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THE FAR SIDE OF PARADOX: STATE REGULATION OF THE ENVIRONMENTAL EFFECTS OF COAL MINING

K. W. JAMES ROCHOW*

INTRODUCTION

This article will analyze the prospects for effective state regulation of the environmental effects of coal mining.¹ The many new and important mandatory requirements which the Surface Mining Control and Reclamation Act of 1977² imposes on state regulatory programs³ will provide the focus of this article. It will be divided into three sections: a “three-stage” analysis of the Act; an analysis of the regulatory framework of federal-state relations under the Act; and an analysis of developments in federal and state regulatory programs from the date of passage of the SMCRA to the present.

I. REGULATORY FRAMEWORK OF THE ACT: THE THREE STAGES OF REGULATION

A. Background—The Paradox of State Programs

The Act is founded on a paradox. On the one hand, it was enacted because of the disastrous consequences resulting from the historic failure of the states to regulate coal mining effectively.⁴ On the other hand, it expressly confers upon the states the primary responsibility for its administration and enforcement.⁵

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¹ This article expresses the personal views of the author. It neither purports to express the official position of Pennsylvania nor of state regulatory agencies.


³ For the sake of succinctness, all references in this article to “regulation” or “regulatory programs” will exclusively encompass the regulation of the environmental effects of coal mining.


⁵ Id. § 1201(f).
The destructive impacts and astronomical costs imposed by coal mining on the public and industry are now well documented and generally recognized. They include water pollution, water supply depletion, land erosion, elimination of topsoil and productive subsoil, flooding, land subsidence, blasting damage to property and health, stream obstruction (sedimentation), aesthetic nuisances, and the disruption of community life.\textsuperscript{6} Acid mine drainage has ravaged over 3,000 miles of streams in Pennsylvania alone.

There is an undeniable legacy of destruction associated with coal mining which testifies to the laxity or nonexistence of state regulation. Nonetheless, the argument was made in opposition to the passage of the Act that state regulation of coal mining was rapidly evolving and had reached the point where it was effective enough so that federal regulation of coal mining was not needed. Indeed, many state officials opposed the passage of the Act. Typical was the comment from the then Lieutenant Governor, now Governor, of Virginia, John M. Dalton: "I urge you to consider not what the States weren't doing 10 years ago, but what they are doing now." Congress was not convinced by this argument. As the House Committee on Interior and Insular Affairs reported:

Hearings conducted . . . in January and February of [1977] . . . established that the problems associated with coal mining have not gone away. Indeed, as new mining technologies have evolved, new problems have been identified. . . . Moreover, despite claims from some quarters that State reclamation laws have improved so significantly that Federal mining standards are no longer needed, the hearing record abounds with evidence that this simply is not the case. For a variety of reasons, including the reluctance of the State to impose stringent controls on its own industry, serious abuses continue.\textsuperscript{8}

B. Structure of the Federal Act—
Three Stage Analysis

The most obvious testimony to the laxity of state regulation, including that immediately preceding the passage of the Act, is the


\textsuperscript{8} Id. at 58, reprinted in [1977] U.S. Code Cong. & Ad. News 596.
fact that the Act will require substantial improvements and revisions to the regulatory programs of every state in which coal is mined. One way to analyze coal mining regulation is to view it as proceeding through three stages: (1) total or almost total lack of regulation; (2) imposition of basic regulatory standards minimally necessary to protect the environment; and (3) imposition of a more sophisticated regulatory scheme which attempts comprehensively to evaluate and control all the effects of mining upon the environment. The Act, according to this analysis, represents both a "catch up" requirement for those states which have not yet achieved an effective second stage regulatory program and, at the same time, a requirement that all states devise and carry out an effective third stage regulatory program.

1. Second Stage Regulation—The Initial Regulatory Program

The Act describes an initial regulatory program primarily designed to bring coal mining operations into expeditious compliance with basic second stage regulatory standards. Section 502(c) refers to eight performance standards from among numerous performance standards specified in section 515. These eight initial performance standards encompass the basic minimum requirements of an effective program of mining regulation. This includes the elimination of highwalls and requiring backfilling to approximate original contour as provided in section 515(b)(3); the segregation, storage and replacement of topsoil and productive subsoil as provided in section 515(b)(5); the restoration of land affected by mining including the establishment of a diverse, effective and permanent vegetative cover as provided in section 515(b)(19); and the prevention and abatement of polluting discharges after, as well as during, mining as provided in section 515(b)(10)." In contrast to the final regulatory program which will come into effect on June 3, 1980, thirty-four months from the date of enactment, the initial regulatory program came into effect for new operations on February 3, 1978, six months from the date of enactment.

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9 This assumes that all stages will attempt to obtain delegation of the enforcement responsibilities under the Act ("primacy") from the Department of the Interior. See 30 U.S.C.A. § 1253 (West Supp. 1978). As of this writing it appears as if every state will apply for primacy.

10 The Act regulates underground mining and coal refuse disposal as well as surface mining. See text accompanying notes 14-20, infra.

ment. The Act requires all operations to comply with the initial regulatory requirements by May 3, 1978, nine months from the date of enactment.

2. Second Stage Regulation—The Permanent Regulatory Program

In addition to the initial regulatory program, the Act sets forth requirements for a permanent regulatory program. The permanent regulatory program attempts to build upon the initial regulatory program and requires operators to comply with an extensive set of second stage requirements.

The structure of the permanent regulatory program reflects the basic requirements contained to a lesser or greater degree in current state legislation: operators must submit a reclamation plan and obtain a permit before beginning mining operations; operators must post a bond covering reclamation expenses in case they fail to fulfill the reclamation requirements of the Act; operations are subject to enforcement inspections and a wide range of penalties for failure to comply with the requirements of the Act, including abatement orders, cessation orders, injunctive relief, civil penalties, and criminal penalties. In addition, the regulatory authority is required to issue rules and regulations setting both “end of pipe” and “best management practices” performance standards or, more precisely, elaborating upon the unusually spe-

12 Id. §§ 1253(a), 1254(a).
13 Id. § 1252(c).
14 Id. §§ 1257, 1258.
15 Id. § 1259.
16 Id. § 1271(a)(3).
17 Id. § 1271(a)(2).
18 Id. § 1271(c).
19 Id. § 1268(a).
20 Id. §§ 1268(a)-(g).
21 “Regulatory authority” refers to the governmental entity, either federal or state or both, responsible for enforcing the SMCRA in a given state. See 30 U.S.C.A. §§ 1252-1254 (West Supp. 1978).
22 In conventional terminology, “end of pipe” is used to designate standards which set requirements to be achieved; for example, effluent limitations on discharges. “End of pipe” is usually contrasted with “best management practices” which designates prescribed methods or processes; for example, topsoil segregation. See 30 U.S.C.A. § 1265(b)(5) (West Supp. 1978). Although the industry puts great emphasis on this distinction, it is illusory in most cases. For example, the requirement to return land affected by coal mining operations to approximate original
cific performance standards contained in the Act for pollution control, land restoration, waste disposal, and nuisance prevention and abatement.\textsuperscript{23}

3. Second Stage Regulation—Underground Mining and Coal Refuse Disposal

In addition to regulating surface coal mining operations, the Act regulates underground coal mining and coal refuse disposal operations.\textsuperscript{24} Its regulation of underground mining operations and contour contained in § 515(b)(3) prescribes both a process and an end result. 30 U.S.C.A. § 1265(b)(3) (West Supp. 1978).


\textsuperscript{24} Section 701(28) of the Act defines "surface coal mining operations"—its operative phrase—comprehensively:

(A) activities conducted on the surface of lands in connection with a surface coal mine or subject to the requirements of section 1266 surface operations and surface impacts incident to an underground coal mine, the products of which enter commerce or the operations of which directly or indirectly affect interstate commerce. Such activities include excavation for the purpose of obtaining coal including such common methods as contour, strip, auger, mountaintop removal, box cut, open pit, and area mining, the uses of explosives and blasting, and in situ distillation or retorting, leaching or other chemical or physical processing, and the cleaning, concentrating, or other processing or preparation, loading of coal for interstate commerce at or near the mine site: Provided, however, That such activities do not include the extraction of coal incidental to the extraction of other minerals where coal does not exceed 16 2/3 per centum of the tonnage of minerals removed for purposes of commercial use or sale or coal explorations subject to section 1262 of this Act; and

(B) the areas upon which such activities occur or where such activities disturb the natural land surface. Such areas shall also include any adjacent land the use of which is incidental to any such activities, all lands affected by the construction of new roads or the improvement or use of existing roads to gain access to the site of such activities and for haulage, and excavations, workings, impoundments, dams, ventilation shafts, entryways, refuse banks, dumps, stockpiles, overburden piles, spoil banks, culm banks, tailings, holes or depressions, repair areas, storage areas, processing areas, shipping areas and other areas upon which are sited structures, facilities, or other property or materials on the surface, resulting from or incident to such activities.

30 U.S.C.A. § 1291(28) (West Supp. 1978) [emphasis added]. The emphasized language, "surface impacts incident to an underground coal mine," is in vacuo arguable susceptible to being read as applying only to the most direct effects of underground mining, (for example, soil removal in site preparation). Other sections of the Act, however, indicate that the phrase is to be applied broadly. See 30 U.S.C.A. § 1266 (West Supp. 1978) (especially § 1266(9) which deals with the
coal refuse operations represents a basic requirement for a minimally effective second stage regulatory program.

Underground mining not only poses most of the same environmental problems associated with surface mining, but it also presents additional, serious environmental problems. Underground mining directly affects the surface of the land in a manner similar to surface mining, although not to the same areal extent. In underground mining operations, sites must be cleared for such things as access roads, mine entries, conveyor belts, plants to sort coal refuse and sort and prepare coal, and railway lines to ship mined coal to preparation plants or markets. In the course of this activity, vegetation and overburden are removed and sometimes coal is actually mined by the surface mining method. But in addition to the environmental problems it shares with surface mining, underground mining poses its own severe environmental problems. For example, extraction of coal by the underground method causes the land surface to subside by removing surface supporting underground strata. In addition, by creating voids (into which naturally occurring groundwater flows) and by creating strata fracturing, underground mining creates polluted underground pools and lakes which because of groundwater migration and hydraulic pressure are often difficult or impossible to contain and sometimes literally break through the surface of the ground.\(^25\)

Even the best known current method of abating post-mining polluting discharges from underground mines—containing the mine pool by sealing all openings with watertight concrete—actually sanctions the continued pollution of the groundwater. Moreover, it has not been established that underground mine seals will effectively prevent pollution over time. Seals and the surrounding strata into which they are anchored are subject to such weakening natural forces as water and wind erosion, rock shifts, and the freezing and thawing cycle. In any event, hydro-regulation of the hydrologic impacts of underground mining). Accord, 30 Fed. Reg. 62,685-700 (1977) (to be codified in 30 C.F.R. §§ 717.11-717.20).
static pressure often forces water, which is contained by sealing, through the strata in an unpredictable manner at unanticipated zones of weakness. The extent of the environmental harm caused by underground mining is illustrated by its disproportionate contribution to acid mine drainage in Appalachia:

Underground mines produce 71.3% of all mine acid drainage, although they constitute only 58% of the number of individual sources. Inactive underground mines, constituting 53% of the sources, contribute 52.5% of the total acid mine drainage. Active underground mines on the other hand, contribute 18.8% of the total acid mine drainage, although they constitute only 5% of the total sources. Thus not only is the acid mine drainage problem concentrated geographically, it is also concentrated in one segment of the mining industry.

Coal refuse disposal operations also create special environmental problems. The present practice of disposing of waste coal and associated waste minerals in mountainous piles on the land surface often results in severe problems of stability, long term water pollution, air pollution, fire hazards, and aesthetic nuisances.

In addition to its regulation of surface mining, the Act's regulation of underground mining and coal refuse disposal operations is especially important because it fills a regulatory void. Until the passage of the Act, Pennsylvania was the only state which in some fashion regulated all of the generally recognized adverse environmental effects of underground mining and coal refuse disposal operations. This failure to regulate underground mining and coal refuse disposal operations exemplifies the failure of state regulatory programs to achieve even complete second stage regulation. Furthermore, the historic failure of many individuals and groups dedicated to protecting the environmental quality (including those

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27 371 A.2d at 466 [citation omitted]. The Pennsylvania Supreme Court has declared that the water pollution problems posed by post-mining discharges from underground mines have reached "a critical state". Id.
28 The much publicized Buffalo Creek disaster, in which impounded water breached a coal refuse pile and resulted in over 125 deaths and approximately 1,000 homes destroyed is a dramatic example of the hazards posed by improperly managed coal refuse piles. See G. Stern, BUFFALO CREEK DISASTER IX (1977). Buffalo Creek and similar examples of spectacular mismanagement tend to obscure the more common and, in the aggregate, more serious problems caused by surface disposal of inherently polluting and inherently combustible coal refuse material.
29 See generally PA. STAT. ANN. tit. 35 § 691.315 (Purdon 1977).
who advocate the abolition of surface mining) to recognize the severe environmental harm caused by underground mining, together with their concomitant promotion of underground mining as an environmentally sound activity, highlights the importance of the Act's regulation of underground mining and provides an ironic complement to the previous lack of regulation of underground mining.

4. Third Stage Regulation

Despite the importance of its requirement for national, uniform minimum standards, the most enduring and significant aspect of the Act should be its requirements for a third stage regulatory program. It is now apparent that a third stage regulatory program is necessary to protect the public from the environmental effects of coal mining operations and that a second stage regulatory program is inadequate to do so. A third stage regulatory program can be defined as one which is oriented toward evaluating the cumulative effects of mining in a process which emphasizes: prevention rather than belated cure of environmental harm; the ag-

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30 The Act reflects in some measure the continuing myth that underground mining is relatively benign. For example, § 402(a) reads in relevant part:

All operators of coal mining operations subject to the provisions of this [Act] shall pay to the Secretary of the Interior, for deposit in the fund [for public reclamation of inactive mines under Title IV of the Act], a reclamation fee of 35 cents per ton of coal produced by surface coal mining and 15 cents per ton for coal produced by underground mining or 10 per centum of the value of the coal at the mine as determined by the Secretary, whichever is less. . . .

30 U.S.C.A. § 1232(a) (West Supp. 1978). The basic reason for the differential in tonnage fee assessment was to encourage underground mining as an environmentally preferable alternative to surface mining. In addition, § 102(k) provides that one of the purposes of the Act is to “encourage the full utilization of coal resources through the development and application of underground extraction technologies.” Id. § 1202(k).

31 See Sierra Club Coal Mining Policy (1971) (superseded by Sierra Club Coal Mining Policy (1976)); see also Environmental Policy Institute and Center for Law and Social Policy, The Strip Mine Handbook (1978). The latter of these publications is intended to help citizens enforce the Act's initial regulatory program. It fails, however, to discuss or describe the methods of underground mining and coal refuse disposal and their regulation. It does contain one reference in a parenthetical note stating that the Act covers the “surface effects of deep mining.” Id. at 10. By virtue of its isolated reference to underground mining, as well as its potentially misleading emphasis of surface effects, the Handbook highlights the continuing failure on the part of the environmentalist community to recognize the environmental harm caused by underground mining.
aggregate and synergistic effect of mining operations on the environment; and the compatibility of mining operations with land use policies and plans.

The nature of environmental harm caused by mining necessitates the imposition of a third stage regulatory program. To take one example, a third stage regulatory program should require the prevention of harm through the multidisciplinary review of thoroughly prepared permit applications and the imposition of appropriate conditions in those permits which are granted. This emphasis is necessary because one of the most salient characteristics of environmental harm from mining is that it cannot be satisfactorily remedied at all, or only at great expense in what are often unsatisfactory ways. A concomitant characteristic of the environmental harm caused by coal mining is that it is long lasting. For example, many post-mining discharges of acid mine drainage if unabated will last beyond the foreseeable future.

The relationship between Pennsylvania's current regulatory program and the requirements of the Act illustrates the Act's third stage regulatory requirements. It has been widely stated that the Act is based largely upon Pennsylvania's mining legislation and regulatory program which is perceived to be the most effective in the country. It is true that Pennsylvania's regulatory program has imposed second stage regulatory requirements on operators for approximately ten years prior to the passage of the Act. Although Pennsylvania's operators have been required for almost a decade to comply with such basic standards as backfilling to approximate original contour, topsoil segregation and replacement, and pollution prevention and abatement both during and after mining, Pennsylvania's regulatory program nevertheless will have to be revised and supplemented in order to be compatible with the Act.


24 In Pennsylvania there is at least one post-mining discharge of acid mine drainage which has lasted almost one hundred years. Theoretically, post-mining discharges of acid mine drainage can last a thousand years or more, although some will be significantly shorter in duration. Such factors as the rate of pyritic leaching and groundwater inundation influence duration.

25 For example, Representative Morris Udall of Arizona has at times expressed this view in the author's presence.

The following are examples of the revisions and supplements which must be made to state regulatory programs in order to reflect the third stage requirements of the Act and to qualify for regulatory primacy.

a. Hydrologic Evaluation Prior to Operation

The Act requires a sophisticated hydrologic evaluation of proposed mining operations as part of the permit application process. Section 507(b)(11) requires the permit reviewing agency to consider all the probable hydrologic consequences of the proposed mining operation both on and off the site. As part of that permit review process, the agency must evaluate the probable cumulative impacts of all anticipated mining upon the hydrology of the area. This review includes impacts on water quantity as well as water quality. Among other things, this requirement should enable a more rational evaluation of the area wide impact of mining and allow the regulatory authority to protect watersheds by developing innovative regulatory techniques such as limiting the amount of mining in a watershed at any one time and limiting the total amount of mining in a watershed. As an example of the type of information this section requires, seasonal flow data (entailing a comprehensive program of hydrologic monitoring over different seasons of the year) will have to be collected and evaluated before a permit can be issued. The performance standards of section 515 reflect this emphasis on evaluating and protecting the hydrologic regime. For example, the operation must restore the recharge capacity of the mined area to approximate premining conditions.

b. Monitoring Requirements and Experimental Permits

Closely allied with the requirement of full evaluation of the environmental consequences of mining operations is the requirement that the permittee monitor the environmental effects of operations during and after mining. Every mining permit issued becomes, in effect, an experimental permit which serves as a vehicle for the collection of field data. This field data can then be used to refine the permit review process by collating predictions of environmental effects with actual results and to evaluate the effectiveness of pollution control and reclamation procedures. Monitoring

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37 Id. § 1265.
39 Id. § 1265(b)(10)(D).
the effects of mining upon the groundwater is an especially important requirement and one which state regulatory programs have neglected. Good examples of the monitoring requirements of the Act are the hydrologic monitoring, data keeping and analysis requirements of section 517(b)(2).39

The hydrologic review and monitoring requirements illustrate why third stage regulation is necessary to protect the public. It is surprising, but true, that after almost a century of significant and sometimes disastrous environmental harm caused by mining, there exists a lack of understanding of important aspects of the effects of coal mining.40 For example, even the natural processes which cause acid mine drainage to form are not completely understood. Until a few years ago, it was assumed that the total sulfur content of coal was the best indication of its potential for producing acid mine drainage; the higher the content, the greater the potential. Professor Caruccio's work in recent years, however, has plausibly theorized that the formation of acid mine drainage is a complex phenomenon which is not controlled by a coal's total sulfur content, but is instead a function of the degree of reactivity of the geochemical pyritic content of the coal; the geochemistry of the aqueous environment of the coal and associated strata (i.e., the capacity of the environment to neutralize acid mine drainage by producing alkalinity); depositional environment of the coal (marine or fresh-water); and the presence of certain catalyzing bacteria (the latter is perhaps epiphenomenal).41

Because the natural processes that produce many of coal mining's environmental effects are complex and not completely understood, the techniques of their prevention cannot be defined and prescribed with maximum effectiveness. Using the formation of acid mine drainage by way of example, the emphasis in Caruccio's theory on the inhibition of acid mine drainage by alkalinity production would indicate that the best way to compose a backfill at a surface mining operation would be to concentrate and bury acid

39 Id. § 1267(b)(2).
producing material at one point surrounded by the maximum areal
distribution of alkaline producing material. In contrast, conven-
tional notions emphasize counteracting already formed acid mine
drainage with alkalinity evenly distributed throughout the layers
of the backfill.

c. Reclamation

The Act also requires intensive and sophisticated review of the
reclamation potential of the proposed operation during the permit
application process. For example, the regulatory authority is au-
thorized to evaluate as part of a permit application any climatolog-
ic factors that are peculiar to the locality of the proposed opera-
tion and the productivity of the land prior to mining. This evalua-
tion should include such factors as the historic average yield of
food, fiber, forage, or wood products obtained from the land under
high levels of management.

d. Land Use Planning

The Act requires that the relationship between proposed min-
ing operations and land use policies and plans be taken into con-
sideration during the permit application process. Specifically, the
Act requires as part of the permit application a statement of the
use proposed to be made of the land following reclamation, an
evaluation of the capacity of the land to support alternative uses,
the relationship of the proposed use to existing land use policies
and plans, and the comments of the surface owner and relevant
government agencies. The long term evaluation of the potential
effects of proposed operations thus extends under the Act to actual
post-mining land use as well as to water quality and quantity
problems. The SMCRA's land use planning requirements should
force an intelligent evaluation of the effects of the operation on the
surrounding community and should help foster an awareness of the
long term effects of a mining operation before a given operation
begins. These land use requirements also enable mining to be eval-
uated from a comparative perspective. For example, mining an
area which can be fully restored after mining is completed may,
under specific circumstances, be environmentally preferable to

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Id. § 1258(a)(2)(C).
Id. § 1258(a)(3).
putting the land to permanent residential or commercial use.\textsuperscript{16} When read together with the cumulative impact requirements of the Act,\textsuperscript{18} the land use requirements should allow regulatory authorities to use their permit granting authority to control, where appropriate, the rate, sequence and location of mining. For example, the regulatory authority could use these requirements to direct mining toward reclaiming areas previously harmed by inadequate mining and reclamation practices.

e. Coordination of Mining Regulation

Different types of mining activity affect each other and can greatly increase the danger of environmental harm from mining-related activities if they are not coordinated by the regulatory authority. For example: surface mining operations and associated blasting can weaken underground mine seals and barriers-in-place; underground mining operations can weaken barriers-in-place by mining too close to adjacent underground mines; and government sponsored abandoned mine reclamation projects can change the hydrology of an area which contains active mining operations.\textsuperscript{17} The Act contains several requirements which constitute at least partial recognition of the need for coordinated regulation of mining. Thus, the Act prohibits surface mining within 500 feet of active or inactive underground mines unless the regulatory authority approves the nature, sequence and timing of the mining operations and finds that they are in public interest.\textsuperscript{18}

f. Designation of Areas Unsuitable for Mining

The requirements of the Act relating to comprehensive analysis, regulatory coordination, and land use planning culminate in

\textsuperscript{16} Of course the two courses of action are not necessarily mutually exclusive; land is sometimes put to permanent residential or commercial use after it has been mined.

\textsuperscript{18} See text accompanying notes 36 to 37 supra.

\textsuperscript{17} The problem of divided jurisdiction exacerbates the inherent difficulties of coordinating mining regulation. In most state regulatory programs, different bureaucratic divisions regulate different aspects of mining. For example, in West Virginia the water pollution aspects of surface mining are largely regulated by the Water Resources Division of the Department of Natural Resources, while the bulk of remaining regulation is performed by the Division of Reclamation of the Department of Natural Resources. See W. Va. Code §§ 20-5-1 to -16 (1978 Replacement Vol.) (water resources); W. Va. Code §§ 20-6-1 to -32 (1978 Replacement Vol.) (surface mining and reclamation).

the area wide regulatory requirements of section 522.\textsuperscript{49} That section requires the regulatory authority to develop a planning process to identify those areas in which no coal mining should be authorized. It requires the regulatory authority to designate areas unsuitable for mining where reclamation is not technologically or economically feasible. It also authorizes the regulatory authority to designate areas unsuitable for mining where mining would: be incompatible with existing land use plans or programs; damage historic, cultural, scientific, aesthetic values or natural systems; or affect renewable resource lands or natural hazard lands.\textsuperscript{50}

g. Prime Farmlands and Distance Restrictions

Several immediately effective provisions of the Act impose upon operators land use related requirements which go beyond the basic, minimum second stage of regulation.

For example, the Act requires extraordinary protection of prime farmlands. Operations which may overlie prime farmlands are required to conduct a soil survey to ascertain the exact location of any prime farmlands.\textsuperscript{51} Permits to mine in prime farmlands may be granted by the regulatory authority only if it finds, in writing, that the operator has the technological capability to restore the affected area and to meet the soil reconstruction standards of section 515(b)(7).\textsuperscript{52}

Moreover, the Act requires the protection of natural, scenic, historic and recreational areas.\textsuperscript{53} Section 522(e) contains prohibitions against mining in (or within specified distances of) parks and other protected areas. The Act also prohibits any operation which will adversely affect a park or National Historic Site unless it is jointly approved by the regulatory authority and the agency having jurisdiction over the park or site.\textsuperscript{54}

\textsuperscript{49} Id. § 1272.

\textsuperscript{50} Operator error (whether or not ill motivated), lack of fail-safe technology, and the often unpredictable environmental results of mining are among the reasons why mining should not be allowed in areas designated environmentally sensitive.


\textsuperscript{52} Id. §§ 1265(b)(7), 1260(d)(1).

\textsuperscript{53} Section 522(e) of the SMCRA exempts two categories of mining operation from its requirements: those which "exist" on the effective date of the Act and those which possess "valid existing rights." 30 U.S.C.A. § 1272(e)(1)-(5) (West Supp. 1978).

\textsuperscript{54} 30 U.S.C.A. § 1272(e)(3) (West Supp. 1978). In theory, section 515(b)(1) of the Act can be read as a third stage regulation which goes so far as to authorize
II. FEDERAL-STATE RELATIONS UNDER THE ACT—STATE OPPORTUNITIES AND RESPONSIBILITIES

The preceding discussion has focused on the Act’s response to Congress’ perception of inadequate state regulation of coal mining—a comprehensive federally mandated program which attempts to expedite initial compliance with second stage standards and to require permanent compliance with a wide range of second and third stage standards. The other aspect of the paradox is the basis which forms the federal-state relationship under the Act: the primary role which the SMCRA mandates to the states to administer and enforce its requirements. The SMCRA is unequivocal with regard to the major role the states are to have in fulfilling its requirements:

Because of the diversity in terrain, climate, biologic, chemical, and other physical conditions in areas subject to mining operations, the primary governmental responsibility for developing, authorizing, issuing, and enforcing regulations for surface mining and reclamation operations subject to this [Act] should rest with the States.

A. State Enforcement of the Initial Regulatory Program

1. The Federal-State Scheme

Section 502 of the Act contemplates, in somewhat inexplicit fashion, a significant state role in enforcement of the initial regula-
At the same time, the initial regulatory program contemplates a major role for the federal government. Section 502(e) requires that a federal enforcement program be in effect within six months of the date of enactment, which coincides with the date the initial regulatory standards took effect with regard to new permits. This enforcement program lasts until the permanent regulatory program, either state or federal, comes into effect. The initial program requires mandatory federal inspection of operations at least once every six months to ascertain compliance with the initial performance standards. Sections 502(b) and 502(c) require, first of all, that operations comply with the initial performance standards specified in those sections. Read in conjunction with section 502(e)'s initial federal enforcement requirements, those sections would seem to have clearly envisaged federal administration and enforcement of the initial performance standards. The requirement that the Office of Surface Mining Reclamation and Enforcement, (OSM), issue regulations setting standards for the initial regulatory program confirms this view.

This apparently well defined federal role is confused, however, by the second half of the first sentence of section 502(b) which states that "such permits" shall contain terms requiring compliance with the initial performance standards. The references to permits in that subsection must be construed to mean state issued permits, inasmuch as the last sentence indicates a state may issue such permits. Moreover, no federal permits are contemplated until and unless OSM institutes a permanent federal regulatory pro-

56 Subsection (a) of § 502 can be dismissed. 30 U.S.C.A. § 1252(a) (West Supp. 1978). That subsection requires that any person who commences mining operations—by implication, on or after the effective date of the Act—must obtain a state permit. Other than representing a pious affirmation of the necessity for acquiring a state permit, this section has proved to have no effect and is therefore not relevant to our discussion. Its failure stemmed from the following facts: the full-fledged initial regulatory program was not scheduled to go into effect until six months from the date of the Act; the Office of Surface Mining Reclamation and Enforcement had no funding or staff until the initial regulatory program went into effect; and the States have the legal authority under state law to require operators to obtain permits.


58 Id. § 1252(b).

59 Id. § 1252(e)(1).

60 Id. §§ 1252(b), (c).

61 Id. § 1252(e).

62 Id. §§ 1251(a), 1211(c)(2).
gram in a state under section 504. This regulatory scheme is further complicated by the fact that section 502(c) contains no relevant reference to permit terms (although it requires compliance with the initial performance standards). Read literally, section 502(c)'s requirements lead to the absurd result that state permits for new operations must contain terms requiring compliance with the initial regulatory standards, but state permits for existing operations need not be amended to require compliance with the initial performance standards.

This permit compliance scheme is further complicated by the fact that information forming an integral part of the initial performance regulations applicable to all operations after May 3, 1978, can only be effectively obtained through the permit process. The prime farmlands requirements, which are immediately effective, are dependent upon the state permit process for their administration and enforcement. These provisions explicitly require permit application information and set forth requirements for permit grants and issuance.

2. The Enforcement Realities

For the reasons set forth above, the central importance of the permitting process in the initial regulatory program means, and practically demands, that the states should have a major role in its administration and enforcement. This major state role is also necessitated by the federal inspection requirements of section 502(e). As a practical matter, OSM must place great reliance on state inspections. In the first place, OSM has experienced long delays in obtaining a budget from Congress and the first bare beginnings of a federal inspection force only took to the field in late Spring of 1978. Even when all federal inspectors are finally hired and they have thoroughly familiarized themselves with the federal requirements and the conditions in their district, it is highly unlikely that OSM will ever be able to hire the vast number of federal

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\[\text{\textsuperscript{a}} \text{Id. } \S \text{1254. This article does not address the regulation of coal mining on federal lands.}

\[\text{\textsuperscript{b}} \text{Id. } \S \text{1252(c).}

\[\text{\textsuperscript{c}} \text{See, e.g., } 42 \text{Fed. Reg. 62,685 (1977) (to be codified in } 30 \text{C.F.R. } \S \text{715.17(a)) (permittees shall submit a surface monitoring program for approval by the regulatory authority).}

\[\text{\textsuperscript{d}} \text{30 U.S.C.A. } \S\S \text{1257(b)(16), 1260(d)(1), 1265(b)(7) (West Supp. 1978).}

\[\text{\textsuperscript{e}} \text{Id. } \S \text{1252(e).}
inspectors necessary to make regular inspections of every mining operation in the country. 68

3. Legal Authority for State Enforcement

The major role which the states should have in administering and enforcing the initial regulatory program having been established, the next question becomes what legal authority, if any, the states have to enforce the initial performance standards. The Act itself does not directly address the issue of state authority to require affirmative compliance with its initial performance standards. Section 505 does, in effect, prohibit states from taking actions inconsistent with (less stringent than) the Act. 69 A state is therefore forbidden from issuing permits requiring compliance with terms less stringent than those of the Act.

Although the point is somewhat unclear, analogous case law indicates that states may be able to enforce the federal initial performance standards affirmatively. In Testa v. Katt, 70 the

68 Section 502(e) institutionalizes federal-state cooperation (or at least communication) in the enforcement of the initial regulatory program. See 30 U.S.C.A. § 1252(e) (West Supp. 1978). It requires that the state regulatory authority file copies of all inspection reports with OSM's Washington office and the appropriate OSM regional office. Id. § 1252(e)(3). It further requires that OSM make a mandatory inspection of an operation if the operation is found in violation of the SMCRA during two consecutive state inspections. Id. § 1252(e)(2).

69 Section 505 reads:

(a) No State law or regulation in effect on the date of enactment of this Act, or which may become effective thereafter, shall be superseded by any provision of this Act or any regulation issued pursuant thereto, except insofar as such State law or regulation is inconsistent with the provisions of this Act.

(b) Any provision of any State law or regulation in effect upon the date of enactment of this Act, or which may become effective thereafter, which provides for more stringent land use and environmental controls and regulations of surface coal mining and reclamation operation than do the provisions of this Act or any regulation issued pursuant thereto shall not be construed to be inconsistent with this Act. The Secretary shall set forth any State law or regulation which is construed to be inconsistent with this Act. Any provision of any State law or regulation in effect on the date of enactment of this Act, or which may become effective thereafter, which provides for the control and regulation of surface mining and reclamation operations for which no provision is contained in this Act shall not be construed to be inconsistent with this Act.


United States Supreme Court held that the supremacy clause requires state courts to enforce the substantive requirements of federal statutes when the state courts are empowered to decide similar state law issues. The issue of whether the federal government can require the states to enforce the initial regulatory program affirmatively in the absence of analogous state law requirements is more difficult. The Supreme Court consciously avoided deciding this issue in its recent decision in *EPA v. Brown*.

4. Federal Carrots and Clubs

Recognizing that the precise definition of the state's role in enforcing the initial regulatory program (and the constitutional limitations thereon) remains unclear, and that practical considerations nevertheless dictate that the states must play a major role in its enforcement, OSM has taken the position that the states should have or should obtain authority under state law to enforce the initial performance standards. The willingness of the states to obtain the necessary authority under state law and to cooperate voluntarily in the enforcement of the initial regulatory program is greatly enhanced by "carrots and clubs" wielded by OSM in the form of the approval or denial of grants.

OSM has the authority under section 705 of the SMCRA to make grants to the states. These grants include funds to cover the additional expenses incurred by the states in administering and enforcing the initial regulatory program. These grants are impor-
tant to the states because they provide funding for additional staff at a time when most state budgets are shrinking. This additional funding should also allow the initial regulatory program to serve, in fact as well as theory, as a "dry-run" for enforcing many of the requirements which must be incorporated in the states' permanent regulatory programs.

B. Permanent Regulatory Program

Consistent with its stated purpose of delegating the primary responsibility for its enforcement to the states, the Act authorizes a state to assume exclusive jurisdiction over the regulation of coal mining under the Act when and if the state submits and OSM approves a state plan for a permanent regulatory program under section 502.75 States must submit and OSM must approve state plans according to a time schedule established by the Act under section 503.76

Section 503(a) specifies seven requirements which a state must meet before its permanent regulatory plan can be approved.77 Essentially, section 503(a) requires that a state have the legal authority and adequate staff and funding to administer and enforce a state regulatory program no less stringent than the requirements of the Act. In the event a state fails to submit an acceptable plan by June 3, 1980, OSM must administer and enforce a permanent regulatory program in that state.78 Because it appears, as might be expected, that every state in which coal mining exists will attempt to qualify for primacy, the Act creates many problems and opportunities for federal and state relationships.

1. Funding

From the states' point of view, the most important role OSM will play under the Act is as a source of funds for state programs. Whatever the ineptitude the federal government may display in other areas, it raises revenues with efficiency. State governments, on the other hand, are often inefficient collectors of revenues at a time when inflation is greatly increasing governmental costs.

75 Id. § 1252.
76 Id. § 1253.
77 Id. § 1253(a).
78 Id. § 1254(a).
The consequences resulting from a given state's inability to fund such a program adequately will affect the public and industry alike. Environmental protection will suffer if fewer inspections are made. Permit applications will take an inordinately long time to review (and the start of operations will be significantly delayed) if there is insufficient staff to review such applications.

Funding is especially important for the states because one of the SMCRA's explicit preconditions to obtaining primacy is a showing that the state regulatory authority is sufficiently funded so as to be able to administer and enforce the Act effectively. This is not a trivial precondition. For example, Pennsylvania, which has a comprehensive program of coal mining regulation, was the only state to regulate all the environmental effects of underground mining prior to the passage of the Act. But there is a serious question as to whether even Pennsylvania's program is sufficiently funded at the present time to develop, administer and enforce a satisfactory state program under the Act.

The Act specifically authorizes OSM to make annual grants to the states for the development, administration and enforcement of state programs under the Act. The Act further provides that the monies authorized by section 712 shall also be used to reimburse the states for the administration and enforcement of the initial performance standards. The maximum amounts of these grants represent a substantial portion of the costs incurred by a state in developing and running its coal mining regulatory program. Under section 705, a state is authorized to collect a percentage of the costs incurred by the state under the Act according to the following schedule: 80% for the first year, 60% the second year.

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71 See text accompanying note 29 supra.
72 Pennsylvania, which has regulated surface mining since 1945, requested an initial regulatory program grant of 700,000 dollars from OSM for surface mining regulation in 1979. This request represented almost a one-quarter increase in Pennsylvania's surface mining budget and was necessary to meet the requirements of the initial regulatory program. The Act's authorization of grants of up to 80% of the cost to the state for administering and enforcing the permanent program for the first year (after obtaining primacy), is a realistic estimate of the incremental costs which will be incurred. See note 89 and accompanying text, infra.
and 50% for succeeding years.84 Section 712(c) appropriates specific sums for grants under section 705: to twenty million dollars for federal fiscal year 1977 to 1978, thirty million dollars for federal fiscal years 1978 to 1979 and 1979 to 1980, and "such funds as are required thereafter."85

Moreover, section 401(a) of the Act creates an Abandoned Mine Reclamation Fund.86 As its name denotes, the Fund serves the purpose of financing governmental reclamation of the adverse effects of past mining operations.87 The Fund is also, inter alia, for the purposes of abating emergency conditions caused by mining operations and for the enhancement of public facilities such as roads and recreational facilities adversely affected by mining.88

In order for a state to administer an abandoned mine reclamation program using monies from the Abandoned Mine Reclamation Fund, it must prepare and OSM must approve an abandoned mine reclamation program for the state.89 In order to encourage states to apply for primacy, OSM may not approve and fund a state abandoned mine reclamation program unless the state has an approved permanent regulatory program.90

Funding under Title IV of the Act alone will be of great benefit to the states. Federal funds will substantially increase the ability of the states afflicted by the destructive legacy of past mining practices (predominantly the eastern states) to restore the vast amounts of land and numbers of streams adversely affected by past mining practices.91 These funds will also enable states affected with sudden sprawl and population growth attendant upon opening new coal reserves (predominantly the western states) to deal

81 Id. § 1295(a).
82 Id. § 1302(c).
83 Id. § 1231(a).
84 This Fund is to be financed by a tonnage assessment on all coal mined in the United States: 35 cents per ton of coal produced by surface mining and 15 cents per ton of coal produced by underground mining. Id. Section 402(a) provides that the assessment shall not exceed ten percent of the value of the coal at the mine. 30 U.S.C.A. § 1231(b) (West Supp. 1978). The section further provides that the fee for lignite coal shall be 10 cents per ton or two percent of the value of the coal at the mine, whichever is less. Id.
86 Id. § 1235.
87 Id. § 1236(c). But see 43 Fed. Reg. 49,941-42 (1978) (to be codified in 30 C.F.R. § 872.11(b)(5)(vi)).
88 See text accompanying notes 4 to 9 supra.
with the social dislocations caused by "boomtowns." Up to ten percent of these funds will also be available to fund the cost of preparation of the determination of hydrologic consequences under section 507(b)(11) and the statement of test boring results under section 507(b)(15) by small operators (those who produce under 100,000 tons). This provision will help small operators meet all of the permit application requirements of the Act and eliminate any excuses based on economic inability to comply.

2. OSM as Standard Setter—The Real World Dichotomy

In addition to its power of the purse, OSM will have a great impact on state regulatory programs in its role as a standard setter. As previously noted, OSM was under a duty to issue initial performance standards in the form of regulations by November 3, 1977, and actually issued them on December 13, 1977. These regulations serve as the basis for state enforcement of the initial regulatory program.

OSM was also under a duty to issue permanent regulations by August 3, 1978. OSM, having missed this deadline, issued self styled "preferred alternative" regulations in January of 1979. The permanent regulations, finally issued on March 3, 1979, will have the effect of elaborating in detail the minimum standards which a state regulatory program must meet in order to qualify for primacy. It is unlikely that most of the requirements of the states' permanent regulatory programs will significantly deviate from federal requirements because of the states' desire to have programs compatible with the federal regulations, opposition of the various state coal mining industries to state standards more stringent than OSM's, and sheer inertia.

Due to their decisive influence on state regulatory programs, it is important that OSM's permanent regulations establish national standards which are based on and do not detract from the requirements of the stronger state regulatory programs. Indeed,

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Id. § 1251(a).
Id. § 1251(b).
one of the principal purposes of OSM's standard setting role under the SMCRA is to prevent the erosion of the stronger state regulatory programs through the movement, or the threat of movement, by industry to states with weaker regulatory programs.\textsuperscript{7}

The problem with OSM's crucial standard setting role under the Act is that OSM is largely divorced by the theoretical and practical necessities of the Act's enforcement scheme from direct, daily involvement in the application of its standards in the permit review process and enforcement activity. This real world dichotomy is not as acute in the initial regulatory program as in the permanent program which contemplates only a general federal supervisory role after a state assumes primacy. Nevertheless, enforcement of the initial regulatory program will, as a matter of necessity, also be primarily left to the states.\textsuperscript{95}

This lack of intimate connection with the "real world," doubtless compounded by the abstract, highly bureaucratized and insular atmosphere of Washington, could lead to well intended but unenforceable regulations. It should be emphasized that "unenforceable in the real world" does not translate into "too stringent." Rather, it denotes poorly written regulations which reflect a lack of understanding of regulation and enforcement.

As might be expected, examples of this lack of real world orientation are most readily found in the enforcement sections of the initial performance regulations. As a threshold matter, the enforcement sections of the Act reflect an almost complete lack of understanding of the realities of enforcement. For example, the enforcement sections of the Act are almost exclusively couched in terms of liability of the "permittee."\textsuperscript{1} The Act therefore makes enforcement actions against unpermitted operations very difficult and, indeed, creates an incentive for operators not to obtain permits. Because the permit review process is necessary to prevent, rather than belatedly to attempt to cure, the irreversible environmental harm which mining often causes, this deficiency in the Act's draftsmanship is especially unfortunate.

The initial regulations also reflect a lack of understanding of how to write legal requirements for effective enforcement. The most conspicuous example of this lack of understanding was sec-

\textsuperscript{7} 30 U.S.C.A. § 1201(g) (West Supp. 1978).
\textsuperscript{8} See text accompanying notes 55 to 74 supra.
tion 722.17(c)(3), as proposed for the initial performance regulations, but which was providentially excised from the final version.\textsuperscript{100} Section 722.17(c)(3) represented an attempt to set forth criteria for a mandatory order requiring an operator to show cause why his permit should not be suspended or revoked under section 521(a)(4) of the Act. Section 722.17(c)(3) read:

The Regional Director \[\text{of OSM}\] shall deem a pattern to exist if the number of willful violations or violations caused by unwarranted failure to comply with the Act, regulations or permit conditions is at a rate 50 percent above the national norm during two months of any four month period. The national norm will be determined by comparing the number of willful and unwarranted violations issued per inspection day to the permittees in the initial regulatory period. The norm will be determined semi-annually and the norm for the proceeding \[sic\] half year will be utilized in determining whether a pattern exists. The national norm may be computed by a sampling or other statistically-valid method when the data exists \[sic\] for the computation.\textsuperscript{101}

The flaws in the "national norm of noncompliance" standard are patent and manifold. The standard assumes an enforcement program predicated on an assumption of violation, and it creates an incentive for the industry as a whole to violate the law (so that the base level of noncompliance will be higher and thus fewer show cause orders will issue). It is also much too complicated to serve as the basis of an effective enforcement program; and it is almost impossible to calculate, much less litigate. Although improved from their proposed version, the enforcement sections of the final initial regulations contain unnecessarily convoluted sections which bespeak an enforcement naiveté. Section 723.12(c)(1) of the initial regulations speaks of the "probability of the occurrence of the event which a violated standard is designed to prevent" as a criterion for assessment of up to fifteen graduated civil penalties points.\textsuperscript{102}

3. The Federal Paper Tiger

Related specifically to the question of reinforcement of the stronger state regulatory programs, as well as generally to the

\textsuperscript{100} 42 Fed. Reg. 44,945 (1977) (to be codified in 30 C.F.R. § 722.17(c)(3)).
\textsuperscript{101} Id.
\textsuperscript{102} 42 Fed. Reg. 62,702-03 (1977) (to be codified in 30 C.F.R. § 723.12(c)(1)).
effective administration of the Act, is the question of how OSM will exercise its supervisory role over state programs. Endemic to the federal bureaucracy is an emphasis on form, details, and the filling out and filing of paperwork. For example, the delegation of the federal water quality permit program has been characterized by an extreme emphasis on form pursuant to EPA's state program regulations and by a lack of emphasis on how the permit programs delegated to the states have actually been administered and enforced.\textsuperscript{102} If OSM follows this course after state permanent regulatory programs have been approved, the SMCRA will become a nullity and OSM will constitute a facade used to justify the continued existence of weaker state regulatory programs.

4. Compatibility of the SMCRA With State Statutes

The last problem this section will address stems from the poor draftsmanship of the SMCRA. The Act serves as a classic example of inept legislative draftsmanship. It is, first of all, internally inconsistent. Words and phrases read differently in different parts of the statute even when they are apparently referring to the same basic standard. For example, section 509(a) provides that the amount of bond shall be calculated upon the cost of reclamation to the regulatory authority, while section 519(c)(2) provides that the amount of bond retained to insure continued success of revegetation shall be calculated upon the cost to a third party;\textsuperscript{104} section 508(a)(3) speaks of "existing land use policies and plans" while section 508(a)(8) addresses "applicable State and local land use plans";\textsuperscript{105} and section 507(b)(5) requires operators to file a statement regarding permit suspensions or revocations and bond forfeitures for the five years preceding the submission of the application, while section 510(c) requires operators to file a schedule regarding violations of environmental laws for a three year period prior to the date of the permit application.\textsuperscript{106} In addition, vague and undefined catch words and phrases are strewn promiscuously around the Act. "Irreparable harm" is a prominent example.\textsuperscript{107}

\begin{footnotesize}
\begin{itemize}
\item[104] Compare 30 U.S.C.A. § 1259(a) (West Supp. 1978) with 30 U.S.C.A. § 1269(c)(2) (West Supp. 1978). Experience has indicated that it costs the government three to four times more to do the backfilling on defaulted operations than it costs the operators.
\item[107] Compare Id. § 1257(b)(5) with Id. § 1260(c).
\end{itemize}
\end{footnotesize}
Some sections of the Act even embody conflicting requirements. Perhaps the most notable example is section 516(b)(1) which requires operators to:

adopt measures consistent with known technology in order to prevent subsidence causing material damage to the extent technologically and economically feasible, maximize mine stability, and maintain the value and reasonably foreseeable use of such surface lands, except in those instances where the mining technology used requires planned subsidence in a predictable and controlled manner: Provided, That nothing in this subsection shall be construed to prohibit the standard method of room and pillar mining . . . 19a

This section has no meaning. Underground mining operations, whether they use room and pillars or longwall techniques, plan for subsidence in a predictable and controlled manner in order to maximize mineral extraction and efficiency of operation. The exception is, therefore, inclusive and the first part of the section is meaningless. The exception might arguably be read to refer to longwall mining techniques. However, to so interpret it would lead to the absurd result that no subsidence control whatsoever would be imposed on longwall mining operations, even if it were "technologically and economically feasible" for them to prevent subsidence damage. The "Provided" clause is a qualification piled on the other qualifications and is mystifying in context. Section 516(b)(1) contains so many elastic phrases—"material damage," "technologically and economically feasible"—that it cannot fairly be construed to prohibit anything.

It is an unfortunate fact that the poor draftmanship of the Act will probably be repeated in much state legislation. Instead of mechanically adopting the Act verbatim, states should attempt to adopt more lucid, enforceable and effective legislation to fulfill the spirit of the Act.

III. DEVELOPMENTS IN FEDERAL AND STATE REGULATORY PROGRAMS—RESOLVING THE PARADOX

The success or failure of the SMCRA depends upon how OSM resolves the paradoxical approach to state regulation which constitutes the core of the Act's regulatory requirements. In order for the

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Act to be effective, OSM must require the states to develop and enforce their own second and third stage regulatory programs and to overcome their legacy of inadequate first stage regulation. OSM itself, on the other hand, must continue to superintend state programs in order to insure their continued effectiveness and in order to reinforce strong state regulatory programs. A definitive conclusion about OSM’s ability, competence and resolve to require states to enforce the Act cannot be reached until sometime after the Act’s deadline of June 3, 1980 for OSM’s approval or disapproval of state primacy plans. However, OSM’s administration of the Act’s initial regulatory program, OSM’s permanent regulations, and its communications with various interested parties—including states—provide a basis for a provisional conclusion.

A. The Initial Regulatory Program—Enforcement

The initial regulatory program has had some success. OSM inspectors have made inspections, have issued notices of violations, and OSM has itself taken some enforcement actions. Although reliable statistics regarding the relative frequency and effectiveness of state inspections and enforcement actions before and after the advent of the initial regulatory program are not available, it appears that initial regulation under the Act has generally resulted in some strengthening of state regulatory programs. For example, in the southern Appalachian states, state inspectors are learning how to prepare cases for court as a result of enforcement actions brought under the initial regulatory program. Under the impetus of the initial regulatory program, state inspectors in some western states are now taking water samples when they make inspections, and New Mexico has hired its first surface mining inspector. Moreover, at this writing, most coal producing states have adopted their own legislation authorizing enforcement of the initial regulatory standards.

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111. See OSM’s Cumulative Assessments Statistics as of Jan. 26, 1979 (Dep’t of the Interior, Jan. 1979). These statistics reveal that up to January 26, 1979, OSM issued 708 notices of violations, 293 cessation orders and 1,511 notices of civil penalty violations under the initial regulatory programs.
114. Some amendments to state laws have simply incorporated the initial per-
Although some incremental gains have been made in mining regulation under the initial regulatory program, the effectiveness of the program is still very much in doubt. After an extensive review of OSM's inspection records, the Center for Law and Social Policy concluded that federal inspections under the initial regulatory program (which are to serve as a model for state inspections) were inadequate in frequency and result. Inspection shortcomings included failure to cite violations and failure to take enforcement action in response to discovered violations.

B. The Initial Regulatory Program—The Retreat From Substantive Requirements

While it appears as though OSM is undertaking a good faith effort to get inspectors out in the field to ascertain compliance with the initial regulatory standards, an examination of the substance of the initial regulatory program reveals OSM's performance to be seriously, perhaps fatally, inadequate. The inadequacies of inspections under the initial regulatory program can be at least partially justified on the grounds of insufficient staffing and enforcement inexperience. West Virginia has apparently had the most correspondence with OSM of any of the states in this regard. Of that correspondence, the most illuminating is the Heine-Callaghan letter.

In September of 1978, Walter Heine, Director of OSM, wrote a letter to David Callaghan, Director of the West Virginia Department of Natural Resources (DNR), in which he purported to summarize understandings reached between OSM and DNR regarding the substantive requirements of the initial regulatory standards as applied to West Virginia. The essence of the letter, stripped of performance standards by reference or by implication. West Virginia's legislation is typical: "The legislature does hereby intend to expand the authority of the department and the commission to issue permits in compliance with federal law." W. Va. Code § 20-6-23a (Cum. Supp. 1978).

116 Letter from Center for Law and Social Policy to Walter Heine, Director, OSM, U.S. Dep't of the Interior (Dec. 21, 1978).

117 Letter from Walter Heine, Director, OSM, U.S. Dep't of the Interior, to David Callaghan, Director of West Virginia Dep't of Natural Resources (Sept. 31, 1978). The Heine-Callaghan letter discusses ten issues designated in subheadings: valley or head-of-hollow fills; haul road drainage; post-mining land use; groundwater monitoring; outcrop barrier; section 522(e); top-of-fill drainage control; continued funding and hiring practices; division of labor; and authority of DNR. An example of the tone and spirit of the Heine-Callaghan letter is contained in its discussion of culvert requirements for haul roads:
equivocal rhetoric, is that West Virginia's regulations are sufficiently stringent to meet the requirements of the initial regulatory program. Although the Heine-Callaghan letter discusses many issues, and purports to grant West Virginia a number of unauthorized exemptions from the initial regulatory requirements of the Act and OSM's regulations, its discussion of hydrologic monitoring requirements illustrates the obfuscatory manner in which the letter waives federal requirements:

In recognition of Section 101(f) of the Federal Act, the requirements of Section 717.17(h)(3) and 717.17(h)(2) of the interim Federal regulations should be applied primarily with the view towards assuring adequate monitoring of the quality and quantity of underground waters. Where use of monitoring wells cannot adequately monitor the change in quality and quantity of underground water, DNR [the West Virginia Department of Natural Resources] may approve alternative means to monitor the underground water. This is especially relevant where wells may not assure adequate or accurate monitoring data in the remote rural areas of West Virginia's mountainous terrain due to the presence of multiple aquifers or underground streams. In conducting inspections, OSM will be guided by West Virginia requirements.117

The last sentence of the quotation controls the entire paragraph because inspections and any subsequent enforcement actions will determine what requirements are enforced. But, contrary to the implication of the paragraph, the purported adoption ("guided by" is a delicate bureaucratic euphemism in this context) of the West

While West Virginia culverts are only designed [under the requirements of state law] to a one year [,] 24-hour [precipitation] event, we [OSM] understand that associated control structures such as basins and standpipes, as well as the number of such structures which are required, should adequately handle a 10-year, 24-hour [precipitation] event.

Id. In other words, according to OSM, a structure designed to handle a 1-year, 24-hour precipitation event is adequate to handle a 10-year, 24-hour precipitation event. The reference to "associated structures" does not detract from this conclusion. In generally accepted engineering practice, associated structures should fit the 1-year, 24-hour design of the culvert. If they are designed to handle a greater flow than the culvert, flooding could occur. If anything, associated structures should be designed to handle less flow than the culvert in order to diminish the possibility of flooding. Although the hydrologic monitoring requirements imposed by the initial program are not as comprehensive as the equivalent requirements of the permanent program, they represent a transition between second and third stage regulation and serve as a crucial test of the effectiveness of the initial program.

117 Id. [emphasis added].
Virginia hydrological requirements by OSM will not result in the use of scientifically accurate monitoring methods which would increase environmental protection. In practice, West Virginia requires hydrologic monitoring only if an operation is within one-half mile of a well or spring.18

OSM's purported adoption of West Virginia requirements has caused it to lose enforcement actions it has brought charging operators with violations of more stringent federal standards. In Carbon Fuel Co. v. OSM,19 a coal company appealed specified notices of violations, cessation orders, and notices of civil penalty assessments which OSM had issued against it under sections 518 and 521 of the Act.20 The administrative law judge vacated all the orders and notices that remained in contention at the hearing stage. The opinion and order of vacation in Carbon Fuel was based specifically on the Heine-Callaghan letter. Finding the operator to have been in compliance with the applicable West Virginia regulations on the dates the violations were charged, the opinion in Carbon Fuel stated:

Although the Respondent did not specifically argue that the West Virginia statutes were not consistent with corresponding statutes of the Act, it is undisputed that Walter N. Heine, P.E., Director of the Office of Surface Mining, in a letter to Mr. David Callaghan, Director, West Virginia Department of Natural Resources (Appl. Exh. 1), stated that, 'OSM recognizes the Department of Natural Resources as the State's regulatory authority as that term is defined in section 700.5 of the interim Federal regulations. Chapter 20, Article 6 of the Code of West Virginia and the rules and regulations promulgated by the West Virginia Department of Natural Resources on August 14, 1978, are essentially in compliance with, and adequate to implement, the initial regulatory program.' Having made such representation, the Respondent would also be estopped from denying that such application of the West Virginia regulations, to Applicant's permit would amount to compliance with the Act and the interim regulations.21

The estoppel rationale is more properly confined to bilateral or

21 U.S. Dep't of the Interior, supra note 11, at 6.
multilateral agreements not involving the exercise of the police power and is not persuasive in Carbon Fuel. Rather, the question presented is the legality of the Heine-Callaghan letter. Rulings or regulations by administrative agencies which are contrary to the governing statutes under which they are issued are not lawful and therefore are not legally effective. Because West Virginia's requirements are, in important respects, less stringent than equivalent requirements of the initial program prescribed by the Act, OSM's adoption of them is legally ineffective under a theoretical analysis. As a practical matter, however, neither operators nor OSM will be interested in challenging the legality of the Heine-Callaghan letter. In any event, as Carbon Fuel indicates, adjudicatory bodies will be reluctant to uphold, if only out of a generalized sense of fairness, OSM's attempts to enforce federal requirements which are more stringent than the state standards OSM has purported to adopt.

Another immediate consequence of the Heine-Callaghan letter is discriminatory enforcement. In C & K Coal Co. v. OSM, a Pennsylvania operator appealed, inter alia, a notice of violation issued by OSM for failure to meet the hydrologic monitoring requirements of the initial regulatory program. Although the administrative law judge found that the operator was in compliance with Pennsylvania's hydrologic monitoring requirements, he upheld the notice of violation on the ground that compliance with state requirements is not a defense to an action for violation of the federally mandated requirements of the initial regulatory program. Although C & K Coal was correctly decided, the contrast between it, the Heine-Callaghan letter and Carbon Fuel highlights the discriminatory effects of OSM's administration of the Act, even at this early date. Operators in one state must follow the statutory scheme and comply with the initial regulatory requirements regardless of whether or not they also comply with state requirements. In contrast, operators in another state may flout the statutory scheme and fail to comply with the initial regulatory requirements because of the affirmative action of OSM in sanctioning


\[125\] Id. at 3-4.
state requirements which are less stringent than the initial regulatory standards prescribed by the Act and OSM's own regulations. This result blatantly contradicts the initial regulatory program's purpose of requiring the states to "catch up" to second stage regulatory requirements, and the Act's purpose of establishing minimum national standards to prevent continued economic advantage to states with weak regulatory programs.126

C. The Permanent Regulatory Program

The implications of the Heine-Callaghan letter and surrounding events assume more importance in light of OSM's proposed permanent regulations.27 The single most important set of decisions OSM will make involves the approval or disapproval of the primacy applications of individual states. The Act requires that in order to qualify for primacy, a state must have a regulatory program, including legislation and rules and regulations at least as stringent as federal requirements.28 OSM has included a section in its permanent regulations which has become known as the "state window" exception:

Standards and procedures for approval of alternatives to provisions of the regulations of this Chapter.

As part of its program submission or as an amendment to an approved State program, a State may request approval for alternatives to provisions of the regulations of this Chapter. For each alternative provision the State shall—

(a) Identify the provision in the regulations of this Chapter for which the alternative is requested;

(b) Describe the alternative proposed and provide statutory or regulatory language to be used to implement the alternative and;

(c) Explain how and submit data, analysis and information, including identification of sources, demonstrating—

(1) that the proposed alternative will be in accordance with the applicable provisions of the Act and be consistent with the regulations; and

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126 See 30 U.S.C.A. §§ 1252, 1201 (West Supp. 1978); see also text accompanying notes 116 to 125 supra.


This provision allows OSM great discretion in approving or disapproving state primacy plans. It contains no criteria whatsoever for evaluating the stringency and effectiveness of proposed state alternatives. The "state window" variance provision will encourage and permit arbitrary and politicized decisionmaking and can result in approval of state programs or subsequent state program amendments which do not meet the requirements of the permanent regulatory program. The ultimate result of the "state window" exception, especially when read in the context of OSM's execution of the Heine-Callaghan letter, may well be that federal action will itself undercut strong state regulatory programs in direct contradiction to the purposes of the Act.

Even assuming that the "state window" exception were less open ended than it appears, the practical problems of applying it to meet the requirements of the permanent regulatory program and to reinforce, not weaken, strong state regulatory programs are illustrated by the remarks of Governor John D. Rockefeller, IV, of West Virginia. With respect to the hydrologic monitoring requirements of the initial regulatory program, Rockefeller stated:


128 This conclusion is not contradicted by the requirement of § 731.13(c)(1) that any state alternative must be in accordance with the Act and consistent with the regulations. Section 730.5 of the permanent regulations defines "consistent with" and "in accordance with" as they relate to the Act and the regulations in the following manner:

(a) With regard to the Act, the State laws and regulations are no less stringent than, meet the minimum requirements of and include all applicable provisions of the Act.

(b) With regard to the Secretary's regulations, are no less stringent than and meet the applicable provisions of the regulations of this chapter.

44 Fed. Reg. 15,324 (1979) (to be codified in 30 C.F.R. § 730.5) [emphasis added]. Under this definition, state primacy programs will not have to include, at OSM's discretion, all of the requirements of OSM's regulations. Moreover, assuming arguendo that the "state window" was lawfully adopted, under familiar principles of deference to agency interpretation, OSM will be allowed great latitude in deciding whether a given state's requirements are consistent with the permanent federal requirements. See In re Surface Mining Regulation Litigation, 456 F. Supp. 1301 (D.D.C. 1978). In any event, the "local requirements" clause of § 731.13 purports to afford OSM broad discretion because of its vague language.

129 This should be contrasted with 44 Fed. Reg 15,315-16 (1979) (to be codified in 30 C.F.R. § 700.13) (this section specifies in detail what must be contained in citizen's notice).
The most significant of [OSM's] enforcement activities, however, is with regard to the failure to have the required underground water monitoring system. No one in OSM has told us, or the industry, what is an acceptable groundwater monitoring system, or how the data collected by such a system is to be used. . . .

. . . When we ask OSM to define for us exactly how to monitor groundwater, they can't tell us.122

Governor Rockefeller's remarks and the Heine-Callaghan undertaking indicate that states are much more likely to argue, and OSM to accept, the position that their current less stringent regulations should be part of the broadly discretionary state window variance, rather than presenting effective alternatives which meet the federal requirements.133 Thus the ultimate effect of the "state window" will be to sanction state programs which do not meet the requirements of the permanent regulatory program.

IV. CONCLUSION

The Act's requirement of basic minimum second stage regulation and preventive, comprehensive third stage regulation represents a national response to the state's historically inadequate regulation of coal mining's environmental effects. Paradoxically, the Act vests primary responsibility for its administration and enforcement with the states. OSM must successfully resolve the paradox inherent in the Act and require the states to overcome their past history of lax enforcement by developing their own regulatory programs to meet the Act's requirements. Although a definitive conclusion would be premature, one can provisionally conclude on the basis of current developments that OSM will not effectively resolve the federal-state paradox. Such a failure will result in a federal sanctioning of weaker state regulatory programs and a federal undercutting of stronger state regulatory programs.

122 Excerpts of Prepared Remarks of Governor John D. Rockefeller, IV, Before the Senate Energy and Natural Resources Committee at 2, 5 (press release issued Sept. 11, 1978). The gravamen of Governor Rockefeller's testimony, which took place several weeks before OSM executed the Heine-Callaghan letter, was that West Virginia's standards were adequate to meet the requirements of the initial regulatory program. In addition, Governor Rockefeller called for a congressional investigation of the "background and philosophies" of OSM staff.

133 Moreover, the hydrologic monitoring requirements of the permanent regulations are generally framed and do not "tell" the industry or the states what to do. 44 Fed. Reg. 15,402-03 (1979) (to be codified in 30 C.F.R. § 816.52).