

GAO

Report to the Chairman, Subcommittee on Environment, Energy, and Natural Resources, Committee on Government Operations
House of Representatives

September 1986

SURFACE MINING

Difficulties in Reclaiming Mined Lands in Pennsylvania and West Virginia



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United States
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**Resources, Community, and
Economic Development Division**

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September 22, 1986

The Honorable Mike Synar
Chairman, Subcommittee on Environment,
Energy, and Natural Resources
Committee on Government Operations
House of Representatives

Dear Mr. Chairman:

This report addresses your concerns about the bonding systems for reclamation of strip-mined land in Pennsylvania and West Virginia. The major issues discussed in the report include reclamation procedures after bond forfeiture, the adequacy of the bonding systems, and the appropriateness of bond releases. The report contains several recommendations to the Secretary of the Interior for making changes and improvements to the bonding programs to assure that adequate funding is available and to assure timely reclamation.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of the report. At that time, we will send copies to the Secretary of the Interior; the Director, Office of Management and Budget; various congressional committees; and other interested parties. We will make copies available to others upon request.

Sincerely yours,

J. Dexter Peach
Assistant Comptroller General

Executive Summary

Purpose

Improperly conducted coal mining, including the failure to reclaim the mined area, can result in damage to the environment and pose a significant risk to the health and safety of the public. Numerous states enacted legislation in the 1930's to control these harmful effects, but these laws allowed varying degrees of protection. Consequently, the Congress passed the Surface Mining Control and Reclamation Act of 1977 (SMCRA) to provide uniform, minimum environmental protection standards. The act further requires mine operators to post a bond to assure that mined lands will be adequately reclaimed if the operator is not willing or able to do so.

Concerned about problems related to the bonding requirements of SMCRA, the Subcommittee on Environment, Energy, and Natural Resources, House Committee on Government Operations, requested that GAO review the bonding systems for reclamation of strip-mined land in Pennsylvania and West Virginia. In particular, GAO was asked, among other things, to respond to the following questions:

- Have bond forfeiture lands been reclaimed?
- Are bonds adequate to assure reclamation?

Background

Since mining takes place in 27 states under different conditions and practices, SMCRA encourages the states, rather than the federal government, to regulate coal mining operations. If a state wants primary responsibility (primacy) over mining operations, it is to submit an operating plan to Interior's Office of Surface Mining Reclamation and Enforcement (OSMRE) demonstrating that the state will meet the provisions of the act. After OSMRE approves the plan, its role becomes oversight and it reviews and reports on the states' performance to assure that state regulatory programs comply with SMCRA. As of August 1986, 24 of the 27 coal producing states, including Pennsylvania and West Virginia, have been granted primacy for regulating mining.

Operators within the 24 primacy states must file a bond with the regulatory authority to assure the availability of reclamation funds. Pennsylvania and West Virginia—along with four other states—also have alternative bonding systems, in which the respective state's system provides supplemental moneys in addition to the bond covering each permitted mine. To meet the requirements of SMCRA, the combined bond and supplemental moneys must be adequate to cover reclamation costs.

After enactment of SMCRA but before the states received primary regulatory authority—the interim program period—there were no federal bonding requirements. Bonding, if any, was controlled by existing state laws. The period after the states obtained primary regulatory authority is called the permanent program period.

Results in Brief

One purpose of SMCRA was to establish a nationwide program to protect society and the environment from the adverse effects of coal mining. However, GAO found a number of problems existed in implementing SMCRA requirements. In particular:

- Unreclaimed acreage exists in both states, posing risks to the health and safety of the public and the environment.
- The interim program bond amounts in Pennsylvania and to a lesser extent in West Virginia have not been adequate to reclaim all interim program lands. In addition, OSMRE has not formally assessed the adequacy of the permanent program bonding systems in either state or assessed the impact of using reclamation funds for program administration on the ability of the states to reclaim their bond forfeiture lands.

Principal Findings

Unreclaimed Acreage

In Pennsylvania, the amount of unreclaimed acreage is extensive. Since SMCRA, the bonds on 22,450 acres have been forfeited, with over 67 percent of this acreage unreclaimed. In West Virginia, the situation is better but not free from problems. Bond forfeiture proceedings in West Virginia involve 6,713 acres, with unreclaimed acreage totaling 28 percent. GAO documented numerous examples of environmental degradation at the forfeiture sites it visited in both states.

Bond Adequacy

The state bonds covering the interim program bond forfeiture acres have not been adequate to cover the costs of reclamation in either Pennsylvania or West Virginia. Specifically, the Pennsylvania bonds have equaled about 12 percent of the cost of reclamation. In West Virginia, the percentage has equaled about 46 percent. Both states have used moneys from their OSMRE-approved permanent program supplemental funds to reclaim some of these acres. However, Pennsylvania expects a shortfall of \$97 million in funding needed to reclaim the remaining

interim program bond forfeiture acres. West Virginia expects a shortfall of \$3.2 million.

It is uncertain in both states whether OSMRE-approved bonding systems are adequate to reclaim all future permanent program bond forfeiture sites. Although OSMRE approved the Pennsylvania and West Virginia alternative bonding systems, these systems were not assessed to assure funding adequacy for reclamation of potential bond forfeiture sites. No formal criteria presently exist for assessing their adequacy.

OSMRE oversight reviews have not assessed the impact of using reclamation funds for program administration on either state's ability to reclaim its bond forfeiture lands. In Pennsylvania, program administration costs accounted for 60 percent of the \$10 million in reclamation program expenditures between July 30, 1982, and December 31, 1985. In West Virginia, administrative costs totaled about 12 percent of reclamation program expenditures between January 1, 1982, and December 31, 1985. The extent to which these expenditures have affected bonding system adequacy is unknown.

Recommendations

In order to assure that adequate funds are available to reclaim forfeited mine sites, the Secretary of the Interior should require the Director, OSMRE, to

- take the lead in examining the interim program funding problem and report to the Congress its recommendations for assuring the reclamation of these lands and
- develop formal criteria for evaluating the adequacy of alternative bonding systems and determine the adequacy of existing alternative bonding systems, including the impact that expenditures for program administration have on the ability of the states to reclaim abandoned lands. (See p. 54.)

GAO is also making recommendations for improving state reclamation processes. (See p. 37.)

Agency Comments

GAO discussed its findings with responsible program officials and has included their comments where appropriate. However, as requested by the Chairman, GAO did not obtain official agency comments on a draft of this report.

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Abbreviations

DER	Pennsylvania Department of Environmental Resources
DOE	West Virginia Department of Energy
EHB	Pennsylvania Environmental Hearing Board
GAO	General Accounting Office
OSMRE	Office of Surface Mining Reclamation and Enforcement
SCS	Soil Conservation Service
SMCRA	Surface Mining Control and Reclamation Act of 1977

Introduction

Coal mining, if done improperly, can result in damage to the environment, including soil erosion and water pollution, as well as permanent loss of productive land. A number of coal producing states enacted legislation in the late 1930's to control these effects, but these laws allowed varying degrees of protection. For this reason, Congress enacted the Surface Mining Control and Reclamation Act (SMCRA) (30 U.S.C. 1201 et. seq.) on August 3, 1977. SMCRA prescribes uniform, minimum environmental protection standards and requires concurrent land reclamation to control the surface effects of both underground and surface mining operations. It further requires that mine operators post bonds to assure that funds will be available to satisfactorily complete all reclamation required by the act if the operator is not willing or able to do so.

Since mining takes place in 27 states under different conditions and practices, SMCRA encourages the states, rather than the federal government, to assume responsibility for regulating coal mining. SMCRA established the Office of Surface Mining Reclamation and Enforcement (OSMRE) within the Department of the Interior to oversee the development of state regulatory programs and to ensure compliance with the act. From fiscal year 1978 through fiscal year 1985, OSMRE's operating budget expenditures have totaled about \$530 million. These expenditures include federal grants provided to states with approved programs.

State Responsibility to Regulate Coal Mining

SMCRA specified that, because of the diversity in terrain, climate, and other physical conditions, the primary regulatory responsibility for surface mining and reclamation should rest with the states. If a state wanted exclusive jurisdiction over the regulation of surface coal mining and reclamation operations, the act required it to submit a plan for a permanent program to the Secretary of the Interior, demonstrating that the state could carry out the provisions of the act. Once OSMRE approved a state's program, its role became one of oversight. In the event that a state did not want exclusive jurisdiction over regulation of its surface coal mining operations, or if a state failed to submit an acceptable state program, OSMRE became the regulatory authority.

The period of time during which the states prepared and submitted their plans to OSMRE for approval is called the interim program period. The period after the states obtained OSMRE approval to regulate coal mining within their boundaries is called the permanent or primacy program period.

As of August 1986, 24 of the 27 coal mining states, including Pennsylvania and West Virginia, had primary responsibility to regulate coal mining on all state and private lands within their borders. Pennsylvania obtained primacy on July 31, 1982, and West Virginia obtained primacy on January 21, 1981. According to OSMRE, these "primacy states" have each enacted laws consistent with SMCRA and have developed regulatory programs approved by the Secretary of the Interior. In the three remaining states OSMRE is the regulatory authority and is responsible for implementing the permanent program provisions of SMCRA.

Reclamation Requirements

During the interim period, all permitted mine operations were required to comply with the initial regulatory reclamation standards outlined in SMCRA (Title V, Sec. 502). Although this section contained numerous reclamation standards, the requirements were less stringent than those for the permanent program. For example, mine operators were required to backfill, regrade, and revegetate the land after operations ceased but they were not required to stabilize and protect the surface area affected by the mining operations in order to control erosion and air and water pollution.

The SMCRA permanent program requirements for reclamation (Title V, Sec. 515), in contrast, are lengthy and exact. Key requirements include (1) separating soil layers and preserving and replacing topsoil, (2) reclaiming as concurrently as practicable with active strip-mining, (3) minimizing disturbance to water quality and quantity, (4) establishing a permanent vegetative cover at least equal to the natural vegetation of the area, and (5) restoring the land, at a minimum, to a condition capable of supporting the uses that it was capable of supporting before mining.

Bonding Requirements

During the interim period, there were no federal bonding requirements. Bonding requirements, if any, were controlled by existing state laws. For example, in Pennsylvania, bonds during the interim period were a flat rate per acre, ranging from \$1,000 per acre in 1977 up to \$4,000 an acre in 1981. Then, beginning in 1981, the state required the mine operator to pay a \$50 per acre permit fee in addition to the bond and reduced the bond rate to a minimum of \$3,000 per acre. Bond amounts in West Virginia during the interim period, according to state regulatory authority officials, were \$1,000 per acre, with an additional requirement of a \$60 per acre permit fee.

Under the permanent regulatory program, SMCRA requires each coal mine operator to file a reclamation bond with the regulatory authority before the operator is issued a permit to conduct coal mining. Each primacy state is authorized to establish its own bonding requirements. However, SMCRA requires that the bond amount be sufficient to assure the completion of the reclamation plan if the regulatory authority had to do the work, and in no case should the total bond under one permit be less than \$10,000. SMCRA also permits the regulatory authority to adopt an alternative bonding system as long as the objectives and purpose of the bonding program are met—that is, sufficient funds to assure the completion of reclamation. At the time of our review, 6 of the 24 primacy states, including Pennsylvania and West Virginia, had adopted an alternative bonding system.¹ (The remaining states use flat rate per acre bonding requirements.) The moneys that make up the alternative systems come from various sources and vary by state. For example, in Pennsylvania each operator is required to post a minimum \$3,000 per acre bond plus a \$50 per acre permit fee. The forfeited bond amount can only be used to reclaim the site on which the bond is forfeited. The permit fee money may be used to supplement the cost of reclamation on any bond forfeiture site in the state for which the bond is not sufficient.

According to OSMRE officials, alternative bonding systems allow more flexibility than systems which rely solely on flat dollar amount per acre bonds and, in general, reduce the financial burden on individual operators. Under alternative bonding systems, operators “pool” their resources as opposed to bearing the entire responsibility individually.

If an operator falls behind in reclamation and fails to take action to correct the situation, the regulatory authority can require bond forfeiture. The forfeited bond money, once collected, is to be used by the regulatory authority to complete reclamation at the site.

Bond Release Requirements

Because there were no federal bonding requirements during the interim period, the bond release procedures, like the bonding requirements, were controlled by state law. In both Pennsylvania and West Virginia, the operator could request a bond release from the state inspector, and, if the state regulatory authority deemed the reclamation adequate, a release was granted. During the period, two phases of release applied in both states—a grade release which required that a mine site be back-filled and regraded and a final release which involved a 2-year liability

¹These are Indiana, Missouri, Ohio, Pennsylvania, Virginia, and West Virginia.

period during which adequate vegetation was to be established. Public notification was not a requirement in either state.

In contrast, under the permanent regulatory programs, SMCRA establishes a schedule for releasing portions of the bond based on the phase of reclamation accomplished. Specifically, bond releases are subject to the following phases:

- Release of up to 60 percent of the total bond amount upon completion of backfilling, regrading, and drainage control on an increment or permit area. (Phase I)
- Release of an additional amount of the total bond upon revegetation of an increment or permit area. The regulatory authority must retain an amount sufficient to cover the costs of reestablishing vegetation if needed. (Phase II)
- Release of the remaining portion of the total bond on the increment or permit area after all of the reclamation standards are satisfied. (Phase III)

To obtain a bond release, regardless of the phase, certain procedures must be followed. First, the operator must file an application for the release with the regulatory authority. As part of this application, the operator must provide proof that the public was notified about the proposed bond release. Public notification includes advertisement of the bond release request in a newspaper with general circulation in the locality in which the coal mining and reclamation operation took place and letters to adjoining land owners and local governmental bodies.

The regulatory authority is then required to conduct an inspection and evaluation of the reclamation work. Interested parties may participate with the regulatory authority in making the bond release inspection. The regulatory authority may also hold an informal or formal hearing in response to written objections to the proposed bond release. Any person or governmental agency which might be adversely affected by the release of the bond has the right to file written objections to the proposed release with the regulatory authority. Each release is subject to state regulatory authority approval.

OSMRE Responsibilities Under SMCRA

OSMRE's role during the interim period is outlined in SMCRA. First, it was responsible for helping states develop their permanent regulatory programs and, once developed, to review and approve or disapprove these programs. OSMRE was also responsible for implementing a federal enforcement program to assure that each surface coal mining operation was conducted in accordance with the initial regulatory reclamation standards outlined in Section 502, Title V of SMCRA. Specifically, SMCRA required OSMRE to inspect surface coal mine sites at least once every 6 months and order any necessary enforcement action to correct violations identified at the inspections. For example, two of the enforcement tools available to OSMRE included (1) ordering a cessation of coal mining and reclamation operations and (2) the suspension or revocation of the mine permit. This enforcement program remained in effect until the states received OSMRE approval of their permanent regulatory programs.

Under the permanent regulatory programs, OSMRE conducts reviews to verify that the state programs approved under the act are being implemented. To carry out this responsibility OSMRE issued Plans and Procedures for the Evaluation of the States' Permanent Programs on March 5, 1982, that described the review process for approved state regulatory programs. To evaluate state compliance—commonly termed “oversight”—OSMRE relies on inspections, program data furnished by the state, data from other sources (individuals, citizen groups, industry), and annual reviews. In addition to an annual report to the Congress on the implementation of the act, OSMRE field offices prepare annual oversight reports on each of the 24 primacy states. OSMRE then submits these reports to interested congressional committees. The first OSMRE field office annual reports were issued between June and October 1983.

Through its 13 field offices, OSMRE is responsible for (1) oversight of state regulatory programs (i.e., permitting, bonding, inspections, enforcement, and penalty assessment); (2) developing annual oversight reports summarizing the states' performance; and (3) submitting the reports to the Director, OSMRE. OSMRE's Denver and Pittsburgh Technical Centers assist the field offices by performing permit and bond oversight reviews in a state and reporting the results to the OSMRE field office director.

Objectives, Scope, and Methodology

On August 10, 1984, the Chairman, Subcommittee on Environment, Energy, and Natural Resources, House Committee on Government Operations, requested that we review the reclamation of strip-mined land in Oklahoma and other selected states. On August 8, 1985, we issued a

report addressing the Oklahoma bonding system.² As agreed with the Chairman's office, we selected West Virginia and Pennsylvania for the subsequent review. We selected these states because they have numerous bond forfeiture sites and also provide coverage of two large coal producing states, ranking third and fourth, respectively, in coal production during 1984. West Virginia had about 664 mines producing over 130 million tons of coal and Pennsylvania produced about 77 million tons of coal at its 504 operating mines during 1984. On June 26, 1986, we testified before the Subcommittee and presented our observations on the bonding systems used for funding the reclamation of strip-mined land in Pennsylvania and West Virginia. This report concludes our work in these two states.

In conducting this review, we agreed to focus on the following questions:

- Have bond forfeiture lands been reclaimed and what is being done to assure reclamation after bond forfeiture? (See chapter 2.)
- Are bond amounts adequate to assure reclamation? (See chapter 3.)
- Are bond releases proper and appropriate? (See chapter 4.)

At the request of the Chairman's office, we also gathered information on measures to prevent future reclamation problems and on the reclamation of mined prime farmland in the two states (See app. I.).

To gain an overall understanding of the bonding and reclamation issues, we reviewed relevant federal and state laws and regulations. In addition, we interviewed OSMRE officials at the locations shown in table 1.1.

Table 1.1: OSMRE Offices Included in Our Review

OSMRE office	Location
Headquarters	Washington, D.C.
Harrisburg Field Office	Pennsylvania
Wilkes-Barre Area Office	Pennsylvania
Johnstown Area Office	Pennsylvania
Charleston Field Office	West Virginia
Morgantown Area Office	West Virginia

We also interviewed responsible officials from the state regulatory authorities—the Pennsylvania Department of Environmental Resources (DER) and the West Virginia Department of Energy (DOE). Further, we

²Surface Coal Mining Operations in Two Oklahoma Counties Raise Questions About Prime Farmland Reclamation and Bond Adequacy, (GAO/RCED-85-47, August 8, 1985).

interviewed responsible officials from the Department of the Interior's Solicitor's Office.

To address the issues of reclamation after bond forfeiture and the adequacy of bonds to assure reclamation in each state, we concentrated on the states' processes for reclaiming bond forfeiture sites and on the ability of each state's supplemental reclamation fund to cover the reclamation costs incurred by the state. Using state records and files, we developed a statewide bond forfeiture data base for each state that contains bond forfeiture information from August 3, 1977—the date of SMCRA's passage—through December 31, 1985. From this information, we analyzed the extent of each state's progress toward reclaiming the bond forfeiture sites. For each state, we also analyzed the reclamation fund receipts and expenditures. To assess the environmental damage caused by unreclaimed lands, we visited 15 sites in Pennsylvania and 9 sites in West Virginia on which the bonds had been forfeited (i.e. bond forfeiture sites). In making this selection, we picked sites that were in various stages of the reclamation process after bond forfeiture. We were accompanied by an OSMRE inspector(s) at each site.

To determine whether bond releases were made in accordance with SMCRA requirements, we reviewed case files of randomly selected bond releases made from January 1, 1984, through September 30, 1985, at two district offices in Pennsylvania—Greensburg and Pottsville—and at the district office in Philippi, West Virginia. We selected these offices because they provide a representative picture of bond release activities in each state. In total, we reviewed 337 out of 601 bond release application case files in Pennsylvania covering 222 bond releases. In addition, we reviewed 74 out of 325 bond release case files in West Virginia. Our samples were designed to yield a sampling error of no more than 7 percent at a 95 percent confidence level. In addition, we visited 15 bond release sites (8 in Pennsylvania and 7 in West Virginia) with OSMRE inspectors to determine if the release by the state regulatory authority was properly made. We selected the sites from our random case file review sample with emphasis on getting a mix of different phased releases. We also gave consideration to the release sites' proximity to the bond forfeiture sites we visited.

To develop the issue of measures taken to prevent future reclamation problems, we interviewed OSMRE and state regulatory authority officials and reviewed internal state and OSMRE records and documents.

To address the prime farmland issue, we interviewed the U.S. Department of Agriculture's Soil Conservation Service Conservationist for each state. We also obtained statistics from the conservationists showing prime farmland acreage by county relative to total county acreage and obtained maps showing the location of coal seams and prime farmland in the state. Finally, we discussed the extent of prime farmland coal mining with OSMRE and state regulatory authority officials.

We made our review from June 1985 through June 1986. We discussed the information we obtained during this review with OSMRE and state regulatory authority officials in Pennsylvania and West Virginia. However, in accordance with the requester's wishes, we did not obtain official agency comments on a draft of this report. With these exceptions, we performed our work in accordance with generally accepted government auditing standards.

Unreclaimed Lands Exist in Pennsylvania and West Virginia

One of the purposes of the Surface Mining Control and Reclamation Act of 1977 is to assure reclamation of mined coal lands. Without reclamation, environmental damage such as soil erosion, water pollution, inadequate water and sediment controls, hazards to public health and safety, and reduced property values result. In Pennsylvania, over 67 percent of the 22,450 acres forfeited since SMCRA have not been reclaimed. West Virginia also has unreclaimed lands—28 percent of the 6,713 acres involved in bond forfeiture proceedings since SMCRA have not been reclaimed. Most of the unreclaimed land in both states was mined under the provisions of each state's interim program.

The land remains unreclaimed, in part, because of a lengthy reclamation process, particularly in Pennsylvania. The average time from bond forfeiture to completed reclamation has averaged 4 years in Pennsylvania and about 2 years in West Virginia. West Virginia has been able to reclaim its bond forfeiture sites in half the time that it has taken Pennsylvania mainly because of differences in the states' reclamation processes.

Pennsylvania and West Virginia Bond Forfeiture Processes

OSMRE regulations implementing SMCRA require the regulatory authority to forfeit the bonds on a permit area if the mine operator refuses to or is unable to conduct reclamation according to the approved reclamation plan. Following bond forfeiture, the regulatory authority is to use the funds, once collected, to complete reclamation. The process for achieving reclamation after bond forfeiture may vary as long as the objectives of SMCRA are met—that is, reclamation must be achieved and procedures for achieving reclamation must be no less stringent than the requirements of SMCRA. Pennsylvania and West Virginia do not use the same process for achieving reclamation of bond forfeiture sites. Neither state's process was reviewed by OSMRE before it approved each state's permanent program.

In Pennsylvania, if a surface mining operation is inactive and reclamation has not been conducted according to the approved reclamation plan, there are a number of steps that state inspectors must take in the field. Generally, the bond forfeiture process includes a warning to the operator to remedy the situation, a notice of intent to declare the bond forfeited if the operator does not respond to the warning, bond forfeiture, an opportunity for the operator to appeal the bond forfeiture action, bond collection, and site inventory, design, and eventual reclamation. During this process there are a number of state government units responsible for assuring reclamation of bond forfeiture lands. These

units, their responsibilities, and a more detailed description of the bond forfeiture process in Pennsylvania can be found in appendix II.

In West Virginia, once an inspector documents a pattern of violations at a coal mining site, a series of steps are also followed, leading to bond forfeiture. These steps include a "show cause" letter which is sent to the operator, giving him an opportunity to show why his permit should not be revoked; bond forfeiture if the operator does not adequately "show cause"; bond collection; and, finally, site reclamation in accordance with the original reclamation plan. A more detailed description of this bond forfeiture process can be found in appendix III.

Over 15,000
Unreclaimed Acres
Exist in Pennsylvania

Since SMCRA was passed, the bonds on 22,450 acres—22,381 from the interim period—have been forfeited in Pennsylvania and over 67 percent (15,134 acres) of the total acreage has not been reclaimed or has not been awarded a contract for reclamation. As illustrated in table 2.1

Table 2.1: Status of Pennsylvania Acreage Involved in Bond Forfeiture Proceedings as of December 31, 1985

Year of forfeiture	Reclaimed by state	Reclaimed by surety	No reclamation action taken	Other ^b	Total
1977 ^a	10	20	•	•	30
1978	143	161	1,108	572	1,984
1979	319	211	413	843	1,786
1980	544	349	742	1,682	3,317
1981	91	180	489	911	1,671
1982	100	50	1,225	128	1,503
1983	91	68	1,116	80	1,355
1984	•	•	5,182	387	5,569
1985	•	10	4,859	366	5,235
Total	1,298	1,049	15,134	4,969	22,450

^aFrom August 3, 1977—passage of SMCRA—through December 31, 1977.

^bIncludes acreage that has either been permitted for remining or the state regulatory authority has reached an agreement with the mine operator to reclaim the land. This category also includes acreage on which the reclamation project is currently being designed by the regulatory authority.

only 1,298 acres or less than 6 percent of the 22,450 acres involved in forfeiture proceedings have been or are in the process of being reclaimed by the state regulatory authority. Surety companies have reclaimed another 1,049 acres.¹ All of the reclaimed land is from the interim program.

Several Factors Account for the Number of Unreclaimed Acres

A number of factors account for unreclaimed bond forfeiture sites in Pennsylvania. These include the time involved in resolving bond forfeiture appeals, collecting the bonds, and performing the reclamation once the bonds are collected.

Perhaps the major factor is that the bond forfeiture actions on 14,838 acres, or over 66 percent of the acres involved in bond forfeiture proceedings, have been appealed to the Environmental Hearing Board (EHB) by either the surety companies or operators. As of December 31, 1985, an EHB ruling had been made on only 6,352 acres, and, in each case, the Board ruled in favor of the state regulatory authority. The other 8,486 acres remain under appeal, and some cases have not been scheduled to be heard even though some were appealed as far back as 1984. State regulatory authority officials told us that the reason for this backlog is because the EHB contains only 3 members and the volume of appeals is too great to be handled by such a small staff. Because of this backlog, the average amount of time from bond forfeiture to an EHB ruling has been over 16 months.

The state regulatory authority sees the high rate of appeals to the EHB as a delaying tactic used by the issuer of the bonds to collect several years of additional interest. The regulatory authority is considering holding the bond money in escrow pending the EHB ruling, but state regulatory authority officials told us that surety companies have indicated an unwillingness to bond coal companies if this practice is instituted.

Collecting the bond is another factor which has added time to the reclamation process. The average amount of time to collect a bond for both appealed and non-appealed cases has been 8 months, ranging from 2 weeks to 4 or more years. In Pennsylvania, of the 15,134 unreclaimed acres, bonds have been collected for only 4,884 of them. The reason that most of the bonds have not been collected is because the bond forfeiture

¹Rather than giving the bond forfeiture money to the regulatory authority, the surety company holding the bond has the option of reclaiming the site. Generally, according to state officials, this is done only if the surety believes that it can reclaim the site for an amount less than the bond amount.

action on them, as noted above, is still under appeal to the EHB. However, the bonds (totaling \$1.7 million) on 1,915 abandoned acres have not been collected either because (1) the surety company is involved in bankruptcy, or (2) because of administrative impediments, the state regulatory authority failed to complete collection action. For example, we identified 13 cases where the EHB made a favorable ruling for the state, but the state regulatory authority unit in charge of bond collection was never notified of the Board's ruling. When asked about this administrative oversight, state regulatory authority officials indicated that it is the responsibility of the state regulatory authority attorney assigned to each case to notify the Bureau of Mining and Reclamation about the Board's decision. In these 13 cases, this was not done. State regulatory authority officials acknowledged that administrative oversight of this nature is always a possibility when so many organizational units are involved.

Performing actual reclamation after the bonds are collected also adds time to the overall reclamation process. For the 733 acres on which the state regulatory authority has completed reclamation, it took an average of 41 months to reclaim the land after the bonds were collected—30 months to complete the inventory, design, and contract award steps after bond collection, and an additional 11 months to complete reclamation.

Overall, it took an average of about 4 years to complete reclamation after bond forfeiture. However, this figure does not fully reflect the impact of the 16 months required for the EHB appeal because about 94 percent of the reclaimed lands were not appealed.

Environmental Damage Is a Consequence of the Unreclaimed Coal Mined Land

In Title I of SM CRA, Congress pointed out that

"Many surface mining operations result in disturbances of surface areas that burden and adversely affect commerce and the public welfare...by causing erosion and landslides, . . . by polluting the water, by destroying fish and wildlife habitats, . . . by creating hazards dangerous to life and property by degrading the quality of life in local communities"

To prevent permanent degradation of the environment, Congress included as one of the purposes of SM CRA the establishment of a nationwide program to protect society and the environment from the adverse effects of surface coal mining operations.

Environmental degradation, however, continues to be a problem. The OSMRE inspectors who accompanied us noted numerous examples of environmental degradation at the 13 bond forfeiture sites that we visited in Pennsylvania that had not been reclaimed or were not being reclaimed.² The 13 sites account for 388 of the 15,134 acres on which the reclamation process has not begun. Soil erosion, water pollution, hazards to public health and safety, and reduction in property values are some of the problems noted.

Specifically, table 2.2 shows that of the 13 sites, the OSMRE inspectors noted soil erosion on 11 of them. Similarly, water pollution and/or inadequate sediment controls were noted on 9 of the sites. Hazards to public health and safety were noted on 6 sites, and reduced property value was noted on 11 of them.

Table 2.2: Environmental Problems Noted on the Unreclaimed Pennsylvania Bond Forfeiture Sites Visited

Location of mine site by county	Environmental problems			
	Soil erosion	Water pollution and/or inadequate sediment controls	Hazards to public health and safety	Reduction in property value
1. Armstrong ^a	X		X	X
2. Armstrong	X	X	X	X
3. Armstrong	X	X	X	X
4. Fayette	X	X	X	
5. Fayette	X	X		
6. Fayette	X	X	X	X
7. Luzerne				X
8. Northumberland	X	X		X
9. Schuylkill	X			X
10. Schuylkill ^b	X			X
11. Schuylkill	X	X		X
12. Westmoreland	X	X	X	X
13. Westmoreland		X		X

^aSite has been partially reclaimed by the regulatory authority; environmental assessment pertains to unreclaimed acreage.

^bSite was a mixture of Title IV and Title V permitted land. Environmental assessment pertains to Title V portion only.

²Although we made 15 site visits, we found that one site had been reclaimed and one was being reclaimed by another coal company. State records showed that these sites had the bonds forfeited with no reclamation.

Figures 2.1 and 2.2 further illustrate the environmental damage resulting from unreclaimed sites in Pennsylvania. The OSMRE inspector(s) accompanying us ranked both of these sites as extremely hazardous. The bond on the site illustrated in figure 2.1 was forfeited in 1981. The bond, totaling \$14,900, was collected in 1981, but reclamation has not begun. According to a state regulatory authority official, this site is scheduled to be designed and hopefully reclaimed sometime during fiscal year 1987—6 years after forfeiture. Reclamation has not been scheduled earlier, the official stated, because of limited permanent program funds to supplement the bond amount. Environmental problems noted by the OSMRE inspector on this site include soil erosion, inadequate sediment controls, hazards to public health and safety, and reduced property value. This site is particularly dangerous because of its close proximity to private residences. Similarly, the bond on the site illustrated in figure 2.2 was forfeited in 1980, and the bond, totaling \$17,284, was collected in 1981. According to a state regulatory authority official, reclamation has not begun on this site because the state regulatory authority is awaiting the results of litigation regarding the landowner's liability to reclaim the site. Environmental problems noted by the inspector include soil erosion, water pollution, hazards to public health and safety, and reduced property value. Also, virtually no topsoil currently exists. Consequently, even if reclaimed, the inspector said that the land would be barren.

**Chapter 2
Unreclaimed Lands Exist in Pennsylvania and
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Figure 2.1: Interim Program Abandoned Site in Fayette County, Pennsylvania , With Environmental Hazards in Close Proximity to Private Residence



Figure 2.2: Interim Program Abandoned Site in Westmoreland County, Pennsylvania, With Water Pollution Problems in Close Proximity to Private Residences



Lower Priority Sites Have Been Reclaimed Before Higher Priority Sites

As illustrated and described above, the extent of environmental degradation at a site may vary. Some may present a significant and continuing hazard to human life; others may be “eyesores” but not necessarily dangerous. In an effort to assure reclamation of the most dangerous sites, Pennsylvania’s reclamation process requires that each site be ranked in order of reclamation priority based on the extent of risk to public health and safety. We found, however, that the state regulatory authority has been reclaiming lower priority sites before reclaiming all of the high-priority sites.

The ranking system used by the state regulatory authority to determine reclamation priority is as follows:

- **Priority 1**—Sites which present a significant and continuing hazard to human life by either their proximity to or impact on the human population.
- **Priority 2**—Sites which present a significant threat to health or safety including actual or threatened loss of public or private water supplies.
- **Priority 3**—Sites which present a risk of damage to public or private property.
- **Priority 4**—Sites which are causing environmental degradation or pollution affecting the productive use of public or private land, or the reclamation of which would create significant environmental benefits.
- **Priority 5**—Other sites which need reclamation.

The high-priority sites in categories 1 and 2 are supposed to be reclaimed before the lower priority sites in categories 3, 4, and 5. However, table 2.3 shows that over 1,800 acres labeled as priority 1 or 2 remain unreclaimed, while the state regulatory authority has reclaimed about 400 low-priority acres. A state regulatory authority official acknowledged that this occurred in earlier years because reclamation was controlled more by citizen complaints and political pressure than by environmental damage. This official stated that the current policy is to concentrate on high-priority sites. Our analysis of the 429 acres reclaimed by the state regulatory authority during 1984 and 1985 lends support to the state regulatory authority official's contention that the current policy is to concentrate on high-priority sites. Specifically, over 76% (327 acres) of the 429 acres reclaimed during these two years by the state were categorized as high-priority sites.

Table 2.3: Reclamation Status of High-Priority Acres in Pennsylvania as of December 31, 1985

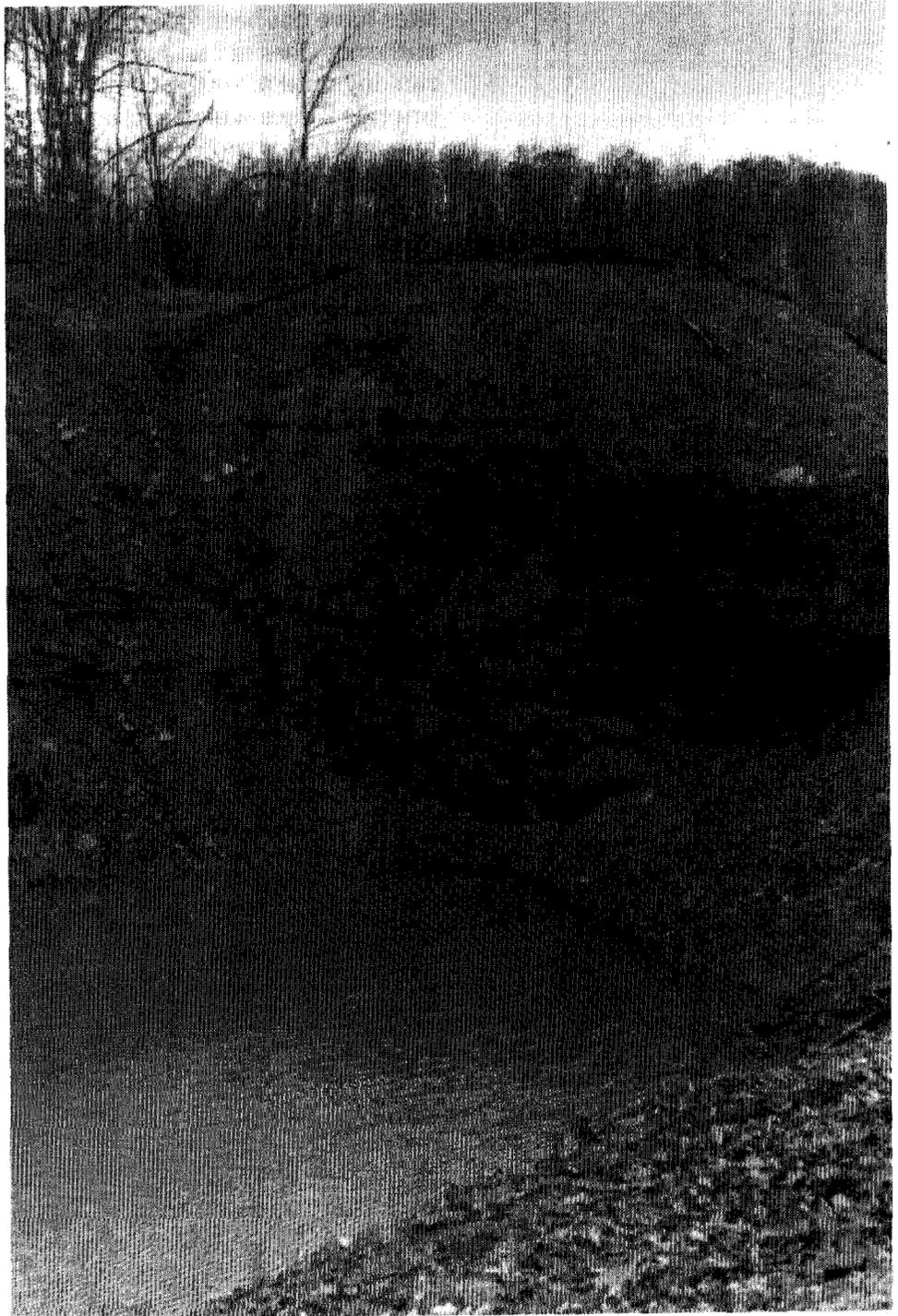
Site priority	Reclaimed acres	Unreclaimed acres
1	320	764
2	514	1,079
3	154	191
4	157	442
5	117	416
No priority ^a	36	12,242
Total	1,298	15,134

^aAcres not evaluated to assign a priority.

Of perhaps even greater importance is the fact that of the 15,134 unreclaimed acres, over 80 percent, or 12,242 acres, have not been assigned a priority ranking by the state regulatory authority even though the majority of these sites were forfeited before 1985. These

sites have not been assigned a priority ranking because the regulatory authority does not assess the risk of environmental damage and assign a ranking until after the bond is collected. This means that priority 1 and priority 2 sites which present a "significant and continuing hazard to human life" or those which present a "significant threat to health or safety" may lay unreclaimed for several years. Figure 2.3 is an example of a site which, according to the OSMRE inspector accompanying us, should be a priority 1 site but has not been ranked by the state regulatory authority because the bond has not been collected. The OSMRE inspector labeled this site as a priority 1 because it is unrestricted from public access, including children. The bond on this site was forfeited in 1981.

Figure 2.3: Interim Program Abandoned Site in Armstrong County, Pennsylvania, With Exposed Water-Filled Pit Unrestricted From Public Access



SMCRA emphasizes the importance of reclaiming abandoned mined lands to prevent health and safety risks. State regulatory authority officials agree that waiting over 2 years after bond collection to assess environmental damage at a site and award the contract does not result in timely reclamation. Yet, they also maintain that making an environmental damage assessment before bond collection is not practical since the bond money is needed to help pay for reclamation costs.

Pennsylvania Has Taken Some Actions to Address Current and Future Reclamation Problems

Pennsylvania has taken a number of actions to help address current and future reclamation problems on bond forfeiture sites. First, in 1984 the state passed a law to assist in reclamation efforts. This law encourages mine operators to remine and reclaim areas by reducing their liability for cleaning up previously existing acid mine drainage. This legislation is significant because, before its passage, operators who wanted to remine a bond forfeiture site were required to reclaim the mine site and assure that all preexisting acid mine drainage was eliminated and water quality restored. Treatment of acid mine drainage can be expensive and perpetual—a possible deterrent to remining and reclamation by another operator. This law allows the operator to remine an area as long as he improves the water quality, but it does not hold the operator responsible for eliminating acid mine drainage which existed before the area was remined. The law was passed in 1984.

In addition, a state regulatory authority official told us in August 1986 that the EHB is in the process of contracting out for another hearing examiner. The hearing examiner will handle the backlog of unresolved bond forfeiture appeals.

The state has also increased its mine site inspection and enforcement staff. For instance, in one district office that we visited there were eight mine inspectors in 1980. Now, according to a state regulatory authority official, there are 12 inspectors and 11 mining specialists inspecting mines. The state had 138 inspectors as of April 1986, an increase of 74 from 1977 and 35 from 1982.

The increased inspection activity should help Pennsylvania ensure that mining and reclamation are conducted concurrently. OSMRE and state regulatory authority officials agreed that this aspect of the state's approved program is the key to prompt and less costly reclamation. Specifically, SMCRA requires the regulatory authority to conduct unscheduled inspections, averaging at least one partial inspection per month and one complete inspection per calendar quarter for the surface

coal mining and reclamation operation covered by each permit. If the inspector notices a violation of the approved permit, the state regulations require the inspector to take whatever steps are necessary to abate the problem, such as ordering the operator to cease operations. State regulatory authority officials acknowledge that unless inspectors cite reclamation plan violations as they occur and order operators to cease operations immediately if the violations are not corrected, future reclamation problems could occur. Their job, they agree, is to ensure that the operator does not get so far ahead of the approved reclamation plan that the bond becomes inadequate to do the reclamation in the event of forfeiture. Our on-going review of OSMRE's inspection and enforcement program will provide a more in-depth look at this aspect of SMCRA. Results of this review are expected before the end of 1986.

Reclamation of Bond Forfeiture Land in West Virginia Is Not Complete

Since SMCRA was passed, the bonds on 6,713 acres—5,776 from the interim period—have been forfeited in West Virginia. Over 72 percent, or 4,849, of the 6,713 acres have been reclaimed or have been awarded contracts for reclamation. Table 2.4 shows the status of the acreage involved in bond forfeiture proceedings and illustrates that, of the total acreage, 1,789 acres have not begun the reclamation process. Furthermore, of the state reclaimed acreage, 354 acres are from permanent program bond forfeiture sites. The remaining acres are from interim program bond forfeiture sites.

Table 2.4: Status of West Virginia Acreage Involved in Bond Forfeiture Proceedings as of December 31, 1985

Year of forfeiture	Reclaimed by state	Reclaimed by surety	No reclamation action taken	Other ^a	Total
1977	70	3	•	•	73
1978	35	27	•	•	62
1979	482	127	326	4	939
1980	183	213	96	•	492
1981	594	339	27	60	1,020
1982	476	284	433	•	1,193
1983	328	31	87	•	446
1984	701	•	123	8	832
1985	62	894	697	3	1,656
Total	2,931	1,918	1,789	75	6,713

^aIncludes acreage that has either been re-permitted or the state regulatory authority has reached an agreement with the mine operator to reclaim the land.

Reclamation Process Has Been More Timely Than in Pennsylvania

In general, the reclamation process after bond forfeiture in West Virginia has been more timely than in Pennsylvania. The state has been able to complete reclamation projects in less than 2 years on the average, compared with 4 years in Pennsylvania.³

One reason that accounts for the shorter reclamation time in West Virginia has been the low rate of bond forfeiture appeals in the state. Unlike Pennsylvania, where bond forfeiture actions on over 66 percent of the acres have been appealed, about 4 percent have been appealed in West Virginia. West Virginia state regulatory authority officials believe that the low percent of appeals is due to the fact that surety companies in West Virginia are not permitted to appeal the state's bond forfeiture actions. Only mine operators can file an appeal, but they seldom do so. Once an action is appealed, it has taken on the average about 11 months for the West Virginia Board of Review to reach a decision. Because the volume of appeals is lower in West Virginia, the Board of Review has been able to hear and rule on appeal cases more rapidly than in Pennsylvania.

The most significant difference between the Pennsylvania and West Virginia reclamation process is that West Virginia does not design its own reclamation projects before awarding the reclamation contracts—the original reclamation plan serves as the design. From bond collection to contract award in West Virginia the time averages about 8 months. In Pennsylvania, the average time between bond collection and contract award is 30 months. Following contract award, reclamation is completed on average in 5 months in West Virginia. As noted earlier, this step in Pennsylvania takes 11 months. Bond collection time of about 8 months is comparable in the two states. Appendix IV provides a comparison of the time frame differences between Pennsylvania and West Virginia for each step in the reclamation process.

Environmental Damage Is a Problem on Unreclaimed West Virginia Mine Sites

OSMRE inspectors noted numerous examples of environmental degradation at seven bond forfeiture sites that we visited in West Virginia, including soil erosion, water pollution and/or inadequate sediment controls, hazards to public health and safety, and reduction in property values.⁴

³While we compared the reclamation processes between the two states, we did not make an assessment of the quality of reclamation in either state for bond forfeiture sites.

⁴We visited nine bond forfeiture sites in total, but one of these sites was being reclaimed by the regulatory authority and another site was being remined.

Specifically, table 2.5 shows that of the seven sites, the OSMRE inspector(s) accompanying us noted soil erosion on each site, water pollution and/or inadequate sediment controls on four sites, hazards to public health and safety on three sites, and reduced property value on each site.

Table 2.5: Environmental Problems Noted on the Unreclaimed West Virginia Bond Forfeiture Sites Visited

Location of mine site by county	Environmental problems			
	Soil erosion	Water pollution and/or inadequate sediment controls	Hazards to public health and safety	Reduction in property value
1. Barbour	X			X
2. Barbour	X	X		X
3. Barbour	X			X
4. Monongalia	X	X		X
5. Marion	X	X	X	X
6. Preston	X		X	X
7. Randolph	X	X	X	X

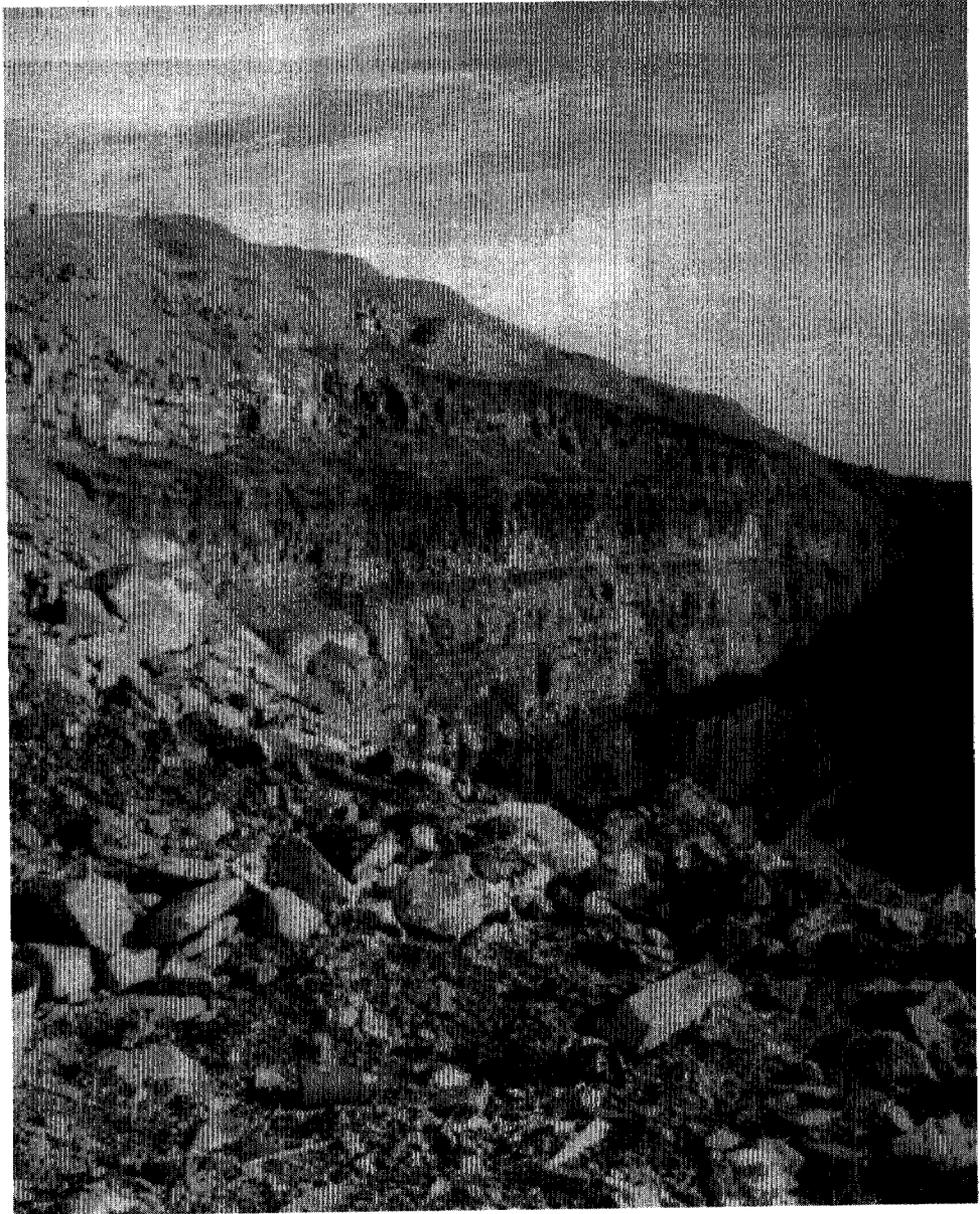
Figure 2.4 is an example of one of the bond forfeiture sites that has not been reclaimed. The major environmental problem noted by the OSMRE inspector is acid mine drainage (not shown in the picture), which had polluted a nearby stream. The bond, totaling \$18,000, has not been collected; consequently, reclamation has not been scheduled. Also, the inspector stated that, because of the close proximity of a private residence to the mine site, reclamation of this site should probably be a priority. The bond on the site was forfeited in June 1985. Figure 2.5 illustrates another hazardous site, according to the OSMRE inspector who accompanied us. The bond was forfeited in February 1985. Again, the close proximity of private residences (not shown in the picture) to the abandoned site makes it a threat to the health and safety of human life, particularly since there are no fences or barriers to restrict public access to the site.

**Chapter 2
Unreclaimed Lands Exist in Pennsylvania and
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Figure 2.4: Interim Program Abandoned Site in Marion County, West Virginia, With Environmental Hazards in Close Proximity to Private Residences



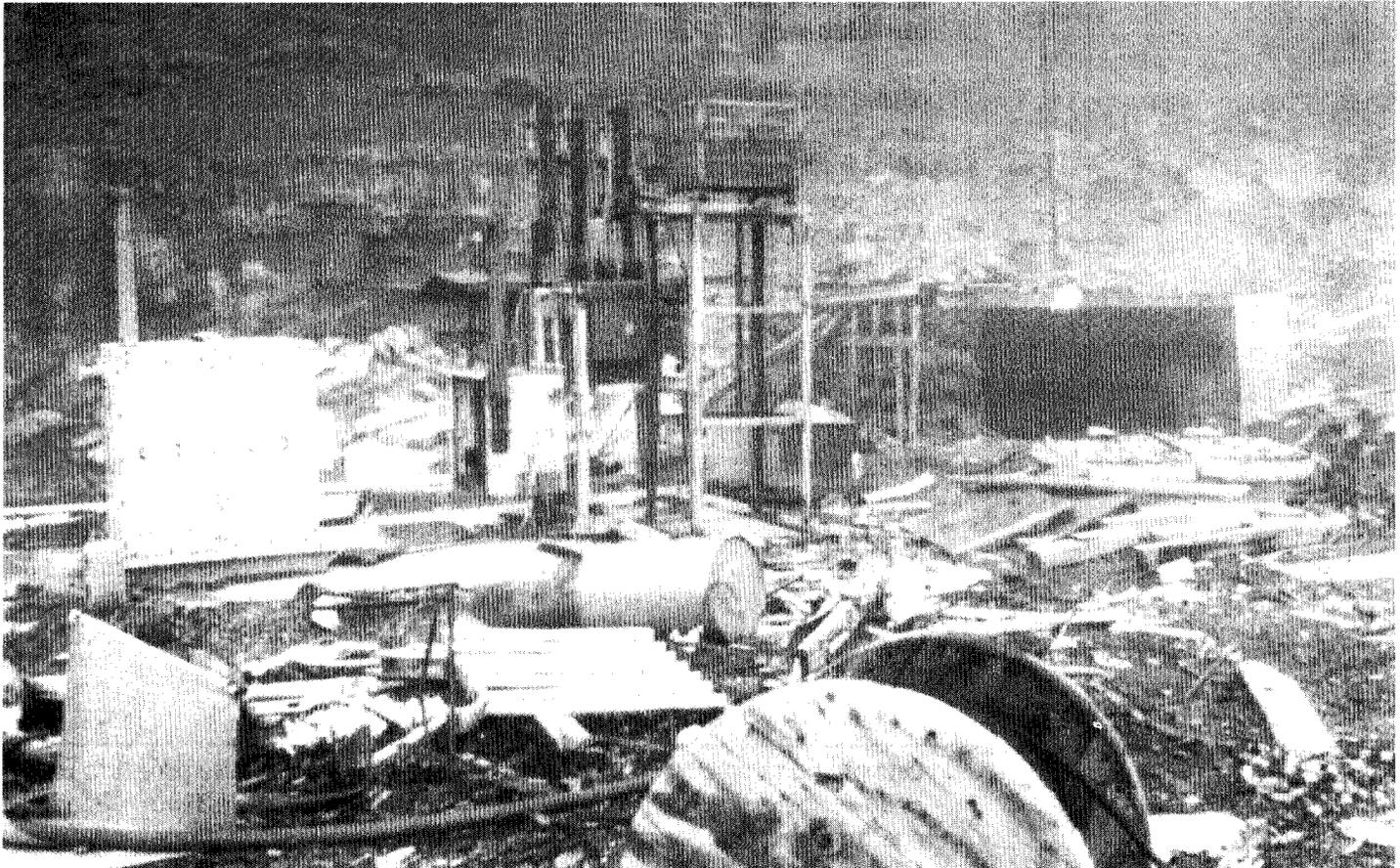
Figure 2.5: Interim Program Abandoned Site in Preston County, West Virginia, With Exposed Water-Filled Pit Unrestricted From Public Access



Unlike Pennsylvania, West Virginia regulatory authority officials told us that they do not use a priority ranking system for assessing sites according to existing environmental problems. Rather, state regulatory authority officials stated that their philosophy and policy is to reclaim

bond forfeiture sites as they occur. Like Pennsylvania, reclamation usually begins after the bond is collected but has occurred before bond collection. We identified 132 acres that were reclaimed by the state regulatory authority before the bond had been fully collected. Supplemental moneys from the reclamation fund were used to complete the reclamation. However, during our on-site visits to bond forfeiture sites, we also identified several sites on which the bonds had been collected but the reclamation had not begun. Figure 2.6 illustrates one of these sites. The bond on this site was forfeited in February 1985 and collected in March 1985. But, the state reclamation specialist advised us in September 1986 that there were no current plans to reclaim the site by the state regulatory authority.

Figure 2.6: Permanent Program Abandoned Site in Randolph County, West Virginia, With Unsealed Underground Mine Opening



Changes to the Reclamation Processes Are Not Planned

West Virginia regulatory authority officials believe that the current process for achieving reclamation of bond forfeiture lands is accomplishing its objective. Because about 72 percent of its bond forfeiture sites have been reclaimed, the state regulatory authority does not plan to make any changes to the process.

OSMRE Has Not Evaluated the State Reclamation Processes

In establishing OSMRE, Congress included as one of OSMRE's responsibilities to

"... review and approve or disapprove State programs for controlling surface coal mining operations and reclaiming abandoned mined lands; [and to] make those investigations and inspections necessary to insure compliance with this Act"

This responsibility includes assuring the timely reclamation of all coal mined land and, in particular, assuring that hazardous sites do not go unreclaimed.

OSMRE officials acknowledged that OSMRE did not analyze the processes used by Pennsylvania and West Virginia to reclaim the interim program bond forfeiture sites before it approved the states' permanent regulatory programs. Consequently, OSMRE was not aware of the length of time from bond forfeiture to reclamation in either state—over 4 years in Pennsylvania and about 2 years in West Virginia.

Only recently—in January 1986—OSMRE field office officials initiated the first study of the Pennsylvania reclamation process. This is almost 9 years after the act's passage and over 3 years since the state obtained primacy. Results of this study are expected by the end of September 1986. Similarly, while OSMRE has not previously evaluated the interim program bond forfeiture sites in West Virginia to identify reclamation problems, the Charleston Field Office initiated a study in March 1986. Results are expected by October 1986. Because OSMRE has not studied or compared and contrasted the various state reclamation processes such as Pennsylvania's and West Virginia's, it does not know whether the processes are as efficient or as effective as they could be.

Conclusions

One of the purposes of SMCRA is to establish a nationwide program to protect society and the environment from the adverse effects of surface coal mining operations. Adverse effects include, for example, soil erosion, water pollution, property damage, and hazards to life and property. Environmental degradation of this nature continues to be a

problem, particularly on abandoned unreclaimed bond forfeiture sites. In Pennsylvania, unreclaimed land exceeds 15,000 acres, and in West Virginia these lands amount to about 2,000 acres.

More importantly, in Pennsylvania the state regulatory authority does not assess the safety risk to the public or damage to the environment until after the bond is collected. Consequently, hazardous sites may lay unreclaimed for several years. West Virginia has reclaimed some hazardous sites before the bond has been collected but, like Pennsylvania, reclamation generally occurs after bond collection.

Also, West Virginia has been able to reclaim its bond forfeiture sites in half the time that it has taken Pennsylvania—2 years as compared to 4 years. The major reason accounting for this difference is two-fold: fewer bond forfeiture appeals and the fact that West Virginia does not design its own reclamation projects before awarding the reclamation contracts. Nevertheless, because OSMRE has not studied or compared and contrasted the various state reclamation processes such as Pennsylvania's and West Virginia's, it does not know whether the processes are as efficient or as effective as they could be.

If OSMRE is to fulfill its responsibility as lead federal agency for assuring the reclamation of coal mined lands, it needs to evaluate the reclamation processes currently being used by the states and determine what can be done to assure that reclamation is as timely as it can be. This means, for example, assessing the Pennsylvania reclamation process to identify ways to shorten the process and working with the state to achieve more timely reclamation. As long as the current Pennsylvania process remains intact, reclamation may continue to take over 4 years to achieve after bond forfeiture. Similarly, the West Virginia reclamation process also needs to be assessed to determine if measures are needed to streamline or expedite its process.

In addition, to protect the public and the environment, we believe that it is important for OSMRE to assure that the most hazardous sites are reclaimed before less hazardous sites. The photographs we took and the OSMRE inspector assessments made of selected bond forfeiture sites in the two states illustrate the safety and environmental problems which arise if these sites remain unreclaimed for extended periods of time.

Recommendations

In order to assure the reclamation of coal mined lands, the Secretary of the Interior should require the Director, OSMRE, to work with the states

to assure that all bond forfeiture lands are quickly assessed and the most hazardous sites are reclaimed rapidly.

Because of environmental problems which may arise if sites remain unreclaimed for extended periods of time—2 to 4 years in our review states—OSMRE should study, compare, and contrast the state reclamation processes and work with the states to implement the most efficient and effective reclamation process.

Funds for Reclaiming Mined Lands in Pennsylvania and West Virginia Have Not Been Adequate

Bonds are the primary means of assuring that money is available to reclaim lands abandoned by mine operators. The interim program bonding amounts in Pennsylvania and West Virginia, controlled by state law, have not been adequate to reclaim interim program bond forfeiture lands. Both states have used money from their permanent program reclamation funds to reclaim some of these sites. However, there are shortfalls in funding for the remaining interim program bond forfeiture acres, particularly in Pennsylvania. Furthermore, adequacy of the OSMRE approved permanent program alternative bonding systems in both states is uncertain since no formal criteria exist for making adequacy determinations. In addition, OSMRE has not assessed the impact of using reclamation funds for program administration on the ability of the states to reclaim their bond forfeiture lands.

Bonding Systems During the Interim Period Were Controlled by Existing State Laws

During the interim period, there were no federal bonding requirements. Because the initial regulatory procedures in Title V, Section 502, of SMCRA did not specifically include a bond requirement provision, OSMRE interpreted this to mean that it did not have the authority to require bonds on interim program permits. Consequently, the existing state bonding requirements, if any, remained in effect. However, according to OSMRE officials, no one anticipated that the states would miss the eighteen-month deadline (March 3, 1979) outlined in SMCRA for obtaining primacy. (Most states' permanent programs were approved by OSMRE between 1980 and 1982.) One of the consequences of the delay in getting the state permanent programs approved was that the existing state bonding systems remained in effect for more years than expected. The impact in terms of land abandoned during this period without adequate bond for reclamation has been extensive. In November 1985, OSMRE reported that over 77,000 interim program acres nationwide were involved in bond forfeiture proceedings.

In Pennsylvania, bonds during the interim period were required by the Pennsylvania Surface Mining Conservation and Reclamation Act of 1971, as amended. During this period, the bonds were set at a minimum of \$1,000 per acre, increasing to \$2,000 in 1979, and further increasing to \$4,000 in 1981. Beginning in August 1981, the state reduced the bond to a minimum of \$3,000 per acre and required mine operators to pay a \$50 per acre permit fee to supplement the bond.

In West Virginia, bonding during the interim period was required under the West Virginia Surface Coal Mining and Reclamation Act of 1971. Bonds were \$1,000 per acre, supplemented by a \$60 per acre permit fee.

Permanent Program Bonding Systems Are Subject to OSMRE Approval

To obtain primary enforcement authority, each state had to develop bond setting systems no less effective than that prescribed by SMCRA. SMCRA requires that the bond amount be sufficient to assure the completion of the reclamation plan if the regulatory authority had to do the work. If the regulatory authority opts for an alternative bonding system, SMCRA requires that the funds generated by the alternative system be sufficient to reclaim the mined lands.

OSMRE had the responsibility of reviewing and approving each system to assure that the provisions of SMCRA are met. Under their approved permanent programs, both Pennsylvania and West Virginia have alternative bonding systems. Under these systems, the states maintain a reclamation fund consisting of forfeited bonds and supplemental funds, which are required by SMCRA to be adequate to assure reclamation. SMCRA allows OSMRE to approve alternative bonding systems that demonstrate the ability to achieve the objectives and purpose of the bonding program. Also, alternative bonding systems can differ among the states as long as each system is adequate to allow the state regulatory authority to complete the necessary reclamation.

The bonding system approved by OSMRE for Pennsylvania on July 31, 1982, consists of a minimum \$3,000 per acre bond plus a \$50 per acre permit fee. Mine operators are also required to post a \$1,000 per acre bond for support activities such as top soil storage areas and haul roads.¹ Money generated from these sources is deposited in the state's reclamation fund. Other moneys that go into the fund include license fees, fines, penalties, and interest on securities. In completing reclamation, only the forfeited bonds are site specific. The remaining moneys in the fund can be used to reclaim any forfeiture site, or the money can be used, in part, to pay for the costs of administering the bond forfeiture program.

In comparison, the bonding system approved by OSMRE in West Virginia on January 21, 1981, requires mine operators to bond each operation at a rate of \$1,000 per acre. To supplement the amount of bond, operators are required to pay a tax of one cent per ton of coal produced.² Like Pennsylvania, the money generated from these sources is deposited into the state's reclamation fund. Other moneys that go into the fund are

¹Support activities consist of areas where the surface has been or will be disturbed as an incidental part of surface mining activities.

²This tax is collected when the net balance in the fund drops to under \$1 million. Once the fund reaches \$2 million, the tax ends.

similar to those in Pennsylvania—penalties and fund interest. Again, the forfeited bonds are site specific; the remaining money is not. The moneys in the fund that are not site specific may also be used to help pay the costs of administering the bond forfeiture program.

The Pennsylvania
Interim Program
Bonding System Has
Not Been Adequate to
Assure Reclamation

Reclamation costs for interim program bond forfeiture sites in Pennsylvania have exceeded the money available to reclaim them. To address the problem of funding shortfalls on these lands, the state regulatory authority has used money from the permanent program reclamation fund to supplement the costs of reclamation. However, thousands of acres of unreclaimed interim program land continue to exist, and the permanent program reclamation fund has not generated enough supplemental money to reclaim them.

Interim Program Bonds
Have Represented 12
Percent of the Cost of
Reclamation

As shown in table 3.1, the average reclamation cost per acre for interim program reclaimed land in Pennsylvania has been \$6,243 while the average bond amount per acre has been \$728.³ Therefore, the amount of bond on the forfeited acres has equaled only about 12 percent of the cost of reclamation.

³A number of the bond forfeiture acres during the interim period were bonded at lower pre-SMCRA rates and were never increased after passage of the act. The bonds were not increased because many operators did not repermit their mine sites under the higher bond rates required.

**Chapter 3
Funds for Reclaiming Mined Lands in
Pennsylvania and West Virginia Have Not
Been Adequate**

**Table 3.1: Comparison of Interim
Program Bonds to the Cost of
Reclamation in Pennsylvania**

Year reclaimed	State reclaimed acres	State reclamation average cost per acre		
		Cost to reclaim ^a	Bond amount ^a	Difference
1977	•	•	•	•
1978	•	•	•	•
1979	•	•	•	•
1980	40	\$2,383	\$500	\$1,883
1981	45	5,508	643	4,865
1982	72	2,784	795	1,989
1983	147	4,235	570	3,665
1984	258	2,966	582	2,384
1985	171	7,658	726	6,932
In reclamation ^b	545	8,695	854	7,841
	1,278^c	\$6,243	\$728	\$5,515

^aState reclamation average cost per acre calculations are based on reclamation costs for 36 permits covering 1,278 acres.

^bAcres under contract as of December 31, 1985.

^cAlthough Pennsylvania has reclaimed 1,298 acres, 20 of these acres were reclaimed under the federal Abandoned Mine Land Reclamation (AML) program. The AML program is designed to cover the costs of reclamation for lands abandoned before SMCRA.

A comparable table can not be prepared for permanent program bond forfeiture sites since none of the approximately 229 permanent program acres forfeited as of September 1986 have been reclaimed by the state.

**Over \$7 Million in
Supplemental Funding Was
Used for Reclamation**

The bond money available to the state to reclaim the 1,278 bond forfeiture acres totaled about \$1 million. The reclamation costs, however, totaled about \$8 million. To make up the difference between the two amounts, the state regulatory authority elected to use money from the permanent program reclamation fund. According to the state regulatory authority Deputy Secretary for Administration, this decision was made in order to demonstrate to the state legislature that additional funds were needed to reclaim interim sites. When asked if this was an appropriate use of the permanent program moneys, the OSMRE Assistant Director for Operations stated that, to his knowledge, OSMRE had never considered the issue. OSMRE has not, he said, told the states that permanent program supplemental moneys cannot be used to help reclaim interim program bond forfeiture lands. In his opinion, spending permanent program moneys to help reclaim interim lands is a valid use of the money by the state regulatory authority as long as enough money is available to reclaim all permanent program bond forfeiture lands. But,

now that there have been some permanent program bond forfeitures (approximately 229 acres as of September 1986), he acknowledged that it is possible that the reclamation costs on these lands could put a strain on the supplemental fund. However, the OSMRE Assistant Director did not think that this was likely since the fund will be replenished by the \$50 per acre permit fee.

State regulatory authority officials, however, acknowledged that the permanent program reclamation fund is not adequate to supplement the cost of reclamation for the remaining unreclaimed interim program bond forfeiture acres. By their own estimate in October 1985, over \$110 million is needed to reclaim these lands. The bonds on this acreage total about \$13 million, leaving a shortfall of about \$97 million. Moreover, as discussed later, almost 60 percent of the reclamation fund expenditures since primacy have been for administrative costs such as salaries and vehicle purchases and not for land reclamation. (See p. 50).

In 1984, the state estimated that, at the current expenditure rate of \$2 million per year, it would take over 45 years to reclaim the interim program lands. As of January 16, 1986, the permanent program reclamation fund balance was \$12.1 million, and the fund has generated approximately \$1.2 million a year in revenues from the supplemental reclamation permit fee.

The State Has Approved a New Program to Reclaim Interim Program Sites

The state has approved a new program to reclaim the remaining 15,134 interim program bond forfeiture acres. In February 1986, the Governor of Pennsylvania proposed a \$100 million, 20-year abandoned mine reclamation program. Under this proposal, contained in the 1986-1987 proposed state budget, \$5 million would be spent annually for site reclamation. Approximately \$1.3 million dollars would come from the state permanent program reclamation fund, and \$2 million in general state funds would supplement the reclamation fund. An additional \$1.2 million to address the backlog would be generated by doubling the present \$50 per acre permit fee for active mining operations. The proposal also prohibited the use of the reclamation fund for most administrative costs; rather, these costs were to be funded out of the general revenue account.

According to state regulatory authority officials, the governor's proposal was adopted on July 1, 1986, with the exception of doubling the \$50 per acre permit fee. The current \$50 per acre permit fee will remain

in effect. By adopting the governor's proposal, the state believes that reclamation of these lands can be accomplished in 25 years.

West Virginia's Interim Program Bonding System Has Not Been Adequate to Assure Reclamation

The reclamation costs for interim program bond forfeiture sites in West Virginia have exceeded the money available to reclaim them. The West Virginia state regulatory authority, like Pennsylvania's authority, has used money from its permanent program reclamation fund to supplement the costs of reclamation. State regulatory authority officials believe that they will be able to reclaim the remaining interim program bond forfeiture lands by continuing to use the permanent program reclamation fund to supplement the costs of reclamation.

Bonds Have Represented Less Than Half of the Cost of Reclamation

Of the 6,713 acres involved in bond forfeiture proceedings in West Virginia since SMCRA, 5,777 are interim program forfeitures and 936 are permanent program forfeitures. For both the interim and permanent program forfeitures, the bonds have represented less than half the cost of reclamation.

Specifically, West Virginia has reclaimed or has contracts to reclaim 2,577 of the 5,777 interim program acres for which bonds have been forfeited. Table 3.2 shows that the average bond amount for these acres has been \$1,131 while the average reclamation cost per acre has been \$2,442—about 46 percent.

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**Table 3.2: Comparison of Interim
Program Bonds to the Cost of
Reclamation in West Virginia**

Year reclaimed	State reclaimed acres	State reclamation average cost per acre		
		Cost to reclaim	Bond amount	Difference
1977	.	.	.	.
1978	.	.	.	.
1979	.	.	.	.
1980	.	.	.	.
1981	162	\$1,543	\$1,080	\$463
1982	594	2,307	1,103	1,204
1983	540	2,203	1,085	1,118
1984	221	1,885	1,255	630
1985	637	2,500	1,181	1,319
In reclamation ^a	248	4,226	1,089	3,137
	2,402^b	\$2,442	\$1,131	\$1,312

^aAcres under contract as of December 31, 1985.

^bDoes not include 11 permits covering 175 acres because either the reclamation cost or the year of reclamation was not available.

In comparison, of the 936 permanent program bond forfeiture acres, 354 acres have been or are in the process of being reclaimed by the state regulatory authority. The bonds on these reclaimed acres, as shown in table 3.3, have represented about 40 percent of the costs of reclamation—a decrease of 6 percent from the amount bonds represented on interim program bond forfeiture acres. The OSMRE Field Office Director could not identify the reasons for this decrease and stated that he did not want to speculate.

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Table 3.3: Comparison of Permanent Program Bonds to the Cost of Reclamation in West Virginia

Year reclaimed	State reclaimed acres	State reclamation average cost per acre		
		Cost to reclaim	Bond amount	Difference
1977	•	•	•	•
1978	•	•	•	•
1979	•	•	•	•
1980	•	•	•	•
1981	•	•	•	•
1982	•	•	•	•
1983	•	•	•	•
1984	6	\$11,636	\$500	\$11,136
1985	223	2,279	1,107	1,172
Year Unknown	40	1,381	813	568
In reclamation ^a	85	3,360	965	2,395
	354	\$2,750	\$1,057	\$1,693

^aAcres under contract as of December 31, 1985.

About \$3.4 Million in Supplemental Funding Was Used for Reclamation

The bond money available to the state to reclaim the 2,577 interim bond forfeiture acres totaled about \$2.9 million. Reclamation costs, however, totaled about \$6.3 million, leaving a shortfall of \$3.4 million. The West Virginia regulatory authority, like Pennsylvania's authority, elected to use money from its permanent program reclamation fund to make up the difference between the available interim program money and the costs of reclamation.

In 1985, state regulatory authority officials estimated that it would cost about \$8.9 million to reclaim its interim period bond forfeiture acres. The reclamation fund balance as of December 31, 1985, was \$5.7 million, leaving a shortfall of \$3.2 million which, the officials believe, can be taken care of by continuing to use permanent program reclamation fund money. They could not, however, estimate how many years this would take.

In comparison, for the 354 state reclaimed permanent program acres, the supplemental moneys used have totaled \$554,443. Because OSMRE believes that permanent program bond forfeiture sites should receive priority, state regulatory and OSMRE officials believe that the supplemental fund will be adequate to cover the reclamation costs for the remaining 582 permanent program bond forfeiture acres. However, as in Pennsylvania's case, some of the supplemental moneys have been used to pay for administrative costs such as salaries and vehicle purchases,

but the percentage is substantially lower. From January 1, 1982, through December 31, 1985, approximately 12 percent of the reclamation fund expenditures have been for program administration.

OSMRE's Role in Funding Interim Program Reclamation Has Been Limited

OSMRE involvement in reclaiming the interim program bond forfeiture sites in either state has been limited. OSMRE's position is that interim program forfeitures are the states' responsibility. Specifically, OSMRE officials say that the SMCRA requirement to post a bond applies only to permits issued under the permanent regulatory program. Thus, these officials believe that OSMRE has no authority to address inadequacies in the interim period bond forfeiture program. OSMRE has not been opposed, however, to the states' use of permanent program supplemental moneys to help pay for the cost of reclamation on interim program bond forfeiture sites. Further, Department of the Interior attorneys and OSMRE officials contend that the reason for the lack of money to reclaim the interim program lands is because of a gap in SMCRA. The act specifically provides funding for the reclamation of land abandoned before SMCRA and also provides stringent bonding requirements for lands mined under the permanent regulatory programs. However, according to OSMRE officials, lands mined between these two periods—the interim program lands—are not subject to OSMRE's jurisdiction with respect to bonding because Section 502, Title V (which outlines the initial regulatory requirements) did not specifically contain a bonding provision.

Even though OSMRE has been aware of the interim program problem, it has not recommended administrative or legislative action to accomplish reclamation of the interim program bond forfeiture lands. Moreover, OSMRE's position that inadequate bonds on interim program permits and reclamation of interim bond forfeiture lands are state problems has not always been consistent. In Oklahoma, for example, one of the factors leading to the partial takeover of the state's regulatory program by OSMRE in April 1984 was bond inadequacy on interim program permits.

On April 1, 1986, the National Wildlife Federation and the Kentucky Resources Council, Inc. notified the Secretary of the Interior and the [Acting] Director of OSMRE that they planned to file a lawsuit against the Secretary and the [Acting] Director for, in part, OSMRE's alleged failure to take inspection and enforcement action on interim program sites. According to the OSMRE Assistant Director for Program Operations, this lawsuit was officially filed in the Kentucky Federal District Court on July 1, 1986. OSMRE is currently preparing its response to the lawsuit.

And, according to a Department of the Interior attorney, this suit may help to resolve OSMRE's responsibility for the interim program lands.

Adequacy of the Permanent Program Bonding Systems Is Uncertain

Although OSMRE approved both Pennsylvania's and West Virginia's alternative bonding systems, neither system was evaluated by OSMRE to assure that it was adequate to cover the costs of reclamation for all potential permanent program bond forfeiture sites as required by SMCRA. Subsequent adequacy assessments have not been made either. Consequently, adequacy of these systems is uncertain. Furthermore, OSMRE has not analyzed revenues and expenditures from the approved supplemental funds to assess the impact of administrative costs on fund adequacy.

Adequacy Assessments Have Not Been Made by OSMRE

SMCRA, as stated previously, allows OSMRE to approve "alternative" bonding systems as part of a permanent regulatory program, as long as the moneys generated by the alternative system are sufficient to assure the reclamation of land by the regulatory authority in the event that individual operators fail to complete reclamation. According to OSMRE's Director of State Programs, while an actuarial study of an alternative bonding system is not a requirement of SMCRA, assuring fund sufficiency is. OSMRE did not assure bond adequacy before it approved either state's permanent program bonding system. Specifically, OSMRE officials told us that it did not require an actuarial study of Pennsylvania's proposed alternative bonding system before approving it on July 31, 1982, since this was not a requirement. However, none of the OSMRE officials could recall any other adequacy studies being conducted in Pennsylvania, and our review of OSMRE administrative records and files did not identify any documents showing an independent assessment of bonding adequacy. State regulatory officials also said that, to their knowledge, OSMRE did not make an independent adequacy assessment of fund sufficiency.

When OSMRE approved West Virginia's permanent program bonding system on January 21, 1981, the approval was conditional. Before lifting the condition, OSMRE required the state regulatory authority to obtain an actuarial study showing that the reclamation fund would be able to generate enough money to meet all future reclamation needs.

A preliminary actuarial study of the fund was made by an outside firm in 1982 at the request of the state regulatory authority. The study concluded that the fund was sufficient to cover expected costs for the next year, but it did not address fund sufficiency beyond that time. The

report pointed out that much of the data needed to assess bond adequacy beyond one year did not exist. After reviewing the actuarial study, OSMRE removed the condition placed on its approval of the state's alternative bonding system in March, 1983.

At the time OSMRE approved these alternative bonding systems, no formal criteria existed for determining system adequacy. Moreover, no agreement had been reached within OSMRE as to what constituted proper design of an alternative bonding system. Little has changed since the time OSMRE approved the Pennsylvania and West Virginia permanent program alternative bonding systems. From initial program approval through 1985, no additional adequacy assessments were made by OSMRE in either state. Adequacy of the states' supplemental funds to cover the reclamation costs of current permanent program bond forfeiture sites has been included as an objective for the 1986 annual oversight reviews, but these reviews have not been completed. A study of fund sufficiency for future permanent program forfeitures is currently being conducted in Pennsylvania by the OSMRE Eastern Technical Center. OSMRE officials said that the results of this study are expected in late 1986 or early 1987. Consequently, it is too early to judge whether the system is adequate to meet the objectives of SMCRA.

Furthermore, OSMRE did not assess bond adequacy during the interim period and project from this the likelihood of forfeitures under the permanent program or the costs to reclaim the land. In our opinion, the interim program experiences are probably the best indicator of problems likely to be encountered under the permanent programs.

OSMRE Has Not Analyzed the Impact of Administrative Costs on Reclamation

Both the Pennsylvania and West Virginia state laws implementing SMCRA allow the use of reclamation fund moneys to pay for program administration costs. Pennsylvania's reclamation fund expenditures for administrative costs have been extensive. From primacy through December 31, 1985, Pennsylvania's reclamation fund revenues totaled about \$14 million and expenditures equaled about \$10 million. Of the \$10 million, \$4 million has been spent for reclamation and \$6 million, or 60 percent, has been spent on program administration (see app. V.). These administrative costs have included such items as salaries, office equipment, and vehicle purchases and repairs. For example, in a January 1984 report, the state regulatory authority reported that the fund, at that time, supported 22 mine inspectors, 3 attorneys, and over 15 jobs in resource management.

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While OSMRE field office officials were aware that moneys from the reclamation fund had been spent on program administration, they did not know how much had been spent nor have they assessed the impact of using reclamation funds for program administration on the state's ability to reclaim its bond forfeiture lands. Consequently, the extent to which these expenditures have affected bonding system adequacy—a requirement of SMCRA—is unknown to OSMRE.

According to Pennsylvania's Director of Fiscal Management, recent action by the governor of Pennsylvania prohibits the use of reclamation fund money for most, but not all, program administration costs. Specifically, the governor's budget passed in July 1986 requires that all program administration costs be paid out of the general revenue fund with the exception of those costs most directly related to administering the bond forfeiture program. For 1986, the "costs most directly related to administering the bond forfeiture program" have been limited to \$750,000. However, in our opinion, these "direct" program administration costs could still impact on the ability of the state to reclaim its bond forfeiture lands.

In contrast, West Virginia's percentage of reclamation fund expenditures for administrative costs has totaled about 12 percent. Specifically, from January 1, 1982, through December 31, 1985, reclamation fund revenues totaled \$8 million and expenditures totaled \$6.4 million. About \$800,000 of the \$6.4 million was spent for program administration. (See app. VI). OSMRE field office officials have questioned to some extent the impact of using reclamation funds for program administration on the state's ability to reclaim its bond forfeiture lands. Specifically, in July 1985, OSMRE questioned the use of the reclamation fund money by the state for administrative costs. OSMRE required the state regulatory authority to conduct a study in order to show that the fund is (1) sufficient to meet the objectives of SMCRA and (2) sufficient to cover all administrative costs allowed by the state. To respond to this requirement, the Acting Commissioner of the West Virginia Department of Energy wrote a letter to OSMRE explaining why he thought the fund is sufficient even though some of the money is being spent for program administration. In October 1985, the Acting Commissioner acknowledged that his analysis was "not an in-depth actuarial study and perhaps not even a good statistical analysis", but he maintained that the alternative bonding system is financially sound despite some expenditures for program administration. Following this response, OSMRE did not require any additional justification nor did it perform an independent analysis. The OSMRE annual oversight reviews in West Virginia, as in

Pennsylvania, have not assessed the impact of using reclamation funds for program administration on the state's ability to reclaim its bond forfeiture lands. Thus, the extent to which these expenditures have affected bonding system adequacy is unknown to OSMRE.

Some Actions Have Been Taken to Address the Issue of Permanent Program Bonding Adequacy

Two legislative proposals to address the issue of permanent program bonding adequacy are currently being considered in Pennsylvania. None are being considered in West Virginia.

Pennsylvania

In Pennsylvania, legislation introduced in 1985 to increase the present bond rate per acre is being considered by the state legislature. Under the proposal, the current minimum of \$3,000 per acre would be raised to \$7,500 per acre. However, the state regulatory authority opposed the legislation in its August 1985 testimony before the committee.

State regulatory authority officials stated that it would be extremely difficult for mine operators to obtain bonding at the increased rate because bond companies would be reluctant to issue bonds at this increased rate since their liability would be increased. In April 1986, state regulatory authority officials advised us that the legislative proposal is still in committee and that they continue to oppose this legislation.

A second piece of legislation was also introduced in 1985. Recognizing that the reclamation fund is intended to be used to pay for site reclamation, a bill was introduced in the state House of Representatives and the state Senate in the fall of 1985 which would prohibit use of the reclamation fund for program administration. The bill, if passed, would result in more money going directly for site reclamation. No action had been taken on this bill as of August 1986.

West Virginia

According to state regulatory authority officials, West Virginia does not plan to make any legislative or administrative changes to its permanent program bonding system. The officials believe that their bonding system

is able to generate sufficient funds to assure reclamation in the event of bond forfeiture.

Conclusions

State bonding systems must be adequate to assure that sufficient funds are available for the state regulatory authority to reclaim mined lands in the event of forfeiture. Clearly, the bonding systems in Pennsylvania and West Virginia during the interim period have not been adequate and the states have relied heavily on permanent program supplemental funds to cover the costs of reclamation. An extensive shortfall in funding to reclaim the remaining interim program bond forfeiture sites exists, particularly in Pennsylvania.

OSMRE involvement in providing funding for the reclamation of interim program bond forfeiture sites has been limited. OSMRE officials contend that these sites exist because of a gap in the legislation. Section 502, Title V of SMCRA, which outlines the initial regulatory requirements, does not specifically contain a bonding provision. While OSMRE is aware that there is a problem with the reclamation of interim program bond forfeiture lands, it has not studied or evaluated the extent of the problem and reported its recommendations—such as a legislative change—for resolving these reclamation problems.⁴ As lead federal agency responsible for assuring the reclamation of all coal mined lands, OSMRE is the logical focal point to develop an approach for resolving the problem of unreclaimed interim program lands.

Furthermore, although OSMRE approved the alternative bonding systems in both Pennsylvania and West Virginia, these systems (consisting of forfeited bond money as well as supplemental moneys) were not assessed by OSMRE at the time of their approval to assure fund adequacy for reclamation of all potential permanent program bond forfeiture lands. Moreover, OSMRE does not have formal criteria for assessing alternative bonding system adequacy. Thus, it is not known whether these systems meet the requirements of SMCRA.

In addition, OSMRE has not assessed the impact of using reclamation funds for program administration on the ability of the states to reclaim their bond forfeiture lands. Expenditures from the reclamation funds to

⁴In November 1985, the Acting OSMRE Director provided Representative Udall with an estimate of the number of interim sites for which forfeiture is indicated and the status of the forfeiture proceedings. The estimates were provided by the state regulatory authorities and do not reflect an independent evaluation by OSMRE. No action was taken by OSMRE to introduce legislation following this letter.

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pay for program administration costs have been particularly extensive in Pennsylvania and, to a lesser extent, in West Virginia. The extent to which these expenditures have affected alternative bonding system adequacy is unknown to OSMRE.

Recommendations

In order to assure that adequate funds are available to reclaim forfeited mine sites, the Secretary of the Interior should require the Director of OSMRE to

- take the lead in examining the interim program funding problem and report to the Congress its recommendations for assuring the reclamation of these lands and
- develop formal criteria for evaluating the adequacy of alternative bonding systems, and determine the adequacy of existing alternative bonding systems, including the impact that expenditures for program administration have on the ability of the states to reclaim abandoned lands.

Bond Release Procedures Were Generally Followed but Reclamation Deficiencies Existed at Some Sites

SMCRA provides for the release of all or part of a bond by the regulatory authority if the authority is satisfied that the reclamation covered by the bond has been accomplished. Our review of a sample of state bond release files in Pennsylvania and West Virginia showed that both states generally complied with the act's requirements for releasing bonds. However, at 3 of the 15 bond release sites that we visited, the OSMRE inspectors accompanying us identified reclamation deficiencies which they believed raised questions about the appropriateness of the bond release.

OSMRE's 1985 annual oversight evaluations of Pennsylvania's and West Virginia's permanent programs produced results similar to ours. In both states, OSMRE found that the prescribed procedures for releasing bonds were generally being followed. However, OSMRE inspectors also found violations of reclamation standards at a number of sites in West Virginia that had received a bond release by the state regulatory authority. Subsequently, OSMRE notified the state to have the reclamation deficiencies corrected. To better ensure that bond releases provided by state regulatory authorities are proper, OSMRE plans to conduct inspections and review the applicable bond release requirements before the regulatory authority approves the bond release. These inspections will be conducted on a sample basis.

SMCRA Bond Release Requirements

SMCRA provides a specific schedule for releasing portions of the bond based on the phase of reclamation accomplished. Specifically, when the operator completes the backfilling, regrading, and drainage control of a bonded area in accordance with the approved reclamation plan, the state regulatory authority may release up to 60 percent of the bond for the applicable permit area. After revegetation has been established on the regraded mined lands in accordance with the approved reclamation plan, an additional amount of the bond may be released. The act requires that the amount retained must be sufficient to cover the cost of reestablishing revegetation, if needed. Then, when the operator has successfully completed all surface coal mining and reclamation activities, the remaining portion of the bond may be released but not before a required 5-year liability period after the last year of augmented seeding. By providing this schedule for bond release, money is available to correct reclamation deficiencies that may occur after the preceding releases. For example, following a revegetation bond release of 25 percent, 15 percent of the bond remains to be used to reestablish revegetation in the event that the previous seeding was not successful.

Another safeguard in place for assuring the adequacy of reclamation on bond release sites is the periodic inspection of each site made by state regulatory authority inspectors and oversight inspections by OSMRE inspectors. SMCRA requires an average of one partial inspection by the regulatory authority per month and one complete inspection per calendar quarter for each surface coal mining and reclamation operation covered by each permit. Bond release sites are subject to this inspection schedule until after the phase II release, at which time a complete inspection of each site is required per calendar quarter. In addition, OSMRE inspections are conducted randomly as part of OSMRE's oversight evaluations of state regulatory programs.

SMCRA also requires that for each bond release, regardless of the phase, the public must be given an opportunity to comment on the adequacy of the reclamation before the release is granted by the state regulatory authority. In general, any person or governmental agency which might be adversely affected by the release of the bond has the right to file written objections to the proposed release with the state regulatory authority, and it is the responsibility of the state regulatory authority to assure that the reclamation requirements of SMCRA are met before granting the release.

Bond Release Procedures Were Generally Followed

We examined documentation in a sample of bond release case files and found that both Pennsylvania and West Virginia generally adhered to the SMCRA requirements for releasing bonds. We checked to see if the major bond release procedures required by SMCRA were followed, including (1) whether the site was inspected by the state regulatory authority before the release was approved, (2) whether proper public notice was given, and (3) whether citizen and landowner complaints were addressed. We found documentation in the state records which showed that the state regulatory authority had generally followed the required bond release procedures. OSMRE's 1985 annual oversight evaluations also concluded that both states had generally adhered to the SMCRA requirements for releasing bonds.

Analysis of Pennsylvania and West Virginia Releases

We reviewed a random sample of 222 bond releases made from January 1, 1984, through September 30, 1985, at the Greensburg and Pottsville district offices in Pennsylvania and 74 at the Philippi district office in West Virginia. In Pennsylvania, we found documentation showing that 221 of the 222 bond releases had been inspected by the state regulatory authority prior to bond release approval and 202 had proof that public

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notice was given. In addition, citizen complaints had been filed on 29 of the 222 bond releases, and, of these complaints, the records showed that the state regulatory authority had addressed all of them.

In West Virginia, our review of case file documents showed that in all 74 cases in our sample, the bond release site was inspected by the state regulatory authority before it granted the release. However, because 70 of the 74 bond releases were granted under interim program procedures, the requirement for public notice did not apply.¹ For the other four cases which were required to follow the permanent program bond release procedures, we found the required public notification documents. None of the four cases had any citizen or landowner complaints.

**Results of OSMRE's 1985
Annual Oversight
Evaluations**

OSMRE's 1985 annual oversight review of bond releases in Pennsylvania further documents the regulatory authority's general adherence to the required bond release procedures. For this review, OSMRE evaluated 162 bond release applications. OSMRE found that (1) most bond release inspections were conducted within 30 days of receipt of a complete application, (2) proof of publication was documented as part of the application file in 84 percent of the cases, and (3) documentation existed showing that the regulatory authority addressed 100 percent of the citizens' complaints filed.

OSMRE also reviewed bond release procedures in West Virginia. In its 1985 Annual Oversight Evaluation Report, OSMRE stated that, based on a review of 68 bond releases granted by the regulatory authority, "it was determined that West Virginia has been adhering to the time frames and public notification procedures for bond release as required by the approved program."

**Reclamation
Deficiencies Existed at
Some Sites**

In addition to reviewing bond release case files, we visited eight sites included in our sample in Pennsylvania and seven in West Virginia that were granted a bond release in either 1984 or 1985. OSMRE inspectors found reclamation standard violations at 3 of the 15 sites. According to them, the other 12 were adequately reclaimed. OSMRE also found reclamation standard violations at a number of sites visited in West Virginia

¹Interim program release procedures did not require the operator to provide public notice of the proposed release. In West Virginia, the regulatory authority followed the interim program procedures. However, in Pennsylvania, all the releases that we reviewed were subject to the state's permanent program bond release procedures.

during its oversight inspections of state bond release sites. Few violations were noted in Pennsylvania.

Site Reclamation
Deficiencies

During our visits to 15 bond release sites, the accompanying OSMRE inspector identified 2 sites in Pennsylvania and 1 site in West Virginia that had reclamation deficiencies.

On the first site in Pennsylvania, the deficiencies noted after the phase I release included inadequate sediment ponds and erosion problems. In addition, the site had not been restored to its approximate original contour as required by SMCRA. After conducting a follow-up inspection at this site in February 1986, OSMRE notified the state regulatory authority to take action to have this site properly backfilled. Based on the OSMRE action, the state regulatory authority issued a compliance order to the operator for failing to meet general backfilling requirements.

Reclamation on the second Pennsylvania site, according to the OSMRE inspector, was generally good. However, the sediment pond had been removed but not reseeded which, according to the OSMRE inspector, should have prevented the bond release from being approved. Pennsylvania officials told us that the reclamation on these two sites, with the exception of returning the first site to its approximate original contour, met the requirements for the applicable bond release at the time they were released— approximately three months and two months, respectively, before our visit. Because of the lapse in time, however, this difference of opinion could not be resolved.

The OSMRE inspector who accompanied us on the visit to the West Virginia site questioned the appropriateness of the bond release, citing poor sediment controls, acid run-off, and substantial erosion as the reclamation deficiencies. A West Virginia official told us that, like the Pennsylvania sites, the site was probably in compliance at the time of the final release which was also three months before our visit. The official pointed out that West Virginia had experienced extremely heavy rains and flooding in early November 1985.

OSMRE Found Reclamation
Deficiencies at a Number of
Bond Release Sites Visited

The OSMRE field offices in both states have conducted oversight studies of bond releases. Few problems were noted in Pennsylvania, but numerous violations of reclamation performance standards were noted in West Virginia. In Pennsylvania, OSMRE conducted a special 1985 study of 75 bond releases. The study concluded that the state is assuring that

the applicable performance standards are being met before approving releases. The West Virginia study, conducted during 1984, found violations of program standards at approximately 31 percent of the 68 sites sampled by OSMRE which had been given bond release by the state regulatory authority. These violations ranged from inadequate signs and markers to backfilling, regrading, and revegetation requirements. The West Virginia official in charge of the state's bond release program agreed that it is not uncommon for sites to require some maintenance after a bond is released but maintained that the releases were appropriate at the time they were granted.

OSMRE Plans to Address Bond Release Appropriateness Concerns

The Director of OSMRE has acknowledged that inspections to evaluate the adequacy of reclamation at bond release sites have sometimes taken place after extended periods of time have elapsed since the release was granted. This occurs, he said, because the time lapse between the bond release and the OSMRE inspection has not been a consideration in selecting bond release sites to inspect. Because of this time lapse, state regulatory authorities have questioned OSMRE's ability to determine the exact condition of reclamation at the time of the bond release. For example, as noted earlier, both the Pennsylvania and West Virginia state regulatory authorities disagreed with the OSMRE inspector's views that the three sites we visited were improperly granted bond releases.

Recognizing a need to change its procedures, OSMRE—on June 3, 1986—issued a new policy, instructing its field offices to participate in state bond release proceedings on a sample basis to evaluate state adherence to the procedural and technical requirements for bond release. During the next year, OSMRE field offices plan to conduct joint inspections of a sample of bond release applications received by the state and review the associated procedural requirements. However, if the state does not allow joint inspections, the OSMRE field offices are instructed to conduct bond release inspections on a sample basis and transmit any concerns to the state within the time frame prescribed by the state regulatory authority for filing written objections to the proposed release.

Conclusions

State regulatory authorities in Pennsylvania and West Virginia have generally followed the required SMCRA procedures for bond release. OSMRE's 1985 annual oversight evaluations of the states' bond release procedures reported results similar to ours. However, we found that there may be problems with reclamation for some sites granted release. State regulatory authority officials disagreed with the OSMRE inspector's

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assessment of the 3 bond release sites we visited on which reclamation deficiencies were cited. OSMRE's recent initiatives to conduct on-site inspections either in conjunction with or as close as possible to the state bond release inspections should help to alleviate state regulatory authority concerns about OSMRE's ability to assess reclamation adequacy of bond release sites. Regular state inspections as well as other OSMRE oversight inspections should also help to assure the reclamation adequacy of bond release sites before final release.

Extent of Coal Mining on Prime Farmland in Pennsylvania and West Virginia Is Minimal

SMCRA allows operators to mine coal on prime farmland but requires them to reclaim the land according to more stringent reclamation standards than for other mined lands. Based on a limited review of available information, we believe that the extent of coal mining on prime farmland in Pennsylvania and West Virginia is minimal.

What Is Prime Farmland?

SMCRA states that the term "prime farmland" shall (1) have the same meaning as that prescribed by the Secretary of Agriculture on the basis of such factors as moisture availability, temperature regime, chemical balance, permeability, surface layer composition, susceptibility to flooding, and erosion characteristics; and (2) historically have been used for intensive agricultural purposes. Lands fitting this definition are required by SMCRA to meet special reclamation standards designed to further ensure that the land is restored to a condition that it was capable of supporting before mining.

Coal Mining on Prime Farmland in Pennsylvania

Based on information provided to us by state regulatory authority officials and the U.S. Department of Agriculture Soil Conservation Service (SCS), coal mining does not generally occur on lands in Pennsylvania containing prime farmland. Although 44 of the state's 67 counties have lands that SCS categorizes as having both prime farmland and coal, the SCS deputy state conservationist told us that prime farmland in the state does not generally coincide with the coal seams. Our comparison of maps showing prime farmland and coal seams in the state indicates that prime farmland does not normally overlay the state's major coal seams.

Extent of Prime Farmland in Coal Producing Counties

Our analysis of state acreage statistics provided by the SCS shows that only about 15 percent of the total acreage in the 44 coal producing counties is prime farmland. The percentage of prime farmland ranged from 4 percent of the total acreage in one county to 52 percent in another county.¹ However, in most instances, the counties with the highest percentage had a relatively small number of active mining permits. For example, at the time of our review the county with 52 percent of prime farmland acreage contained only 18 permits. Conversely, the county with 4 percent of prime farmland acreage had almost 300 permits.

¹The number of active mining permits was not available for 11 of the 44 coal producing counties.

**State Could Not Identify
Number of Permits
Containing Prime Farmland**

State regulatory authority officials advised us that they do not maintain summary statistics on mine permits containing prime farmland, and, therefore, they could not identify the number of mines in the state that contain prime farmland.

According to them, this information would only be available in the permit files. State regulatory authority officials advised us that they are required to send every permit application to SCS so that a determination can be made as to whether the permit area contains prime farmland. Based on this, they estimate that less than 10 percent of the state's active permits authorize operators to mine coal on prime farmland.

**Coal Mining on Prime
Farmland in West
Virginia**

Coal mining in West Virginia, like Pennsylvania, does not frequently occur in areas that contain prime farmland. Of the state's 55 counties, 33 have land that SCS categorizes as having both coal and prime farmland. However, the SCS state conservationist advised us that the majority of the state's coal seams are located in non-prime farmland areas.

**Extent of Prime Farmland
in Coal Producing Counties**

Our analysis of statewide statistics on prime farmland provided by SCS disclosed that only 3 percent of the total acreage in the state's 33 coal producing counties is prime farmland. The percentage ranged from less than 0.3 percent in one county to about 12 percent in another county. State regulatory officials told us that there are two active mines that contain prime farmland. OSMRE's Morgantown field office confirmed this after reviewing their case files.

The state conservationist at SCS advised us that his agency does not review mine permit applications to determine whether they contain prime farmland because of the small amount of such land in the state.

Pennsylvania Bond Forfeiture Process

In Pennsylvania, if a surface mine operation is inactive and reclamation has not been conducted according to the approved reclamation plan, there are a number of steps which are required to be taken by state inspectors in the field. First, a notice of violation is issued, and the operator has 60 days to remedy the situation. If this is not done, an abatement order and civil penalty is the next step in the enforcement process. Following still further inaction, the forfeiture process begins, as follows:¹

Step 1 - Notice Of Intent To Declare Bond Forfeit - This notice is issued in writing to the operator in question, and the operator has 30 days to respond or take corrective action.

Step 2 - Order Of Forfeiture - A letter which formally declares the bond forfeited is sent to the operator.

Step 3 - Resolving Process - This process may actually involve several steps depending upon the course that an individual case takes. In the simplest case, the State Attorney General's Office (the responsible collection agency) collects the bond money. In other cases, the forfeiture action is appealed to the Environmental Hearing Board (EHB) by either the operator or the surety company holding the bond. Other cases may result in "consent agreements" between the state and the operator or surety company, or "consent orders" issued by the court which spell out a schedule for reclamation work. These cases are then either resolved or may go on to collection if the terms of the agreement are not complied with. Other sites may be permitted for remaining by another operator (either before or after bond collection) and reclaimed as a part of his mining operation.

Step 4 - Bond Collection - The bond money is collected and, at this point, the regulatory authority assumes responsibility for site reclamation. The bond money collected is to be used in reclaiming the site.

Step 5 - Site Reclamation - Once the bond money is collected, the site is added to those to be "inventoried." The inventory reveals the exact environmental conditions of the site and the estimated reclamation cost. It also provides the basis for placing the site on a priority list, determined largely on the severity of the danger of the site conditions to human life and safety. Following site assessment, the reclamation is

¹The description of the Pennsylvania bond forfeiture process was taken largely from a January 1984 report by the state regulatory authority.

designed by the regulatory authority, bids are taken, a construction contract is awarded, and reclamation work is begun.

During this process there are a number of state government units that have the primary responsibility for assuring reclamation of bond forfeiture lands. They are listed here with a brief description of their area of involvement.

1. DER - Bureau of Mining and Reclamation - Responsible for all the initial site inspection and enforcement stages and involved in resolving cases after forfeiture.
2. DER - Bureau of Regulatory Counsel - Responsible for legal advice and actions throughout the process.
3. Office of Attorney General - Responsible for collecting the bond money.
4. Environmental Hearing Board - Handles appeals of bond forfeiture actions.
5. DER - Bureau of Abandoned Mine Reclamation - Assumes responsibility for sites once the bonds are collected. Inventories sites and sets priorities for reclamation.
6. DER - Office of Engineering - Designs reclamation projects and supervises construction work.

West Virginia Bond Forfeiture Process

In West Virginia, once an inspector documents a pattern of violations at a coal mining site, a series of steps are also followed, leading to bond forfeiture. These steps, provided by the state regulatory authority, are as follows:

Step 1 - "Show Cause" Request Form - This form, completed by the inspector, contains general information pertaining to the mine site location and also lists the pattern of violations. If the regulatory authority headquarters approves the "show cause" request form, a letter is sent to the mine operator notifying him that he is in violation of the West Virginia Surface Coal Mining and Reclamation Act.

Step 2 - "Show Cause" Hearing - The operator is given 30 days from receipt of the violation letter to request a "Show Cause" hearing before a hearings officer from the state regulatory authority. The hearing is intended to give the operator an opportunity to show why his permit should not be revoked and his bond forfeited.

Step 3 - Order of Forfeiture - If a hearing is not requested or if the hearing is ruled in favor of the state, the regulatory authority formally declares the bond forfeited and revokes the permit.

Step 4 - Resolving Process - The operator has 30 days to appeal the bond forfeiture action to the Reclamation Board of Review. The surety company holding the bond is not allowed to appeal.

Step 5 - Bond Collection - Bond collection efforts are initiated through the state regulatory authority's Accounting Department, or in the case of surety bonds, the Attorney General's office.

Step 6 - Site Reclamation - Once the bond money is collected, the state regulatory authority prepares site profiles, which are used to identify the extent of the existing reclamation problem and to estimate the reclamation costs. Bids are then solicited, and the contract is awarded.

The organizational units involved in the bond forfeiture process in West Virginia include:

1. DOE - Inspection and Enforcement Division - Responsible for inspecting the site, recommending forfeiture, and forfeiting the bond.
2. State Attorney General's Office - Responsible for collecting forfeited surety bonds.

3. State Accounting Department - Responsible for collecting forfeited collateral bonds.

4. Reclamation Board of Review - Handles appeals of bond forfeiture actions.

5. DOE - Special Reclamation Division - Prepares site profiles and supervises construction work.

A Comparison of Time Frames Between Pennsylvania and West Virginia for Completing Each Step of the Reclamation Process

Steps (from - to)	Time (in months)		
	Pennsylvania	West Virginia	Difference
1. From bond forfeiture to appeal decision (if appealed)	16	11	5
2. From appeal decision to bond collection	8	8	0
3. From bond collection to contract award	30	8	22
4. From contract award to reclamation completion	11	5	6

Pennsylvania Reclamation Fund Revenues and Expenditures From Primacy Through December 31, 1985

Dollars in thousands

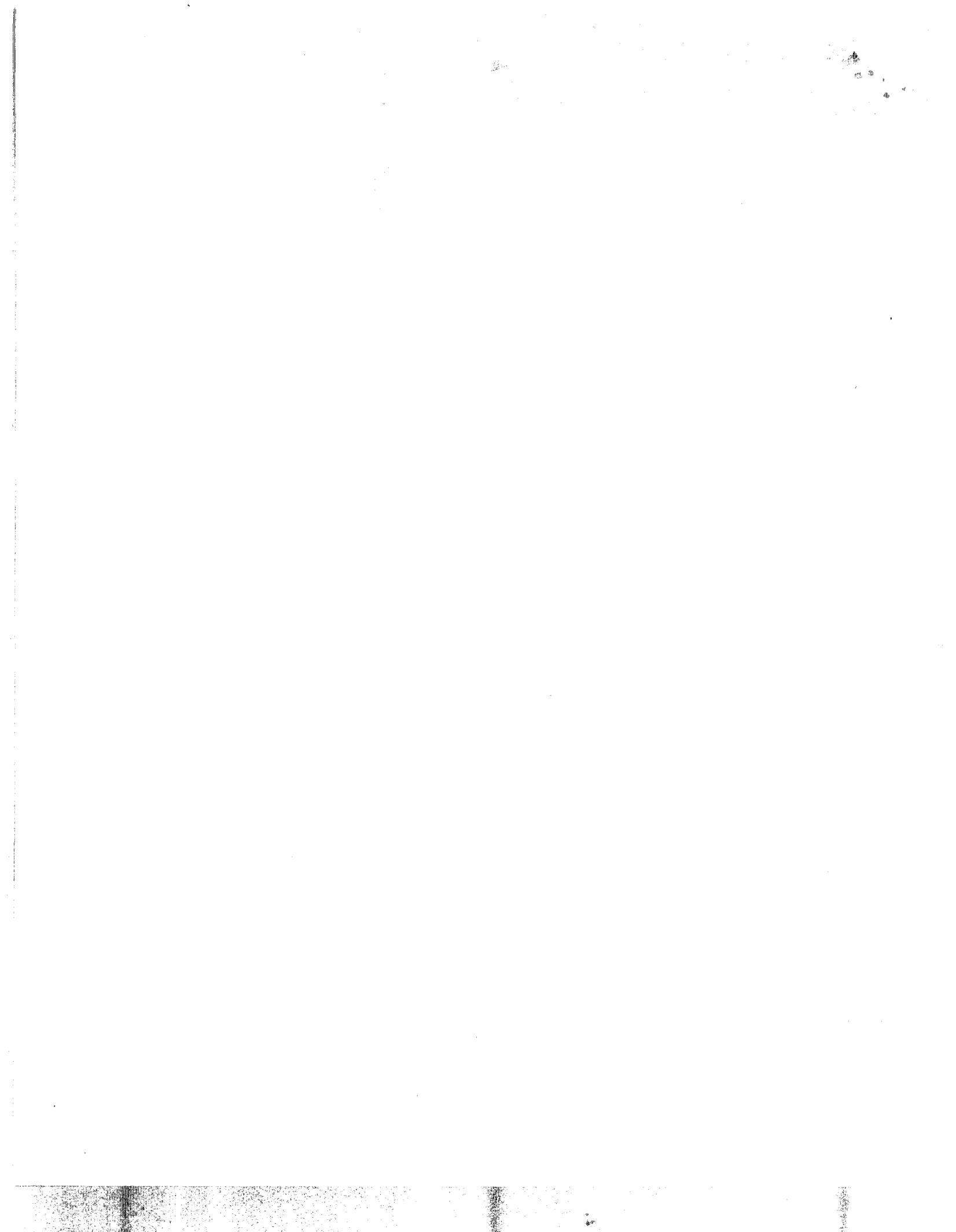
	Fiscal Year				Total
	1982	1983	1984	1985	
Revenues:					
Forfeited bond collections	\$693	\$851	\$658	\$662	\$2,864
Permit fees	1,341	1,200	1,080	549	4,170
License fees, fines and penalties, and interest on securities	1,781	1,704	2,142	889	6,516
Total	\$3,815	\$3,755	\$3,880	\$2,100	\$13,550
Expenditures:					
Reclamation	\$175	\$500	\$1,291	\$1,933	\$3,899
Program administration	1,577	2,315	1,434	737	6,063
Total	\$1,752	\$2,815	\$2,725	\$2,670	\$9,962

NOTE: The fiscal years shown are the state of Pennsylvania's, which run from July 1 of the year shown through June 30 of the following year. For example, fiscal year 1982 represents the time period July 1, 1982, through June 30, 1983. Fiscal year 1985, however, represents the six month period July 1, 1985, through December 31, 1985.

West Virginia Reclamation Fund Revenues and Expenditures From January 1, 1982, Through December 31, 1985

Dollars in thousands					
	Calendar Year ^a				Total
	1982	1983	1984	1985	
Revenues:					
Bonds	\$988	\$497	\$1,049	\$907	\$3,441
Supplemental	1,289	370	1,656	1,299	4,614
Total	\$2,277	\$867	\$2,705	\$2,206	\$8,055
Expenditures:					
Reclamation	\$1,599	\$1,781	\$763	\$1,511	\$5,654
Program Administration	127	181	243	220	771
Total	\$1,726	\$1,962	\$1,006	\$1,731	\$6,425

^aReclamation fund data was not available from January 1981 through December 1981.



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