸⁶ States selected are as follows: **Appalachian:** Alabama, Kentucky, Maryland, Ohio, Pennsylvania, Tennessee, Virginia and West Virginia; **Interior:** Arkansas, Illinois, Indiana, Iowa, Kansas, Missouri, and Oklahoma; **Western:** Colorado, Montana, New Mexico, Utah, Washington and Wyoming

Source: Energy Information Administration
 Numbers indicate 2004 coal production in million short
 tons and percentage change from 2003

must be considered within any analysis of the impact of regulatory takings litigation on the permitting of surface mining. The regions, themselves, are characterized by differing factors, each making the question of permitting particularly unique. Geologically, Appalachian coal seams are smaller, positioned more deeply, are under complex topographies and hydrologies, and contain higher amounts of sulfur. Western coal seams, conversely, are larger, nearer the surface, are predominantly under flat and arid lands, and are valued for their low sulfur content. Historically, coal mining has been more predominant in Appalachia, where underground mining was common; however, starting in the 1970's, coal production has moved west, utilizing surface mining techniques almost exclusively, seeking large deposits of low sulfur coal to satisfy demand brought on by an oil embargo and stricter environmental regulations.¹⁸⁷ Figure 2 demonstrates the current disparity between Western and Appalachian surface coal mining by comparing the production of coal of Wyoming, currently America's largest producer of coal, by far, and Kentucky.

Figure 2: Comparison of Wyoming and Kentucky Coal Production (1978-2004)



¹⁸⁷ Scheberle, *supra* note at 157-61.

Source: Annual Reports of the Office of Surface Mining

Additionally, developments in surface mining technology have increased efficiency, as demonstrated in Figure 3, making Western coal more attractive economically. The accessibility of Western coal seams, located in sparsely populated, flat, arid areas, compared with the difficulties in extracting Appalachian coal from under varying, populated terrains,¹⁸⁸ has also affected the types of companies involved in coal mining. To simplify this difference, Western coal companies tend to very large operations, possessing sufficient expertise and capital to extract large amounts of coal from very large seams, while Appalachian coal companies, although they are becoming more corporatized, are significantly smaller, and are frequently limited to extracting coal left behind by previous mining enterprises. This means that, although the vast majority of America's coal comes from Western states, regulatory bodies are much larger in the East, regulating several smaller operations; regulatory authorities in Western states frequently regulate fewer than 10 single surface mining operations. Finally, since coal is a commodity, it can be assumed that changes in demand brought about by changes in the price of coal will likely also affect the amount of pressure on coal mining companies to seek permits in the first place. Figure 4 indicates that the price of coal has dropped over the lifetime of SMCRA, although a recent spike in the price has fallen outside of the timeframe of other collected data.

Figure 3: Efficiency of U.S. Surface Coal Mining (1978-2004)

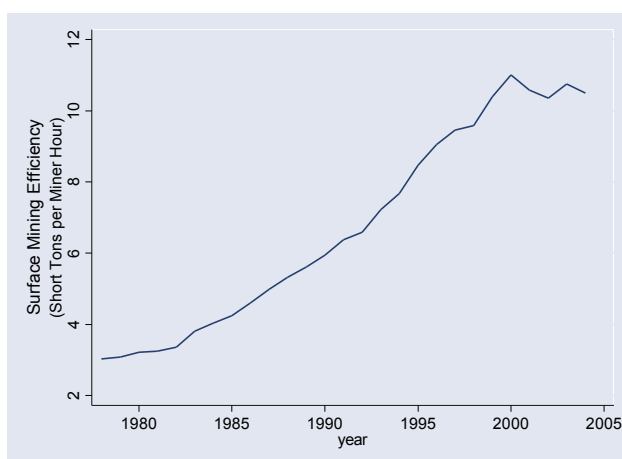
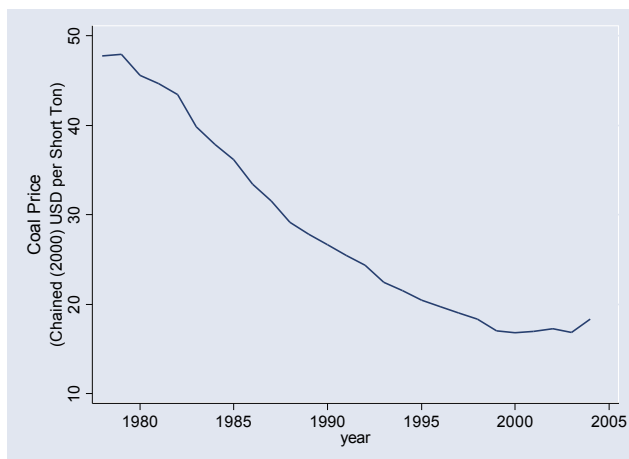


Figure 4: Price of U.S. Coal

¹⁸⁸ One regulatory agent in an Appalachian state enviously characterized the process of removing the overburden from over Western coal as, essentially, involving nothing more than a whisk broom.



Source: Energy Information Administration

A problem unique to time-series analyses is stationarity. If the observations of data in a TSCS analysis are not stationary, the estimates will likely be inefficient. “[A] stochastic process is said to be stationary if its mean and variance are constant over time and the value of covariance between two time periods depends only on the distance or lag between the two time periods and not on the actual time at which the covariance is computed.”¹⁸⁹ Tests for stationarity were conducted across panels and within panels.¹⁹⁰ To test for stationarity across panels, Im-Pesaran-Shin and Levin-Lin-Chu panel unit root tests were applied to the dependent variable: the number of surface mining permits maintained in a state each year (PERMITS). These tests produced results to indicate, at least initially, that the PERMITS variable is stationary. Additionally, Dickey-Fuller and correlogram testing was conducted for the dependent variable for each state over time. The results are presented in Figure 5. Dickey-Fuller testing produces a tau-statistic $[Z(t)]$, and if the absolute value of that statistic exceeds the absolute value of the critical values, then the hypothesis of stationary data is not rejected.¹⁹¹ Likewise, correlogram testing produces a Q statistic which, if significant, indicates that the null hypothesis of stationarity should be rejected. Figure 5 indicates that the PERMITS variable is not stationary for a number of states.

Figure 5: Results of Dickey-Fuller and Correlogram Testing for Stationarity

State	Z(t)*	Q	Prob>Q
AL	-2.492	15.515	0.0001
AR	-3.759	9.7109	0.0018
CO	-2.541	20.679	0.0000
IA	-2.832	20.62	0.0000

¹⁸⁹ Gujarati, Damodar N. *Basic Econometrics*, 3rd ed. New York: McGraw-Hill, Inc. 1995. p. 713.

¹⁹⁰ Since FWS Region 7 (Alaska) has never issued a permit for an HCP, it was eliminated from all TSCS analyses.

¹⁹¹ Gujarati, *supra* note 189 at 719.

IL	-3.056	5.9303	0.0149
IN	-4.994	0.00857	0.9262
KS	-3.315	17.721	0.0000
KY	-3.693	6.0405	0.0140
MD	-3.9	2.7927	0.0947
MO	-4.193	21.971	0.0000
MT	-4.638	0.16092	0.6883
NM	-4.101	1.1351	0.2867
OH	-3.12	4.0283	0.0447
OK	-2.442	16.391	0.0001
PA	-3.196	6.0427	0.0140
TN	-1.881	20.085	0.0000
UT	-0.963	16.874	0.0000
VA	-4.08	8.4968	0.0036
WA	-3.122	10.353	0.0013
WV	-2.869	5.6707	0.0173
WY	-3.769	5.2322	0.0222

*Interpolated Dickey- Fuller		
1% C.V.	5% C.V.	10% C.V.
-4.371	-3.596	-3.238

Before assessing the impact of regulatory takings litigation on the SMCRA permitting process, it was important to establish a baseline for understanding that process; in other words, it was determined of which factors the permitting process is a function. Data, including the number of permits issued by each state (PERMITS), the amount coal produced by each state through surface mining (SURFTON), the number of OSM oversight visits (OSVS), federal funding (FEDFUNDS), and the number of NOV's issued (NOVS) were collected from the Annual Reports of the Office of Surface Mining for the years 1978-2004. Additionally, other data were collected that could conceivably impact the permitting process, including the efficiency of surface mining technology (SURFEFF), the U.S. price of coal (USPRICE), the party of the federal (PRESDEM) and state (GOVDEM) regulatory authorities, the coal region where each state is found (APPAL, WEST, INTERIOR), and whether each state was operating its own regulatory program (PRIMACY). Coefficients for these variables were determined by subjecting the data to a Prais-Winsten, panel corrected standard errors (PCSE) regression, which controls for first order autocorrelation amongst the panels.¹⁹² The results of those regressions are summarized in Figure 6. These results indicate that, without considering the impact of regulatory takings litigation, the SMCRA permitting

¹⁹² Beck, Nathaniel, and Jonathan N. Katz. "Time-Series—Cross-Section Issues: Dynamics, 2004." 2004.

process is a function of the state's surface coal mining production level and the amount of federal funds made available, controlling for the unique conditions of the Appalachian region and the state of Wyoming.

Figure 6: Prais-Winsten PCSE Regression (AR1) Results

	Y = PERMITS			R ² = 0.4377		
	COEF.	STD. ERR.	Z	P> Z	95% CONF.	INTERVAL
SURFTON	.7155495	.2426913	2.95	0.003	.2398834	1.191216
FEDFUNDS	-.0000248	5.61e-06	4.43	0.000	.0000138	.0000358
APPAL	206.6936	14.32038	14.43	0.000	178.6261	234.761
WY	-142.5539	50.51775	-2.82	0.005	-241.5669	-43.54092
CONS	7.480599	9.078755	0.82	0.410	-10.31343	25.27463

Dummy variables were then constructed to measure the impact of the presence of a judicial precedent finding a taking in the implementation of SMCRA. The cases that established a federal precedent were *Whitney Benefits* (1990-present), *Cane* (1997-2001), and *Stearns* (2003-2004). State precedents were also considered through the creation of a STATECOURT variable, which marked the presence of a state having lost a taking challenge in either federal or upper state courts, measured as a one until the case was overturned.¹⁹³ The results of the addition of these dummy variables to the baseline can be found in Figure 7.

Figure 7: Prais-Winsten PCSE Regression (AR1) Results

	Y = PERMITS			R ² = 0.4585		
	COEF.	STD. ERR.	Z	P> Z	95% CONF.	INTERVAL
SURFTON	.6217765	0.2137581	2.91	0.004	0.2028184	1.040735
FEDFUNDS	0.0000348	5.87e-06	5.94	0.000	0.0000233	0.0000463
APPAL	151.6303	11.38522	13.32	0.000	129.3156	173.9449
WY	-131.1922	35.73924	-3.67	0.000	-201.2398	-61.1446
USPRICE	7.145154	1.057533	6.76	0.000	5.072427	9.217882
SURFEFF	11.28747	2.941476	3.84	0.000	5.522285	17.05266
WHITNEY	35.66403	4.320925	8.25	0.000	27.19518	44.13289
CANE	8.789777	2.943328	2.99	0.003	3.020961	14.55859
STEARNS	-16.3845	3.311526	-4.95	0.000	-22.87497	-9.894031

¹⁹³ STATECOURT=1 for the following states: Indiana (1988-1989), Kentucky (2003-2004), Ohio (2003-2004), Pennsylvania (1999-2002), Tennessee (1997-2001), and Wyoming (1990-present).

CONS	-306.6969	56.98417	-5.38	0.000	-418.3839	-195.0100
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Figure 8: Prais-Winsten PCSE Regression (AR1) Results

	Y = ACRES			R ² = 0.4572		
	COEF.	STD. ERR.	Z	P> Z	95% CONF.	INTERVAL
SURFTON	.6223132	.2006851	3.10	0.002	.2289776	1.015649
FEDFUNDS	0.000035	5.68e-06	6.15	0.000	0.0000239	0.0000461
APPAL	156.6755	10.12651	15.47	0.000	136.8279	176.5231
WY	-129.4252	35.50265	-3.64	0.000	-199.1855	-59.66487
USPRICE	5.40988	0.9072661	5.96	0.000	3.631672	7.188089
SURFEFF	7.670704	2.465997	3.11	0.002	2.837439	12.50397
TOTCASES	12.87961	1/861358	6.92	0.000	9.231412	16.5278
CONS	-226.5414	48.50719	-4.67	0.000	-321.6138	-131.469

As the regression results from Figure 7 demonstrate, the *Whitney*, *Cane*, and *Stearns* decisions all had statistically significant impacts on the SMCRA permitting process. The coefficient of the *Stearns* decision, however, was negative, which would run counter to the intuitive assumption that a finding of a taking would influence regulatory behavior by chilling restrictions, thus resulting in more permitting. With the addition of the case variables, the USPRICE and SURFEFF variables both became statistically significant with positive coefficients, which fits expectations: as the price of coal and the efficiency of extracting that coal go up, the pressure to engage in coal mining, and seek permits to do so, increases. Testing specifically for the impact of a takings finding on the state itself (STATECOURT) did not render any significant findings. However, when the total number of cases from both federal and state courts are added (making sure to not double count, say, *Whitney Benefits* for Wyoming), and a new additive variable is formed indicating the total number of precedent cases in the legal environment of that state (TOTCASES), that variable likewise produces significant and expected results.

As the TSCS regressions indicate, there appears to be a statistically significant positive relationship between successful regulatory takings challenges and the issuance of surface mining permits under SMCRA. Such conclusions should be made cautiously, though, as time series analyses are particularly susceptible to spurious regressions and cointegration of variables,¹⁹⁴ and knowledge about stationarity in TSCS data is in its infancy.¹⁹⁵ If our data is not stationary, and previously described tests

¹⁹⁴ Gujarati, *supra* note 189 at 724-26.

¹⁹⁵ Beck & Katz, *supra* note 192.

summarized in Figure 5 indicate that the data for at least some states is not stationary, and if the PCSE (AR1) regressions were insufficient to control for all non-stationarity, then there is a likelihood that the relationship observed between variables is a function of their joint function of time. Variance analyses run after each PCSE regression indicate that there is a high likelihood of correlated variance between the data sets for the states.

REASSESSING THE IMPACT

To develop a better understanding of the internal workings of SMCRA and how the various past, and possible future regulatory takings challenges, could affect permitting activities, elite interviews were conducted with key personnel in federal OSM and state regulatory authority offices. Such interviews always run the risk of confronting Heisenberg's Principle of Indeterminacy, and one must always remain aware that any observations made through such a process will invariably contain a degree of uncertainty.¹⁹⁶ Nevertheless, efforts were made to prevent leading the subjects, and the interviews were conducted in a manner that focused on general decision-making processes, narrowing down to various perceived threats to those processes, and eventually narrowing further, if needed, to regulatory takings challenges. A few trends capable of being generalized emerged, which provide insight into the applicability and validity of the TSCS regression figures. In general, the structural forms unearthed by the interviews reveal a decision-making process in which the likelihood of regulatory takings litigation directly producing a behavioral adjustment characterized as a chilling effect is low.

One feature of SMCRA regulation that emerged from the interviews was bureaucratization. This feature was found to exist both externally and internally to the regulatory regime. Externally, SMCRA regulation occurs within a larger bureaucratic context, involving other regulatory agencies, enforcing various statutes of federal, state, and municipal origins. Surface mining procedures present a number of risks to the area's hydrology, agriculture, biodiversity, and history, risks which SMCRA requires mining operations to control. Even absent of SMCRA, these risk producing activities would require various permits and activities. Discharge permits would be required by the Clean Water Act. Considerations

¹⁹⁶ Seidman, I.E. *Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences*. New York: Teachers College Press. 1991. p. 103.

may have to be made under Archeological Resources Protection Act and/or the National Historic Preservation Act. Compliance with U.S. Forest Service regulations may be required. The U.S. Fish and Wildlife Service may require an endangered species consultation. Such steps are required before a permit under SMCRA can be issued. In other words, a great deal of decision-making in SMCRA permitting actually occurs outside of offices authorized to enforce SMCRA. Any chilling effect caused by takings litigation could easily be offset by the requirement of compliance with other regulatory agencies, such as the Army Corps of Engineers or the Forest Service. It would be difficult for an OSM office to weaken its regulatory standards in reaction to a lawsuit when so many of those decisions are made outside of the office.

Bureaucratization was also found internally, with knowledge in the regulatory regime being highly compartmentalized. Given the complex, scientific nature of the requirements placed upon surface mining by SMCRA, employment in OSM or the various state regulatory authorities is based upon some sort of expertise. Although the head of the department has the ultimate authority to approve or deny a permit, and there were occasional stories about the politicization of that decision, by and large, little to no evidence of recommendations consistently ignored was observed. This was particularly true of legal knowledge. Most respondents responded to questions about specific legal standards by saying that they would have to consult with their legal counsel. This does not mean that the respondents were ignorant of changes in legal standards. Frequently, respondents indicated that knowledge about changes in legal standards comes to them in the form of a memo from legal counsel or procedures are changed in writing by directive from above. All in all, the decision-making atmosphere observed was one of compartmentalized ritual. Most respondents indicated that the statute and the regulations are pretty clear as to how things should be done, and if those standards are not met, permits will not be regarded as sufficient, and any legal challenge will be confidently approached with the knowledge that the individual was following the rules.

This observation was particularly salient in relation to regulatory takings litigation. Every respondent was aware of regulatory takings litigation. However, the topic of regulatory takings had to be brought up by the interviewer, as most respondents saw it as a possibility, but stated that its occurrence

was rare. There was some hesitation on the part of respondents that such litigation could increase and could result in a chilling effect, but such responses were limited. By and large, there appeared to be a strong presence of a culture of obligation within the regulatory agencies. Although the law regarding takings may change to the benefit of property owners, all respondents, without exception, defined their task at hand as one defined by the statute. Some of the respondents were, in the past, part of the coal mining industry, and were sympathetic to the degree of regulation they face. However, they stated that they must do their job according to the statutory and regulatory requirements and, if there is going to be a takings challenge, that is a decision that falls out of their hands. Even respondents in offices that had lost a takings challenge and had to pay compensation (or at least perceived they had to pay – frequently, such payments come from the general treasure, not the particularly agency) told stories of directives requiring the office to pursue regulation just as before.

Finally, a set of generalizations can be made about the relationship between the various state and federal regulatory offices and the mining operations. All respondents described their general interactions with permit applicants as cooperative today, but that had not always been the case. The general story that was told by personnel in agencies charged with implementing SMCRA is that the initial resistance of the coal mining community to a new set of regulations has high, and it lasted for several years, but now things are better. A couple of factors could be central to this evolution. First, several respondents indicated that it just took a while for the mining operations to learn about the expectations brought on by the requirements of the law. SMCRA's history appears to be consistent with the general understanding of the development of all the major environmental statutes that developed in the 1970's. Originally, there was a great deal of mistrust as to whether recalcitrant agencies would exercise their newly acquired responsibilities.¹⁹⁷ Scheberle's research on federal/state interactions within SMCRA enforcement indicates that oversight of the state regulatory authorities by the federal OSM has relaxed, partially due to "the development of performance agreements that evaluate states on the basis of 'on-the-ground results' rather than number of inspections and citations issued."¹⁹⁸ Figure 9 verifies this by demonstrating a

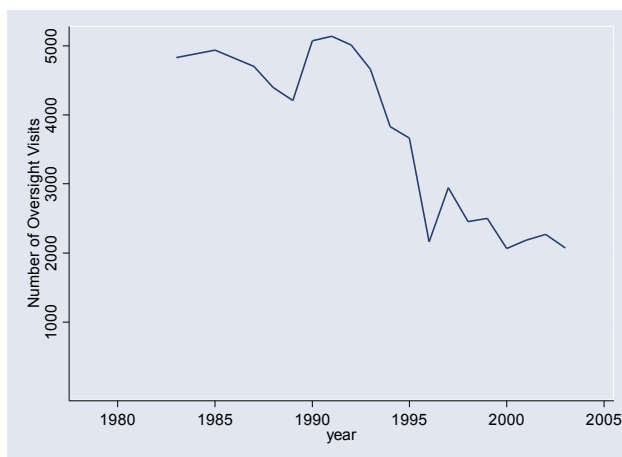
¹⁹⁷ Melnick, R. Shep. *Regulation and the Courts: The Case of the Clean Air Act*. Washington, D.C.: The Brookings Institution. 1983.

¹⁹⁸ Scheberle, *supra* note 2 at 177.

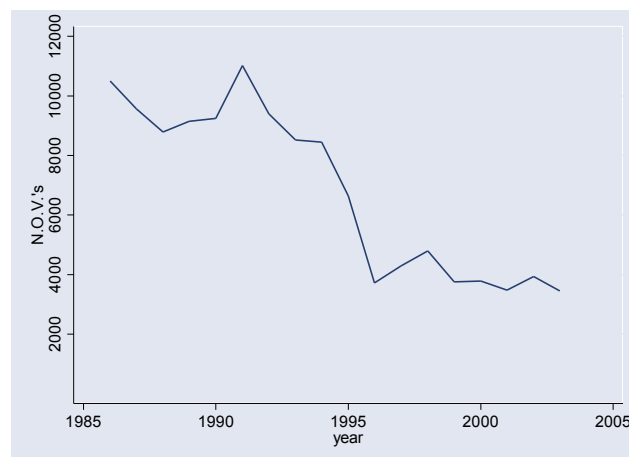
general decline in the number of oversight visits of state regulatory authorities by OSM. Less pressure on the states to produce a simple number of citations can result in more cooperative relationships with the coal mining industry.

Figure 10 indicates that there has been a drop in the number of NOV's issued by the states in the last decade. That decline may be caused by several factors. One could be the above described relaxing of federal oversight. Another could be the possible capture of SMCRA enforcing agencies by the coal industry. These are all valid suggestions, but the focus of this research is on the decision-making processes within those agencies. Interviews with those personnel indicate that it could just be the simple passage of time that has resulted in more knowledge on the part of surface miners about the legal requirements of SMCRA. Additionally, the development of mining practices has affected that knowledge. As mining has become more corporate, with more and more large companies controlling a bigger chunk of surface coal mining in the U.S., knowledge about surface mining regulations has become central to corporate decision-making. Furthermore, large corporations have more legal resources at their disposal, which could lead to more litigation, but as the respondents have indicated, in this case, have lead to more informed decision-making and cost efficient compliance with regulations.

**Figure 9: Oversight Visits by OSM
(1983-2003)**



**Figure 10: Notices of Violation Issued
(1986-2003)**



Source: Annual Reports of the Office of Surface Mining

Respondents generally indicated that most takings challenges emerge from poor planning. Agency personnel prefer that potential mining operators consult with the regulatory authority before getting too deeply involved in pursuing mining plans; however, few institutional or informational factors are created by those agencies to inform miners of this preference. Respondents indicated that, when miners do consult with the regulatory authority early in the planning process, the permitting process is done much more smoothly. Larger corporate operations are most likely to have the personnel resources and legal knowledge to be able to seek such information from the beginning. Furthermore, several large operations, particularly those in the West, have more coal estate than they can currently mine. Therefore, current mining practices in those areas are more likely in areas with little reclamation difficulty. Although corporate mining companies are also making their presence felt in the Appalachian and Interior regions, there is still a heavy preponderance of smaller mining operations. These operations are more likely than larger operations to get engaged in situations that could result in takings litigation, as they have less access to the decision-making resources of larger corporations and are, therefore, more likely to enter into situations with expectations to be quashed. They are also more likely to rely on individual, inelastic mining plans, are less likely to have another mining area to fall back on, and may get aggressive if their plans are restricted.¹⁹⁹

**Figure 11: Prais-Winsten PCSE Regression (AR1) Results
Appalachian Region Only**

	Y = PERMITS				R ² = 0.3332	
	COEF.	STD. ERR.	Z	P> Z	95% CONF. INTERVAL	
SURFTON	3.436892	1.399001	2.46	0.014	0.6949011	6.178884
FEDFUNDS	0.0000319	7.86e-06	4.06	0.000	0.0000165	0.0000473
USPRICE	6.577931	1.717478	3.83	0.000	3.211736	9.944126
TOTCASES	38.48382	16.65837	2.31	0.021	3.834018	71.13362
CONS	-117.0959	61.90431	-1.89	0.059	-238.4262	4.234281

Figure 11 provides the TSCS regression results when only the Appalachian and Interior regions are considered. Since these are the areas less dominated by larger mining corporations, one should expect that takings litigation is not only more likely in these regions, for the reasons explained above, but that

¹⁹⁹ On of the co-owners of the company in *M&J Coal Company v. United States* “suggested that all federal mine inspectors should be shot.” See Nyden, *supra* note 64.

such litigation would have a greater impact in those regions. The results do indicate a positive impact by the presence of each precedent that found a taking, but the caution should be applied to these results, as non-stationarity and covariance are still at issue. The same regression analysis run for the Western states did not produce statistically significant results.

CONCLUSION

The evidence gathered through TSCS regressions indicate that there is the possibility of regulatory takings litigation have a chilling effect on regulatory outputs by causing an increase in the amount of permits granted by state and federal agencies charged with implementing SMCRA. A couple of concerns, however, should caution against the unquestioned acceptance of this conclusion. First, the possibility for a spurious relationship between the permitting process and the presence of takings precedent is high, given the problems of stationarity faced by TSCS analyses. Second, the interviews conducted with the personnel that make SMCRA permitting decisions produced an image of a regulatory regime that is not particularly susceptible to such direct impacts. The bureaucratization of knowledge, a cultural sense of obligation to the requirements of the statute, and an increase in the knowledge of regulatory requirements by the mining companies, caused in part by the increased corporate nature of coal mining are all factors that make either regulatory takings litigation itself or an observable impact caused by it less likely.

This does not mean that the findings are without merit. Litigation that does stand a chance of altering agency behavior is litigation that confronts the organizational inertia of agencies. Such inertia describes the compartmentalized goals and responsibilities of agency personnel, who see compliance with the statute and regulations defining their agenda. Inertia can also describe the individuals and companies that are regulated. Litigation that could potentially impact the larger operations of SMCRA implementation would have to change the expectations of regulator and regulated. Regulatory takings litigation may have affected policy outputs, not by itself by imposing economic costs and risks upon regulatory decision-makers, but as a part of a larger political context. The property rights expectations of surface coal mining operators, which are central to regulatory takings litigation, are part of a consciousness, either of the public as a whole or of the particular community, in this case, coal mining

companies. SMCRA undoubtedly restricts those expectations, but the legitimacy of those restrictions can be changed. Strategic litigation on the part of interest groups can push those expectations one way or the other. The relatively low level of public awareness of SMCRA, however, may insulate the law from social mobilization of property rights to change the law, and circumvent the organizational obligation of regulatory personnel to the letter of the law. Whereas other environmental statutes, such as the Endangered Species Act, exist high on the public radar and are more susceptible to public perceptions of draconianism, SMCRA is involved with risks that are just as threatening to the property of the public as the statute itself is to the property of those being regulated.

Commonly Used Acronyms

AMD – Acid Mine Drainage

AML – Abandoned Mine Lands

AVF – Alluvial Valley Floor

CO – Cessation Order

OSM – Office of Surface Mining

NOV – Notice of Violation

SMCRA – Surface Mining Control and Reclamation Act

TDL – Technical Deficiency Letter

TSCS – Time-Series Cross-Sectional

TWQCA – Tennessee Water Quality Control Act

UFM – Unsuitable for Mining

VER – Valid Existing Rights