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ENVIRONMENTAL REGULATION OF COAL MINING,
SMCRA's SECOND DECADE

JAMES M. McELFISH and ANN E. BEIER

This controversial book examines environmental regulation of coal mining in the United States over the 1979-1989 period. The Surface Mining Control and Reclamation Act of 1977 (SMCRA) established federal regulation of the environmental effects of coal mining. The permanent regulatory program implementing SMCRA was initiated in 1979. This book looks at the first ten years of SMCRA, seeking to draw lessons from experience that will improve regulation, so that "the objectives of the law may be achieved in SMCRA's second decade" (page 4).

The authors review legal and regulatory issues pertinent to SMCRA enforcement, and offer recommendations on steps that should be taken to improve enforcement. As a review of selected issues, the book succeeds admirably. However, it is far from exhaustive, as the authors deal in depth only with those issues they consider to be "most critical" to enforcement of SMCRA.

The authors are obviously well versed in the regulatory issues surrounding SMCRA, by far the most detailed and complex U.S. legislation established to regulate a single industry. The material is presented in a way that does not require specialized knowledge on the part of the reader, or prior experience with the environmental effects of coal mining. The book sets out to instruct the reader how this complex legal and regulatory system works. In this, the authors succeed. They have produced what these reviewers feel is the best introduction to environmental regulation of coal mining available today. McElfish and Beier bring clarity to complex issues such as the federal-state oversight system, permitting and bonding, and the interaction of SMCRA and the Clean Water Act in regulating the mining industry's water quality impacts.

However, this book is a far from dry, dispassionate review of legal principles. The writing is critical and opinionated. The author's interests are in protecting the environment from the effects of mining. Writing for the non-profit Environmental Law Institute, they are straightforward in proclaiming their interest. They are highly critical of the U.S. Office of Surface Mining Reclamation and Enforcement (OSMRE), state regulatory agencies, and especially the coal industry. Although they admit that the environmental effects of coal mining have been substantially reduced by SMCRA, relative to standards prevailing during pre-1977 regulation by individual states, they feel that the full potential of SMCRA to protect
the environment has not been realized. Generally speaking, the authors believe that a strong and secure “safety net” of regulation is necessary to control the coal mining industry, as that industry will take advantage of any opportunity to exploit gaps and loopholes in the regulatory structure.

The first three chapters provide an overview and define the context for what follows, as they introduce the reader to SMCRA itself, environmental impacts of coal mining, the “cooperative federalism” embodied in the federal-state oversight system, and specific regulatory enforcement tools. The authors contend that a strong federal oversight role is necessary due to the “one-industry nature of the federal program,” “the tendency of regulated industries to ‘capture’ regulators,” and the strong pressures faced by individual states to minimize regulation (page 44).

Chapters 4 and 5 deal with two topics that the authors feel to be of overriding importance: permitting and bonding. The authors consider the permitting stage to be under-utilized as an enforcement tool. Prior to issuing a permit to mine, the regulatory agency holds a great deal of power over the mining firm and can dictate the terms of mining. Once the permit is issued, the agency’s power is restricted to enforcing the terms of that permit. The authors argue that regulatory agencies could do much more to ensure the environment is duly protected from the abuses of coal mining during the permit application and review stage, arguing that “The SMCRA permit is a privilege granted by the regulatory authority” (page 53).

The authors provide an outstanding review of various mechanisms of performance bonding, SMCRA’s primary reclamation enforcement tool. They review the types of bonds typically utilized by the industry, and the distinction between “full cost” performance bonding systems and the alternative “insurance pool” systems in use in many states. The authors are critical of regulations implementing SMCRA’s bonding provisions, arguing that regulatory authorities are not setting full cost bonds at high enough amounts to ensure reclamation, and that many of the alternative bonding systems would prove to lack actuarial soundness if subjected to close scrutiny.

The following two chapters deal with water quality issues. An entire chapter is devoted to acid mine drainage (AMD) and the tremendous costs of this problem to the mining industry, regulatory agencies, and the public. The technical review of the chemical reactions of AMD is surprisingly thorough for a book designed primarily for an audience with legal and regulatory interests. The authors feel that the regulatory system should be strengthened, so as to deal more effectively with AMD. Their recommendations include permit denial (in situations where mining firms
cannot demonstrate conclusively that AMD will not be a problem) and increased bond amounts and delayed bond release in AMD areas.

Chapters 8 and 9, on subsidence and water loss from underground mining, provide a brisk and readable summary of the technical and legal issues leading the authors to their claim that SMCRA's regulatory program has "substantially failed to deal either with subsidence or with the destruction or impairment of water supplies by underground mining" (page 4). Although it is certainly possible to go into a much greater level of technical detail on the fine points of subsidence, and, a fortiori, the effects of underground mining on water resources, the authors lay out the essentials. In this connection, the schematic illustrations are helpful, although they do not provide technically accurate representations. Both chapters are organized similarly, with a summary of the technical aspects; a close analysis of the sections of the act pertaining to subsidence and water loss and their interpretation and implementation at the federal level; how selected states have dealt with the issues, particularly the issue of mine operator liability; and a summary of the outstanding challenges and some suggested solutions.

The key issues in both subsidence and water loss from underground mining concern equity and economics. They revolve around prevention and remediation of damages to owners of surface lands above underground mines. Subsidence can and often does damage buildings and other structures; its effects on water supplies can be seriously disruptive. The authors provide analysis of the failure of the federal regulatory scheme to provide protection to surface owners, and review some of the ways individual states have attempted to deal with the consequences. In general, the information is as up-to-date as can be expected in a book, an important consideration in a dynamic policy area.

The final chapters deal with designation of lands unsuitable for mining, abandoned mined land reclamation, valid existing rights, and remining of previously mined lands. The treatment of these issues is not as thorough as is treatment of those issues dealt with in the earlier chapters.

In some sections of the book, the authors are forced to do what they said (in the introductory chapter) they would not: give a "blow-by-blow account of the . . . regulatory struggles surrounding SMCRA." The historical review is unavoidable because the present state of certain federal regulations cannot be understood apart from the litigation and regulatory machinations of the past thirteen years.

The distinguishing characteristic of this book is the manner in which the authors have integrated their excellent reviews of current policies and procedures with text containing statements of bias and opinion. The heart of the book is their recommendations for changes in current policies.
Evidence in support of recommendations is, in some cases, anecdotal, and generally selective.

For example, consider Chapter 10, which deals with section 522(e) of SMCRA, a clause allowing regulatory agencies to designate areas as unsuitable for mining. The authors argue that the states are not using this clause effectively. The heart of their argument is a recitation of statistics regarding the number of areas declared unsuitable by individual states, and the assertion that—except for Pennsylvania—the numbers cited are not enough. They call the overall record "lamentable" (page 239), and claim that the 522(e) process is "not being used as the planning tool Congress envisioned in 1977" (page 246) without producing any evidence as to what Congress did envision, other than language from the act itself. They do not present any evidence that extensive environmental degradation has occurred due to the infrequency with which this clause has been utilized.

However, other arguments are much more convincing, and the authors do bring some excellent points to light. For example, they focus attention on the tremendous sums of money being spent on remediation of problems caused by acid mine drainage, and that current procedures for calculating performance bond amounts do not include consideration of the cost of treating AMD discharges. In some cases, the cost of this treatment has been sufficient to cause mining companies to abandon their permits, leaving the discharge untreated, or leaving the public to pay for perpetual treatment. Clearly, this is not what the framers of SMCRA had in mind. Similarly, their discussion of the interaction of the Clean Water Act and SMCRA in regulating mine discharges focuses needed attention on a number of regulatory and enforcement inconsistencies.

Readers should be aware that the book does contain some inaccuracies and misleading statements. These are, for the most part, peripheral to the arguments presented. They do, however, reflect the authors' interests. For example, on page 185, the authors recite a litany of effects alleged to result from subsidence, including that "Highways, pipelines, and powerlines may be damaged, cracked, or severed." These statements paint a grim picture. However, the fact of the matter is that, today, such effects are extremely rare, if they occur at all, as results of subsidence from active mining, due in large part to current regulatory structures. When such events do occur today, they are generally results of subsidence from older, pre-1977 mine works. The references for the authors' statements were dated 1977, 1980, and 1983, respectively, with the 1983 reference being an OSMRE report pursuant to SMCRA implementation. Similarly, the photograph on page 195 is titled "Subsidence caving threatens to swallow this home." The subsidence pit in question is a sharply defined angular crevice, an apparent result of near-surface room-and-pillar mining.
from years ago, and is not at all typical of present-day mining technology. On page 166, the authors state that mining industry impacts on water quality are regulated by the NPDES permit as a point source, but only during active mining. After reclamation, they claim, "nonpoint source' discharges frequently occur." This is true only after the performance bond has been released, when non-permanent runoff control structures are removed. According to the authors' own admission elsewhere in the text, bond release signifies that (quoting from the U.S. EPA) "post-mining pollution problems are abated and can reasonably be expected not to recur" (page 163).

Throughout the book, the authors leave the coal industry with the task of presenting its point of view, because it will not be found in these pages. Though they are undoubtedly correct in their assumption that industry can be trusted to present its case, nonetheless some indication of the costs, economic ramifications, and technical feasibility of some of the recommended policies would have helped to provide balance to this presentation. A major purpose of AMCRA is to "strike a balance between protection of the environment . . . and the Nation's need for coal as an essential energy source" (Sec. 102(f)). In this context, an essential consideration in evaluating any regulatory system must be its effect on the regulated industry. The effects of recommended actions on the coal industry do not appear to have received serious attention from the authors of this book. The coal industry and the environmental lobby have been squared off against each other for years—this book presents the environmental viewpoint.

Furthermore, the authors have spent a great deal of effort analyzing actions to enforce the act, but appear to have given little consideration to the act itself, including difficulties that the language in the act might present to regulatory personnel and industry alike. For example, on page 230, the authors recommend that strict interpretation of SMCRA requires "States and OSMRE should use their permitting authority to assure that damage to the hydrologic balance is minimized and mitigated." This is a difficult task for the most dedicated regulator, given today's level of understanding of the mechanisms of water loss from underground mining. The authors go on to state that if an underground mine permit applicant does not "demonstrate that it can 'minimize' disturbance to the hydrologic balance and to water 'quantity'" (page 230) the permit must be denied. Sounds simple, but in practice it is very far from it.

These criticisms notwithstanding, this book is an excellent overview of selected problems within the current regulatory framework. The book's strength is the understanding the authors bring to their discussion of some of the most complex issues associated with SMCRA's regulations and enforcement, and the clarity with which they describe them. Its weakness
is the one-sided nature of its arguments. Although the book is presented as an objective review, it is in fact an advocacy piece. It will stand as an effective advocacy piece, as it is well written, and its arguments are well presented. The book is informative as well as persuasive, and is likely to prove especially persuasive among those who have little or no familiarity with on-the-ground realities of coal mining. This book is recommended reading for all who have an interest or responsibility in its subject field.

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