Legislative History
Committee Publication No. 95-25

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STATE SURFACE MINING LAWS: A SURVEY,
A COMPARISON WITH THE PROPOSED FEDERAL LEGISLATION, AND
BACKGROUND INFORMATION
COMMITTEE ON ENERGY AND NATURAL RESOURCES UNITED STATES SENATE
95TH CONGRESS, 1ST SESSION; JUNE 1977; Publication No. 95-25

MEMORANDUM OF THE CHAIRMAN

2 To Members of the Senate Committee on Energy and Natural Resources:

2 For almost 6 years Congress has labored diligently to enact legislation designed to bring order out of the chaotic and emotion-laden issue of the surface mining of coal. Manifestly, there is need for establishing uniform national environmental protection performance standards for the coal industry. The time is long overdue when under State law operators may be permitted to cast overburden downslope, leave ugly highwalls behind, pollute streams with acid drainage, ruin valuable farmlands, or in other ways add to the environmental degradation of areas on or near the operation. Equally important is the setting up of a strict management system for federally-owned coal deposits. Taken together, this is a task only Congress can accomplish.

2 Although twice frustrated in its attempt to enact balanced and equitable legislation when President Ford repeatedly vetoed the surface mining reclamation bill, and although confronted with unverified claims of the Ford administration as to coal production losses, rise in unemployment, and increase in utility rates which would allegedly be the consequences of the legislation, if passed, Congress is preparing once again to send a bill to the White House.

2 Fortunately, much of the previous atmosphere of intense conflict has vanished with President Carter's assurance that he supports a strong surface mine bill. Nevertheless, ther remains a contention that the coalproducing States have brought the stringency of their reclamation laws and the level of

their enforcement into line with requirements of the proposed Federal bill, thus obviating the necessity for a national surface mining reclamation law.

2 The Committee on Energy and Natural Resources, formerly the Interior and Insular Affairs Committee, has carried the burden of preparing surface mining reclamation legislation, under the dedicated and able leadership of the chairman of the Public Lands and Resources Subcommittee, Senator Lee Metcalf.

2 In order to examine the validity of this claim, Senator Metcalf in November 1976 circulated a questionnaire to all the relevant State regulatory agencies requesting data as to the adequacy of their reclamation laws and regulations and the effectiveness of their enforcement, based upon standards set forth in the bill which was then before Congress, H.R. 13950.

2 The States' response, while slow in coming, is very informative. I believe committee members will find this compilation, as prepared by the Congressional Research Service, helpful during their consideration of the Surface Mining Control and Reclamation Act of 1977.

2 HENRY M. JACKSON, Chairman.

LETTER OF TRANSMITTAL

{3} THE LIBRARY OF CONGRESS, CONGRESSIONAL RESEARCH SERVICE, Washington,
D.C., April 25, 1977.

3 Hon. HENRY M. JACKSON, Chairman, The Senate Committee on Energy and Natural Resources, U.S. Senate, Washington, D.C.

3 DEAR SENATOR JACKSON: In response to your request, we are submitting a study of the scope and effectiveness of State surface mining laws.

3 The report includes an analysis of information provided by the States in response to a survey conducted by the committee, along with a comparison of State laws with proposed Federal legislation and an analysis of recent policy reports on State surfacing mining laws.

3 The study was prepared by Duane A. Thompson and David M. Lindahl, Analysts in our Environment and Natural Resources Policy Division. The selected bibliography was prepared by the Library Services Division.

3 We hope this study adequately serves your committee's needs as well as those of other committees and Members of Congress interested in the legislation related to the regulation of surface coal mining.

3 Sincerely, GILBERT GUDE, Director.

INTRODUCTION

{4} The Senate Committee on Energy and Natural Resources recently surveyed State regulations of mining. To do so, the appropriate departments of the State governments were sent questionnaires that sought information concerning the abandoned lands reclamation programs of the States, the adequacy of their mine inspections, the effectiveness of citizen complaints about alleged violations of the mining laws, the extent to which States enforce their mining laws, and the sufficiency of such measures as bonding that States use to promote reclamation of mined lands. The following report reviews and presents the information obtained by the survey. Moreover, the following report attempts to provide additional information such as a legislative history of the Surface Mining Control and Reclamation Act, current legislation that would provide Federal law to govern surface mining, and background information. Taken as a whole, this report is designed to assist the Committee in determining whether or not Federal legislation to regulate surface mining is necessary and, if it is, what that legislation might contain. Finally, under the policies established by Congress, CRS cannot and does not take any position in favor of or against H.R. 13950, H.R. 2 (which has replaced it), or any other bill now being considered by Congress that would affect mining in the United States.

LEGISLATIVE HISTORY OF THE SURFACE MINING CONTROL AND RECLAMATION ACT

3 The Surface Mining Control and Reclamation Act has received major attenion from the last three Congresses. During the 93rd Congress, First Session, extensive hearings were held in both the House of Representatives and the Senate. Using the information offered by representatives of the coal mining industry, environmental groups, and various Federal, state, and local government agencies, the Congress drafted compromise legislation in the form of S. 425. This piece of legislation was pocket vetoed by the President at the close o the 93d Congress.

3 On February 6, 1975, the President transmitted to Congress, a letter which proposed 27 suggested changes in the legislation, 8 of which were considered critical by the administration. The objections offered by the administration and the reaction of the Congress to the suggestions included the following:

3 [Selected from "Conference Report - Surface Mining Control and Reclamation Act of 1975"]

3 CRITICAL CHANGES

3 1. Citizen suits. Administration Recommendation : "S. 425 would allow

citizen suits against any person for a 'violation of the provisions of this Act'. * * * Citizen suits are retained in the Administration bill, but are modified * * * to provide for suits against (1) the regulatory agency to enforce the act, and (2) mine operators where violations of regulations or permits are alleged."

3 Conference Report - Section 520: Modifies language to meet Administration objection.

3 2. Stream siltation. Administration Recommendation : "S. 425 would prohibit increased stream siltation - a requirement which would be extremely difficult or impossible to meet and thus could preclude mining activities. In the Administration's bill, this prohibition is modified to require the maximum practicable limitation on siltation.

3 Conference Report - Section 515(b)(11)(B): Clarifies language so as to avoid interpretation feared by Administration.

3 3. Hydrologic disturbances. Administration Recommendation : "S. 425 would establish absolute requirements to preserve the hydrologic integrity of alluvial valley floors - and prevent offsite hydrologic disturbances. * * * In the Administration's bill, this provision is modified to require that any such disturbances be prevented to the maximum extent practicable so that there will be a balance between environmental protection and the need for coal production."

3 Conference Report - Section 515(b)(10)(F): Modifies language to avoid "absolute requirements" objected to by Administration.

3 4. Ambiguous terms. Administration Recommendation : "In the case of S. 425, there is great potential for court interpretations of ambiguous provisions which could lead to unnecessary or unanticipated adverse production impact. The Administration's bill provides explicit authority for the Secretary to define ambiguous terms so as to clarify the regulatory process and minimize delays due to litigation."

{4} Conference Report : Does not adopt Administration recommendation.

4 5. Abandoned land reclamation fund. Administration Recommendation : "S. 425 would establish a tax of 25~ per ton for underground mined coal and 35~ per ton for surface mined coal to create a fund for reclaiming previously mined lands that have been abandoned without being reclaimed, and for other purposes: * * * The Administration bill would set the tax at 10~ per ton for all coal * * * which would be ample."

4 "Under S. 425 funds accrued from the tax on coal could be used by the Federal government (1) for financing construction of roads, utilities, and

public buildings on reclaimed mined lands, and (2) for distribution to States to finance roads, utilities and public buildings in any area where coal mining activity is expanding. * * * The Administration bill does not provide authority for funding facilities."

4 Conference Report - Section 401(d): Reduces reclamation fee on underground mined coal to 15~ per ton. Does not restrict the scope of the program.

4 6. Impoundments. Administration Recommendation: "S 425 could prohibit or unduly restrict the use of most new or existing impoundments, even though constructed to adequate safety standards. In the Administration's bill, the provisions on location of impoundments have been modified to permit their use where safety standards are met.

4 Conference Report - Section 515(b)(13): Provides that Corps of Engineers will set location standards for impoundments, and thus eliminates language objected to by Administration.

4 7. National forests. Administration Recommendation: "S. 425 would prohibit mining in the national forests - a prohibition which is inconsistent with multiple use principles and which could unnecessarily lock up 7 billion tons of coal reserves. * * * In the Administration bill, this provision is modified to permit the Agriculture Secretary to waive the restriction in specific areas when multiple resource analysis indicates that such mining would be in the public interest."

4 Conference Report - Section 522(e)(2): Does not adopt Administration recommendations.

4 8. Special unemployment provisions. Administration Recommendation : "The unemployment provision of S. 425(1) would cause unfair discrimination among classes of unemployed persons, (2) would be difficult to administer, and (3) would set unacceptable precedents including unlimited benefit terms, and weak labor force attachment requirements. This provision of S. 425 is inconsistent with Public Law 93-567 and Public Law 93-572 which were signed into law on December 31, 1974, and which significantly broaden and lengthen general unemployment assistance. The Administration's bill does not include a special unemployment provision."

4 Conference Report : Adopts Administration recommendation.

4 "OTHER IMPORTANT CHANGES"

4 1. Antidegradation. Administration Recommendation : "S. 425 contains a provision which, if literally interpreted by the courts, could lead to a non-degradation standard similar to that experienced with the Clean Air Act. *

* * Changes are included in the Administration bill to overcome this problem.'

4 Conference Report - Section 102(a): Adopts Administration recommendation

4 2. Reclamation fund. Administration Recommendation : "S. 425 would authorize the use of funds to assist private landowners in reclaiming their lands mined in past years. Such a program would result in windfall gains to the private landowners who would maintain title to their lands while having them reclaimed at Federal expense. The Administration bill deletes this provision."

4 Conference Report - Section 404: Does not adopt Administration recommendation.

4 3. Interim program timing. Administration Recommendation: "Under S. 425, mining operations could be forced to close down simply because the regulatory authority had not completed action on a mining permit, through no fault of the operator. The Administration bill modifies the timing requirements of the interim program to minimize unnecessary delays and production losses."

4 Conference Report - Sections 504 and 506: Includes provisions designed to eliminate possibility of shutdown.

4 4. Federal Preemption Administration Recommendation: "The Federal interim program role provided in S. 425 could (1) lead to unnecessary Federal preemption, displacement or duplication of State regulatory activities, and (2) discourage States from assuming an active permanent regulatory role.* * * In the Administration bill, this requirement is revised to limit the Federal enforcement role during the interim program to situations where a violation creates an imminent danger to publc health and safety or significant environmental harm."

5 Conference Report - Section 502: Does not adopt Administration recommendation.

5 5. Surface owner consent. Administration Recommendation : "The requirement in S. 425 for surface owner's consent would substantially modify existing law by transferring to the surface owner coal rights that presently reside with the Federal government. S. 425 would give the surface owner the right to "veto" the mining of Federally owned coal or possibly enable him to realize a substantial windfall. In addition, S. 425 leaves unclear the rights of prospectors under existing law. The Administration is opposed to any provision which could (1) result in a lock up of coal reserves through surface owner veto or (2) lead to windfalls. In the Administration's bill surface owner and prospector rights would continue as provided in existing law."

5 Conference Report - Section 714: Does not adopt Administration

recommendation.

5 6. Federal lands. Administration Recommendation: "S 425 would set an undersirable precedent by providing for State control over mining of Federally owned coal on Federal lands. In the Administrations bill, Federal Regulations governing such activities would not be preempted by State regulations.'

5 Conference Report - Section 523: Does not adopt Administration recommendation.

5 7. Research centers. Administration Recommendations "S. 425 would provide additional funding authorization for mining research centers through a formula grant program for existing schools of mining. This provision establishes an unnecessary new spending program, duplicates existing authorities for conduct of research, and could fragment existing research efforts already supported by the Federal government. The provision is deleted in the Administration bill."

5 Conference Report - Title III: Does not adopt Administration recommendation.

5 8. Prohibition on mining in alluvial valley floors. Administration Recommention : "S. 425 would extend the prohibition on surface mining involving alluvial valley floors to areas that have the potential for farming or ranching. This is an unnecessary prohibition which could close some existing mines and which would lock up significant coal reserves. In the Administration's bill reclamation of such areas would be required, making the prohibition unnecessary."

5 Conference Report - Section 510(b)(5): Modifies this provision to make it more precise.

5 9. Potential moratorium on issuing mining permits. Administration Recommendation : "S. 425 provides for (1) a ban on the mining of lands under study for designation as unsuitable for coal mining, and (2) and automatic ban whenever such a study is requested by anyone. The Administration's bill modifies these provisions to insure expeditious consideration of proposals for designating lands unsuitable for surface coal mining and to insure that the requirement for review of Federal lands will not trigger such a ban."

5 Conference Report - Section 522: Modifies this provision to require expeditious administrative action on designations so as to avoid any moratorium.

5 10. Hydrologic data. Administration Recommendation : "Under S. 425, an applicant would have to provide hydrologic data even where the data are already available - a potentially serious and unnecessary workload for small miners.

The Administration's bill authorizes the regulatory authority to waive the requirement, in whole or in part, when the data are already available."

5 Conference Report - Section 507(b)(11): Does not adopt Administration recommendation.

5 11. Variances Administration Recommendations : "S. 425 would not give the regulatory authority adequate flexibility to grant variances from the lengthy and detailed performance specifications. The Administration bill would allow limited variances - with strict environmental safeguards - to achieve specific post-mining land uses and to accommodate equipment shortages during the interim program."

5 Conference Report - Section 515(c): Does not adopt Administration recommendation.

5 12. Permit fee. Administration Recommendation : "The requirement in S. 425 for payment of the mining fee before operations begin could impose a large 'front end' cost which could unnecessarily prevent some mine opening or force some operators out of business. In the Administration's bill, the regulatory authority would have the authority to extend the fee over several years."

{6} Conference Report - Section 507(a): Adopts Administration recommendation.

6 13. Preferential contracting. Administration Recommendation : "S. 425 would require that special preference be given to reclamation contracts to operators who lose their jobs because of the bill. Such hiring should be based solely on an operators reclamation capability. The provision does not appear in the Administration's bill."

6 Conference Report - Adopts Administration Recommendations.

6 14. Any class of buyer. Administration Recommendations : "S. 425 would require that lessees of Federal coal not refuse to sell coal to any class of buyer.This could interfere unnecessarily with both planned and existing coal mining operations, particularly in integrated facilities. This provision is not included in the Administration's bill."

6 Conference Report - Section 523(e): Modiies language to accommodate Administration concern.

6 15. Contract authority, Administration Recommendation : "S. 425 would provide contract authority rather than authorizing appropriations for Federal costs in administering the legislation. This is unnecessary and inconsistent with the thrust of the Congressional Budget Reform and Impoundment Control Act.

In the Administration's bill, such costs would be financed through appropriations."

6 Conference Report - Section 712(a): Does not adopt Administration recommendation.

6 16. Indian lands, Administration Recommendation : "S. 425 could be construed to require the Secretary of the Interior to regulate coal mining on non-Federal Indian lands. In the Administration bill, the definition of Indian lands is modified to eliminate this possibility."

6 Conference Report - Section 701(9): Adopts Administration recommendation.

6 17. Interest charge. Administration Recommendations : "S. 425 would not provide a reasonable level of interest charged on unpaid penalties. The Administration's bill provides for an interest charge based on Treasury rates so as to assure a sufficient incentive for prompt payment of penalties."

6 Conference Report - Section 518(a): Adopts Administration recommendation.

6 18. Prohibition on mining within 500 feet of an active mine . "This prohibition in S. 425 would unnecessarily restrict recovery of substantial coal resources even when mining of the areas would be the best possible use of the areas involved. Under the Administration's bill, mining would be allowed in such areas as long as it can be done safety."

6 Conference Report - Section 515(b)(12): Does not adopt Administration recommendation.

6 19. Haul roads. Recommendation : "Requirements of S. 425 could preclude some mine operators from moving their coal to market by preventing the connection of haul roads to public roads. The Administration's bill would modify this provision."

6 Conference Report - Section 522(e)(4): Adopts Administration recommendation.

6 Source: Surface Mining Control and Reclamation Act of 1975, Conference Report to Accompany H.R. 25, 94th Congress, 1st Session, Report No. 94-101, May 2, 1975.

6 At the beginning of the 94th Congress, the House and Senate took the Administration's suggested changes under advisement and incorporated many of them into its Joint Conference bill, H.R. 25. Despite the efforts of the Congress to compromise on this matter (Congress accepted six of the eight critical changes and ten of the seventeen important changes suggested by the

Administration), the President vetoed H.R. 25 on May 20, 1975. The veto was very nearly overridden in the House on June 10, 1975, but failed by a margin of three votes.

6 In his veto message, President Ford indicated that he could not sign the bill for the following reasons:

6 1. As many as 36,000 people would lose jobs when unemployment already is too high.

{7} 2. Consumers would pay higher costs - particularly for electric bills - when consumer costs are already too high.

7 3. The Nation would be more dependent on foreign oil - when we are already overly dependent and dangerously vulnerable.

7 4. Coal production would be unnecessarily reduced - when this vital domestic energy resource is needed more than ever.

7 The President said that the Department of the Interior and the Federal Energy Agency had estimated that:

7 . . . if this bill were to become law, a production loss of 40 to 162 million tons would result in 1977. This would mean that six to twenty-four percent of expected 1977 coal production would be lost. Actually, production losses resulting from H.R. 25 could run considerably higher because of ambiguities in the bill and uncertainties over many of its provisions.

7 Later in his veto message, the President admitted that the legislation he had sent to Congress would have resulted in coal production losses that would have been tolerable if Congress had enacted the "comprehensive energy package" that he had proposed. To many, this latter statement was an indication that the surface mining bill was not judged on its own merits by the President, but instead was rejected because it was an element of a much larger energy policy which was less desirable to the Administration.

7 In a news conference on May 19, 1975, the day before the President vetoed the bill, FEA Administrator Frank Zarb, in responding to a question of whether or not the lack of a total energy policy by Congress was the reason that the President would veto the surface mining bill answered:

7 If a national energy program was in place, and if we were already underway in reducing our consumption levels of oil, and if we were already underway in putting those measures into place to get additional production between now and 1980, then perhaps this bill might have been examined differently.

7 In order to give the administration an opportunity to substantiate its production loss estimates, the Subcommittee on Energy and the Envirnment and the Subcommittee on Mines and Mining of the House Interior Committee (along with members of the Senate Interior Committee who had been invited to participate in the proceedings) in joint action held justification hearings on June 3, 1975. The administration was represented by Mr. Frank Zarb (Administrator, Federal Energy Administration), Mr. John Hill (Deputy Administrator, Federal Energy Administration), Mr. Eric Zausner (Acting Deputy Administrator, Federal Energy Administration), Dr. Thomas Falkie (Director, United States Bureau of Mines), Mr. Raymond Peck (Office of General Counsel, Department of Commerce), and Mr. Rogers C. B. Morton (Secretary of Commerce).

7 Other individuals representing the Bureau of Mines, the Federal Energy Administration, and the Department of the Interior were also present at the proceedings.

7 At the proceedings, the Administration representatives repeated their assertions that the bill offered by Congress would result in lost coal production and associated employment within the industry. To justify their estimates, the witnesses used figures from a paper published by Dr. William Miernyk, Professor of Economics and Director of the Regional Research Institute at West Virginia University, n1 in conjunction with coal production loss estimates prepared by the Bureau of Mines staff. This line of reasoning was refuted during the hearings, however, when one of the Committee members informed the witnesses that the study prepared by Dr. Miernyk did not predict any impact on employment within the industry but did illustrate the interrelationship of the coal industry to other sectors of the economy in Appalachia.Later, the author informed the Subcommittees and the press that the information in his study had been misused by the Administration. Furthermore, Senate members participating in the hearings pointed out that the testimony being offered was inconsistent with earlier statements made by Administration officials.

7 n1 William H. Miernyk, Environmental Management and Regional Economic Development, Regional Research Institute, West Virginia University, Morgantown, W.Va., Nov. 6. 1971.

{8} Senator Lee Metcalf emphasized that in February of 1975, Interior Secretary Rogers Morton has assured the House Interior Committee that the implementation of the legislation would actually increase the number of jobs within the industry since the amount of production that would be lost from the surface mines would have to be replaced by production from underground mining which is more labor intensive. n2 A crucial element to the proceedings, however, was a list which was to be supplied by the Administration to the Committees that would have identified some of the actual mines that would have been shut down by the implementation of the surface mining bill. This list was never supplied. Supporters of the bill felt that the inability of the Administration to provide

this list and the actual methodology used to calculate the aggregate production loss figures and associated unemployment damaged the credibility of the case against regulation of surface mining at the Federal level. This was not enough, however, to provide sufficient impetus to override the Presidential veto, although the House vote was only three votes short of the total needed for an override.

8 n2 Allen F. Agnew. The U.S. Bureau of Mines, prepared by the Senior Specialist Division of the Congressional Research Service for the Senate Committee on Interior and Insular Affairs, September 1976, p. 152.

8 Later in the 94th Congress, two bills, amended to meet the objections of the Administration, were introduced. The first, H.R. 9725, as introduced, was virtually identical to the vetoed H.R. 25.

8 Technical changes which would have delayed the implementation of the provisions were made in order to account for the passage of the time from the consideration of H.R. 25 and the implementation of H.R. 9725.

8 The Committee did, however, add language to allow mining in alluvial valley floors by operators who had produced coal in commercial quantities during the year preceding the enactment of the Act or who had obtained specific authority to mine in alluvial valley floors from the appropriate State agency.

8 H.R. 9725 was reported to the House Rules Committee on March 12, 1976. The bill failed, however, to receive a rule in the Committee. Although a petition was circulated to take the bill directly to the floor of the House, the petition failed to receive the required number of signatures and died in the Rules Committee.

{9} In a final effort in the 94th Congress to pass legislation, H.R. 13950 was introduced.This bill was also virtually identical to earlier legislation, but it underwent some changes in the House Interior Committee before being reported. In order to make the legislation more acceptable to the Administration, changes were made in the bill to phase in its provisions more gradually in order to give the small and intermediatesized operators time to comply with its provisions. Under H.R. 13950, the implementation of the bill would have been phased in over a period of three years. According to the Subcommittee report on the bill:

9 H.R. 13950 retains the basic framework and concepts of the previous bills. The time periods for compliance have been extended, however, and this modification should mitigate the administrative burdens attendant to a new regulatory scheme. As the bill is now drafted, after enactment of the legislation coal surface mines would begin to become subject to a system of reclamation standards and administrative procedures that are phased in over a

period of 26 to (possibly) 38 months. In many cases, the standards and procedures will be compatible with current state laws. Where they are not, states are given over 2 years to amend their laws to conform with the minimum national standards required by the new law.

9 In spite of the Committee's efforts to report a bill acceptable to the Administration, Mr. Kent Frizzell, Acting Secretary of the Interior, indicated in the following letter, dated June 22, 1976, to the Honorable James Haley, Chairman of the House Committee on Interior and Insular Affairs, that the Administration was still opposed to the legislation which it considered to be essentially unchanged from H.R. 25.

9 UNITED STATES DEPARTMENT OF THE INTERIOR, OFFICE OF THE SECRETARY,
Washington, D.C., June 22, 1976.

9 Hon. JAMES A. HALEY, Chairman, Committee on Interior and Insular Affairs, House of Representatives, Washington, D.C.

9 DEAR MR. CHAIRMAN: Your Committee has before it H.R. 13950, the "Surface Mining Control and Reclamation Act of 1976," which is based largely on previous legislation considered by the Congress. Its antecedents include H.R. 25, which was vetoed by the President on May 20, 1976, and a similar bill, H.R. 9725, which was subsequently reported by your Committee but denied a rule for action by the House.

9 We have carefully reviewed H.R. 13950 and conclude that it is unacceptable for essentially the same reasons as the earlier measures.

9 Unemployment in this country remains at unacceptably high levels, but H.R. 13950 could foreclose substantial employment in the coal industry and the communities dependent on it. H.R. 13950 would add significantly to the costs of mining coal and, to the extent that it would cause a decline in coal production, it would require use of scarce higher priced fuel alternatives to meet projected energy demands of the Nation. The need for foreign petroleum would increase in the face of a situation which today finds this Nation more dependent on foreign sources than when the President vetoed H.R. 25 over a year ago. We simply cannot afford unbalanced, inflexible legislation which would stifle our efforts to double coal production by 1985.

9 I recognize that H.R. 13950 incorporates changes intended to ameliorate some of the unduly burdensome or inflexible provisions of earlier legislation. Some relief would be provided for small mine operators, who would have suffered heavily both with respect to unemployment and production losses under H.R. 25 and H.R. 9725. Unfortunately this bill is only marginally better than earlier legislation in this regard. Although certain procedures have been made more

flexible, major difficulties remain in the permitting, enforcement and bonding requirements. The timing of the development and implementation of the Federal and State programs set forth, and the relationship between them, remain unrealistic.

{10} In addition to the direct hinderance imposed on coal production, H.R. 13950 would still lead to long regulatory delays, litigation and uncertainty detrimental to the achievement of either our energy or environmental objectives. Other objectionable features of the previous legislation remain untouched by the latest bill.

10 In short, I believe that H.R. 13950 does not cure the major defects in legislation vetoed by the President and that the major elements of the analysis underlying his veto would remain valid with regard to H.R. 13950.

10 Since the President's veto I have implemented a new coal policy which includes comprehensive new surface coal mining regulations for Federal lands. These were developed after considerable discussion to accommodate both our energy and environmental goals.

10 On non-Federal lands, we note a continued trend of strengthening State regulation. The Administration remains firmly convinced that imposition of a major new all-embracing Federal surface mining program could have a devastating effect on coal production, particularly in the light of our steadily deteriorating energy situation.

10 I therefore strongly urge that your Committee not report H.R. 13950.

10 The Office of Management and Budget has advised that there is no obligation to the presentation of this report, and that enactment of H.R. 13950 would not be in accord with the program of the President.

10 Sincerely yours,

10 KENT FRIZZELL, Acting Secretary of the Interior.rior.

CURRENT LEGISLATION

{11} Early in the first session of the 95th Congress, two bills establishing Federal regulation of surface coal mining were introduced. The House version, H.R. 2, is virtually identical to the previously described H.R. 13950 of the 94th Congress. The Senate version, S. 7, does contain some differences. Included in these differences are those relating to the establishment and funding of state mining and mineral resource and research institutes, the levying of a tax on coal for the establishment of an abandoned mines reclamation fund, and the protection of surface owners rights in instances

where the surface is under private control and the minerals are owned by the Federal government.

11 Title III of H.R. 2 provides for the establishment of mining and mineral resource and reserach institutes. The title would establish a comprehensive framework for the designation of eligible colleges and universities and would authorize funds for the conduct of research pursuant to the provisions of that title. Title III also would require the dissemination of the findings resulting from research by the designated mineral resource institutes. Senate bill S. 7 does not contain similar provisions.

11 With regards to the establishment of an abandoned mines reclamation fund, H.R. 2 would require that a tax on coal, in the amount of 35~/ton for surface mined coal and 15~/ton for underground mined coal, be levied in order to establish the fund. The tax would be levied on all coal regardless of its ownership, either private, state, or Federal. Senate bill S. 7 while establishing the same reclamation fund, would apply the tax only to that coal which is produced from Federal lands.

11 The House version, H.R. 2, is virtually identical to the previously described H.R. 13950 of the 94th Congress. The Senate version, S. 7, does contain some differences. Included in these differences are those relating to the establishment and funding of state mining and mineral resource and research institutes, the levying of a tax on coal for the establishment of an abandoned mines reclamation fund, and the protection of surface owners rights in instances where the surface is under private control and the minerals are owned by the Federal government.

11 The most controversial of the differences in the two bills is that dealing with mining on lands where the coal is Federally owned but the surface is privately owned. In H.R. 25 the House and the Senate, determined in joint conference that the best way to protect the rights of farmers and ranchers in the West who choose not to have coal mined from under their lands would be to make it mandatory for the mine operators to obtain their written permission prior to mine development.At the same time, in order to prevent surface owners from receiving windfall profits from the mine operators for permission to mine coal, Congress would establish a system for the evaluation of the surface owner's rights. Under this system, the appraisal would be made by three individuals, the first appointed by the land owner, the second appointed by the Secretary of the Interior, and the third appointed by the first two appointees. This type of arrangement would assure both the surface owner and the mine operator of a fair price for the surface interests attached to the land. This arrangement is retained in the current House version of the surface mining bill. In the Senate version, however, neither the mine operator nor the surface owner are consulted in the decision to mine or not to mine the coal because regardless of the wishes of the surface owner, the development of the coal is prohibited in

all cases where the ownership of the coal resources and the surface is different.

{12} Other technical differences exist between the two bills, however, a detailed comparison is beyond the scope of this study.

BACKGROUND AND RECENT DEBATE

{13} Over the course of the debate on the issue of Federal Regulation of coal surface mining, the emphasis shifted at least twice. In the initial debate during the 93d and 94th Congress, opponents of the legislation insisted that to impose further regulations on the industry would force many operators (especially the small ones) out of business, would raise the price of coal produced by the operators capable of remaining in business, would increase the cost of electricity produced by coal-fired generating plants, and would increase America's reliance upon imported energy resources. This carried with it the prospects of increased U.S. trade deficits and compromised United States foreign policy with respect to oil-producing Nations. This argument was bolstered by the actions of the Organization of Arab Petroleum Exporting Countries (OAPEC), in October of 1973, imposing an oil embargo against the United States which lasted until March, 1974.During the embargo, through the initiatives of the larger Organization of Petroleum Exporting Countries (OPEC) the price of oil to the U.S. quadrupled. In the wake of the embargo and the oil price increases, the price of steam coal in the United States doubled and, in some cases, tripled.

13 Following these developments, spokesmen for the coal mining industry asserted that any new regulation of the industry, especially any as "stringent" as that proposed for surface mining, could only serve to damage America's goal of energy independence by 1985.

13 Since that time, the debate over the proposed regulation of surface mining first shifted from the production losses that could occur if the legislation were enacted to whether or not the production loss estimates made by the former Administration were valid and were made in good faith. The second shift in emphasis occurred after the close of the 94th Congress. At that time, some mining companies conceded that the implementation of the legislation would not have resulted in the large production losses that had been initially forecast. In an article which appeared in the Wall Street Journal on July 28, 1976, n1 shortly after Congress upheld the Presidential veto of the strip mining bill, H.R. 25, several coal company representatives were quoted as saying that they could have lived with the surface mining bill. Mr. John Witt, Land Commissioner for the State of Kentucky said that, in conjunction with his State's own strip mining law, "I can't see where the federal bill would have curtailed our mining and reclamation in any severe way."

13 n1 "New Outlook for Coal: Not So Sensational - And Not So Troubled," The Wall Street Journal, July 28, 1976, pp. 1 and 23.

13 A survey was conducted by the Environmental Protection Agency, the U.S. Bureau of Mines, and the Federal Energy Administration in order to determine the actual reclamation cost that would be incurred by mine operators under the provisions of the surface mining bill. n2 Aside from the extreme difficulty that the agencies had in collecting accurate information for the survey, the conclusion was, at that time, the Administration did not know what the real costs of the legislation would be. The results of the survey were also widely thought to be damaging to the credibility of the Administration's assessment of the bill's impact of surface mine operators.

13 n2 Coal Week, May 31, 1976, p. 4.

{14} The current industry contention is that the coal-mining states are already sufficiently regulating surface mining at the state level, thereby obviating the need for Federal controls. A large majority of the industry and trade association witnesses at both the coal briefings held by the House Interior and Committee on January 10 and 12, 1977 and the hearings conducted by both the House and Senate Interior Committees during February and March testified that the states are already doing an adequate job of regulating strip mining. According to the industry, imposing an additional level of regulation on top of the existing one would subject the industry to hardships at a time when increased production is more crucial than ever.

14 The purpose of this study was to determine the effectiveness of the State enforcement agencies. To accomplish this, the Senate Committee on Energy and Natural Resources conducted a survey of the various state agencies responsible for policing surface coal-mining activities within their jurisdictions.

14 The first State to establish regulations for the surface mining of coal was West Virginia in 1939. By 1975, that number had increased to 38 States. Most of these State programs are very recent with 32 having been implemented between 1970 and 1975. n3 Some of the state programs for the regulation of the industry and the reclamation of mined lands are relatively effective while others are little more than token efforts. Similarly, enforcement of the existing laws in some of the states is very strict, while in others it may be non-existent.

14 n3 A Guide to State Programs for the Reclamation of Surface Mined Areas, United States Geological Survey Circular 731, Resource and Land Investigations Program (RALI), by Edgar A. Imhoff, et al., 1976.

14 In order to determine the similarities and differences in the surface mining laws of the various states, the Resources and Land Investigations program

of the United States Geological Survey, under the direction of Mr. Edgar Imhoff prepared a comparison, as shown in Table 1, of the State surface-mined area reclamation programs as of December, 1975.

{15} [See Table in Original]

{16} [See Table in Original]

{17} [See Table in Original]

{18} [See Table in Original]

{19} [See Table in Original]

{20} According to the Imhoff study, early State reclamation laws addressed only coal mining. Rules were promulgated requiring revegetation and, in some cases, reduction of spoil-pile slopes as a means of converting strip mined land to a land-cover type that would be of economic value and would reduce erosion. Near the close of the 1960's, however, many states expanded the coverage of their laws to include minerals other than coal, such as sand and gravel, clay, stone, etc.

20 The primary problem alleged with individual states regulating mining for coal or other minerals has been that a uniform set of regulations has been generally lacking. This type of arrangement allows the states to regulate mining activities according to the unique conditions which may exist in the individual states. In the case of coal, however, when one state passes stringent rules for the control of the mining industry and enforces these rules while a neighboring state does not, it creates a condition of unfair competition for mine operators in the first state who have higher costs but must compete for the same customers with operators in the second state.

20 Reclaiming mined land is expensive and the proponents of mining legislation have not denied this. Such additional costs are usually added to the price of coal along with other costs such as labor and amortization of the physical plant and equipment. If mine operators are not required by the State to reclaim mined land, they can pass this saving on to their consumers in the form of lower prices, thereby undercutting mine operators in other states who must reclaim land at additional costs. Therefore, the non-existence of a uniform set of requirements for mine operators simultaneously favors some and impairs the ability of others to compete in the open market for coal customers. This view was expressed in a statement before the Senate Subcommittee on Minerals, Materials, and Fuels of the Committee on Interior and Insular Affairs on March 2, 1977, by Mr. Robert A. Bohm, Associate Professor of Finance at the University of Tennessee who testified that a surface mining reclamation law is needed now "to provide coal mining states minimum standards of reclamation upon

which to compete in the coal market."

20 Many State officials have expressed apprehension about the Federal government regulating an activity within their boundaries, which they claim could be better regulated by State and local officials. Much of this anxiety, however, is apparently based on a misunderstanding of the Federal bills. As they are written, both the House and Senate surface mining bills merely establish a framework within which the individual States may conduct their own reclamation and enforcement programs. Only in instances where a State is unwilling to establish an acceptable program for reclamation would the Federal government become actively involved in the regulation of coal surface mining within that State.

20 Much of the debate has centered on the adequacy of some of the individual state enforcement programs. Because of a concern regarding the capability of some states to properly enforce existing surface mining laws, the Center for Science in the Public Interest conducted a survey in 1975 to determine whether or not the States being surveyed (Kentucky, West Virginia, and Pennsylvania) were capable of and committed to a program of sound regulation. n4 The States included in the survey are major producers of coal through surface mining. At the time of the survey, the production figures for the three states for surface mining were as follows:

{21}

*4*1974 SURFACE MINED PRODUCTION FOR THE 3 STATES SURVEYED

4[In thousand tons]

	Total State surface mining production	Percent of State total production	Percent of U. S. total surface mining production
Kentucky	73,700	53.7	22.6
Pennsylvania	38,213	47.5	11.7
West Virginia	20,243	19.8	6.2

21 n4 Enforcement of Strip Mining Laws, by the Center for Science in the Public Interest, 1975. (CSPI).

21 According to the CSPI report, over the last few years, in Kentucky there has been a sharp increase in the number of permits issued to operators for the development of surface coal mines in Kentucky. In 1974, the State issued a total of over 1400 permits, up from 677 the preceding year. Unfortunately, at

the time of the survey, the office responsible for the reviewing of the mining permits had only three staff members, two of whom were responsible for permit review in the eastern part of the State and the third was responsible for the western half.

21 As of August, 1975, notwithstanding the doubling of the permit applications over the preceding year, the staff responsible for reviewing these permits had not been increased. Assuming that there are 220 days in the standard working year, this would mean that each of the three staff members would be responsible for processing at least two permit applications each day of the year. CSPI concluded that:

21 . . . Kentucky's system of permit review is conducted in a deficient and hurried fashion by an untrained and understaffed section of DNREP (Department of Natural Resources and Environmental Protection). Inspectors - also involved in the permit review procedure - are overworked and incompetent. Citizens, who could serve as a check upon the state's review system are prevented from participating by lack of notice.

21 Also, according to the following salary schedule of the State inspectors which was included in the CSPI report, the field inspection staff earns a relatively low wage, especially when compared with the wages of the miners:

	Amount per month	Amount per year
Inspectors	$583	$6,996
Senior inspectors	710	8,620
Chief inspectors	802	9,624
Supervisor	951	11,312
Reclamation supervisor	1,048	12,576

21 The report also observed that the extremely low salaries of the inspectors, especially the field inspectors, made them prime targets for favors from mine operators less than anxious to comply with the State's surface mining laws.

{22} In West Virginia, the authors concluded that the staff of the regulatory agency had, in some instances, become too closely allied with the operators they were responsible for regulating and that the problem was not one of having an adequate staff, but rather, one of inefficient application of the staff that was available.

22 Because one of the provisions of the existing surface mining law was in litigation at the time the report was written, the authors also reported that the regulatory agency was being too lenient because it expected the court to rule in favor of the operators. Finally, the lack of adequate records,

particularly on the frequency of inspections at each mine, was cited as a weakness of the State's regulatory system.

22 CSPI gave the state of Pennsylvania relatively high marks in the field of reclamation enforcement, primarily in the bituminous coal fields. In the anthracite areas in the eastern part of the State, however, the authors indicated that there was a general lack of inspections. Crucial to this lack of inspections was the feeling that many of the field inspectors had been intimidated by either mine operators or workers whenever they approached the mines to conduct their inspections. CSPI did indicate that Pennsylvania's law did contain elements which served as motivations to reclaim the land. Among these were the fines that could be assessed against operators in noncompliance, the bonding requirements of the State law, and the authority of the field inspectors to issue cease and desist orders on-site. According to the report, the State has the option of imposing a fine of $5 ,000 and/or imprisoning the operator or relieving the operator of his total profits during the course of his violations. The threat of losing total profits from the operation probably acts as more of a deterrent against violating the law than does the $5 ,000 fine, especially for the larger operators who could well afford to pay the fine. With respect to the bonding provisions, the State requires that a bond be posted which would be sufficient for the State to reclaim the land in the event that the operator chooses to forfeit the bond. Finally, as an incentive for operators to keep their mines in compliance with existing regulations, the State has empowered the field inspectors to issue cease-and-desist orders at the mine sites.According to CSPI, this type of action is considered by many to be a doubled-edged sword which cuts off the company's profits immediately by halting the operation and forces remedial action before operations may be resumed.

22 CSPI did indicate, however, that the salaries of some of the inspectors, which on the average are lower than the industry workers, have made them the target for occasional favors from some operators. The report stated that there is one case on record in which an inspector was convicted of accepting bribes for not enforcing the law. The authors concluded that, of the three States which were surveyed, Pennsylvania appeared to have the most diligent enforcement operations. No statement by the coal mining industry refuting the findings of the CSPI report could be found.

22 Because of the conflicting claims by proponents and opponents of Federal legislation to regulate surface mining and because of the charges and countercharges in various reports, the Senate Committee on Energy and Natural Resources recently sought information directly from the States involved. In order to determine the effectiveness of existing State laws, the staff of the Committee and the Congressional Research Service developed an extensive questionnaire which was sent to 39 states that have surface mining laws for coal or other minerals. The questionnaire is reprinted in its entirety on the following pages, along with the CRS analysis of the responses by the states and

a matrix summary of that information.

SUMMARY

{25} The effectiveness of State regulation of surface mining, as indicated in responses to a questionnaire sent by the Senate Committee on Energy and Natural Resources, varies greatly from State to State. The results from the survey suggest that most requirements of the State laws are far less stringent than the proposed Federal regulations in H.R. 13950 would be. The survey also indicates that the relative weakness of these laws is further compounded in many cases by extremely lenient or even non-existent enforcement of the laws that do exist.

25 The usefulness of the Committee's survey is limited by the quality of the responses, which differed widely. Some States provided prompt and complete answers as requested. A large number of states, however, including some that produce significant amounts of coal, made only token responses to the Committee's effort to obtain an accurate determination of the existing extent of state control of this problem. The coal mining industry has claimed that State laws are sufficient to prevent future mining abuses; environmentalists and others dispute this claim. An accurate understanding of the degree to which the States actually regulate surface mining, therefore, appears essential to the resolution of the issue of whether or not Federal controls are needed.

25 Some States expressed interest in formulating a workable surface mining control and reclamation policy for the Federal Government and were grateful for the opportunity to provide input to the legislative process. Much of the information which was forwarded by the states was too complex to fit into the matrix and had to be footnoted for further explanation.

25 Some of the information requiring more detailed analysis was included in the text of the report.

25 As shown in the matrix, virtually all of the states which have surface mining laws require that mine operators first obtain permits before engaging in active mining. This concept appears compatible with the requirements of the Federal bill, H.R. 13950, with which, the various states were asked, by the Senate Energy and Natural Resources Committee through its survey, to compare their respective laws. Even though the permit requirements are similar in most instances, procedures for permits in H.R. 13950 are for the most part much more detailed than those of the States, the Ohio law being an exception. Ohio mining law is very similar to the Federal proposal and requires detailed information from prospective mine operators.

25 ABANDONED LANDS RECLAMATION PROGRAMS

25 Few of the states in the survey have implemented any programs of reclaiming land which was mined prior to the passage of the State mining laws. Exceptions to this include Kentucky and Virginia which have either directly appropriated money for such reclamation or have procured money from other government agencies such as the TVA. Some of the other states have also initiated programs to reclaim abandoned lands by using the proceeds from fines for noncompliance or from permit application fees. Of the States that reported such programs, Kentucky had the largest expenditures with approximately $1 .5 million designated for reclamation of abandoned lands. A large percentage of the coal-producing states which admitted having problems with abandoned lands also indicated that the largest percentage of these lands either had been or were being left to be reclaimed naturally.

{26} MINE INSPECTORS

26 Mine inspection problems reported by the various states consisted of:

26 Inadequate number of mine inspectors for the number of mining operations under permit in the state.

26 Inadequate professional training for surface mine inspectors.

26 Distance of the mine inspectors to the mines being inspected.

26 The inspection capabilities vary considerably from State to State. Some of the key coal-mining states such as Kentucky have ratios of one inspector for 75 coal mines. Others, which are not major coal producers, such as Kansas, have only one inspector for the entire state. In this instance, one individual is responsible for the regulation of the total of 97 surface mining operations in the State. In Georgia, the ratio is one inspector to 85 mines, and in Idaho one to 362. Pennsylvania, one of the most important coal-producing States, replied that it had an inspector-to-mine ratio of between one to 50 and one to 100. Ratios such as these usually require inspectors to devote much less time to the inspection of each mine at the cost of the thoroughness of the inspection. For example, in the case of West Virginia, the law requires inspectors to inspect each mine at least once every two weeks.

26 With the ratio of mine inspectors to mines in West Virginia being about one to 17.5, that law on the face of it could be hard to administer. An inspector has a difficult time inspecting one mine a day. Given a five-day work week, an inspector in two weeks would have to exert a rigorous effort to thoroughly review 10 mines; 17.5 mines would be that much more difficult. Such high ratios may be the result of inadequate fuding for mine inspection in the various states; if true, the ratios could be alleviated by the implementation of Federal strip mine controls with their associated appropriations for mine inspection. In any case, if the demands for coal production projected by the

FEA materialize between now and 1985, it is open to question whether the present mine inspection personnel can assume the additional workload that will be generated by the almost certain increase in the number of surface mines that will be opened.

26 Many State inspection officers have not had adequate training to detect reclamation problems. A large number of these officials are not graduates of mining engineering programs and, according to the States, lack training in other disciplines such as agronomy, forestry, hydrology, and geology, which are vital to adequate reclamation efforts. It should be noted, however, that many of the enforcement officers that lack the technical training or have degrees in liberal arts are older and have been with the enforcement agencies for many years and thus have much experience. The States, however, do appear to be hiring young field inspectors with more substantial backgrounds in environmental sciences and actual mining experience.

{27} The location of mine inspectors near the mines which they are to inspect was also perceived as a problem. Such close proximity could result in the intimidation of mine inspectors and their families by uncooperative operators; in some cases, substandard wages of the mine inspectors could make them susceptible to favors from the mining industry.

27 CITIZENS COMPLAINTS

27 Many State mining laws do not have adequate mechanisms for the filing, consideration, and disposition of citizen complaints related to coal surface mining. This is evidenced by the disproportionately small number of operations that were either halted or modified as a result of citizen complaints. With the exception of Kentucky and West Virginia, very few of the major coal-mining states conducted hearings arising from such complaints. Although many of the opponents of the Federal bills have complained that the review and hearings procedures in the bills would be an unnecessary hindrance, the State survey reveals that some improvements in the present State systems could be made. Of all of the States participating in the survey, Tennessee, South Dakota, Montana, and Kentucky were the only ones which indicated that a mining operation had either halted or been modified as a result of a citizen complaint.

27 ENFORCEMENT

27 The survey also indicates that even when violations have been discovered in a State, fines assessed against the operators were small in size and in number. Kentucky, Montana, Ohio, and Virginia were among the few States which have actually assessed fines against mine operators for non-compliance with the law. One of the largest coal producers, West Virginia, indicated in the survey that no fines or prison sentences had yet been imposed.

27 BONDING

27 The survey indicates that the most serious shortcoming of the state surface-mining laws seems to be that of not requiring an adequate amount of performance bond to insure reclamation in the event of forfeiture by the operator. Indiana, Virginia, Kentucky, Missouri, and Kansas reported that the average amount of performance bond required of the mine operators would not cover reclamation costs in the event that the State has to perform that reclamation itself or award a contract to have the job done. In the case of Indiana, the State agency responded that it had not reclaimed lands under forfeited bond because the costs exceeded the amount of the bond required of the operator. Indiana indicated that the average amount of bond forfeited per acre under permit wwas $2 68.05. When the State accepted estimates for the reclamation of the land, however, it learned that the reclamation cost could range between $2000 and $4000 per acre, leaving a shortfall between $1700 and $3 700 per acre in the amount of performance bond. Not all of the coal-producing States have seen this discrepancy develop. Illinois and Ohio are two states that require apparently adequate amounts of performance bonds, in the $3 000/acre range; some of the other states require the performance bond to be sufficient to reclaim the land, whatever the cost, by the state or by a third party in the event of forfeiture by the operator. This is the same concept proposed by H.R. 13950. In instances where the mining operation is carried on over a long period of time and where contemporaneous reclamation is not required, it may be desirable to require a bond in an amount sufficient to reclaim the affected areas at the end of the projected period for mining. The bond could cover any increases in costs between the time the permit is granted and the actual reclamation is started.

{28} Regardless of the mechanisms used to require reclamation, a feature of the performance bond which would give it more authority is that an amount be set which is sufficient to motivate the operators to completely reclaim the affected areas. The action of forfeiting performance bond in all cases, therefore, should be a less attractive alternative than incurring the cost of adequate reclamation.

STATE SURFACE MINE RECLAMATION QUESTIONNAIRE

{29} The purpose of this inquiry is to gather information concerning State laws and regulations governing surface effects of coal mining, together with information regarding enforcement of those laws, as compared with the requirements of the Surface Mining Control and Reclamation Act of 1976 (H.R. 13950 - 94th Congress). Enclosed for purposes of comparison is a copy of Sections 515 and 516 of this bill.

29 Please supply the following:

29 1. A copy of the current State laws relating to coal surface mining and reclamation, surface reclamation of underground coal mines, and coal waste disposal and impoundments.

29 2. A copy of the current rules and regulations implementing these laws.

29 3. An analysis of the State laws, indicating which specific provisions (if any) are identical with or substantially similar to the environmental protection performance standards contained in Sections 515 and 516 of H.R. 13950.

29 4. An analysis indicating which of the standards in Sections 515 and 516 (if any) could not be complied with, because of peculiar geologic, hydrologic or other physical conditions in your state and why compliance is impossible.

29 5. A list of areas designated by the State as being unsuitable for coal surface mining, if any, and an enumeration of laws under which such areas have been designated.

29 6. An explanation of how, if at all, State law specifically deals with alluvial valley floors.

29 7. An analysis of the reclamation of lands which were abandoned and unreclaimed prior to enactment of State reclamation laws, including a showing of reclamation achieved during the 10-year period 1966 to 1975, and the amount and percent of acreage still to be reclaimed.

29 8. Levels of State appropriations for abandoned mined lands reclamation, covering the 10-year period 1966 to 1975, and actual reclamation expenditures during the same period.

29 9. A description of the State program, if any, for monitoring the long-term effectiveness of reclamation required by alw, with reference to (a) individual surface mines and their vicinity, and (b) groups of surface mines and their affected watersheds.

29 10. Information, based on calendar year 1975, for the following:

29 COAL DATA

29 (a) Tons of coal produced by (i) surface mine operations, and (ii) underground mines.

29 (b) Number of surface mine operations producing (i) over 250,000 tons of coal, and (ii) under 250,000 tons of coal.

29 (c) Percent of coal lands within your State which are not affected by State reclamation laws (i.e., Federal or Indian lands).

{30} RECLAMATION FIELD INSPECTIONS

30 (a) Number of trained, full-time reclamation filed inspectors.

30 (b) Ratio of trained, full-time reclamation filed inspectors to surface mine operations under permit or license.

30 (c) Method of hiring reclamation field inspectors - (i) civil service merit system, (ii) patronage system, or (iii) if other, please specify.

30 (d) Average number of years of college-level education and type of professional training of reclamation field inspectors.

30 (e) Salary schedule and numerical distribution of reclamation field inspectors on the salary scale, and median income for your State.

30 (f) Ratio of trained, full-time field inspectors to technical specialists, if any, who are available for back-up purposes.

30 (g) Frequency of announced on-site inspection of surface mine operations.

30 (h) Frequency of unannounced on-site inspection of surface mine operators.

30 (i) Type of follow-up of field inspection reports.

30 (j) Number of operations ceased without formal actions, such as suspension or revocation of license or permit.

30 CITIZEN ACTION

30 (a) Number of citizen complaints against surface mine operations which were registered with the State regulatory agency.

30 (b) List of public hearings which were held regarding citizen complaints against surface mine operations, indicating any remedial actions taken.

30 (c) Number of citizen suits brought against (i) a surface mine operator, (ii) the State regulatory agency.

30 PERMITS AND LICENSES

30 (a) Analysis of suspensions and revocations of permits or licenses issued

under relevant laws, giving reasons for suspensions and revocations.

30 (b) Number of applications for permit or license shich were i) approved without modification, ii) approved with modification, or iii) rejected.

30 (c) Number of applications for permit or license which were modified or rejected upon receipt of a citizen complaint, without holding a public hearing on the complaint.

30 (d) Number of applications for permit or license which were modified or rejected upon receipt of a citizen complaint, after holding a public hearing on the complaint.

30 (e) Method of hiring person primarily responsible for decisions on permit issuance and enforcement.

{31} PERFORMANCE BONDS

31 (a) Average amount of performance bond required per acre under permit or license.

31 (b) Analysis of bonds forfeited, indicating reasons for forfeiture.

31 (c) Average amount of bond forfeited per acre under permit.

31 (d) Number of acres of land reclaimed under forfeited bond.

31 (e) Method of awarding contracts for reclaiming land under forfeited bond.

31 (f) Cost per acre of reclamation under forfeited bond.

31 VIOLATIONS

31 (a) Total fines collected for civil violations.

31 (b) Total fines collected for criminal violations.

31 (c) Average amount of all fines collected per acre under permit.

31 (d) Total fines imposed but not collected, giving reasons for non-collection.

31 (e) Prison sentences imposed for criminal violations, if any.

31 Please forward your response to Mr. D. Michael Harvey, Senate Interior

Committee, 3106 Dirksen Senate Office Building, Washington, D.C. 20510.

RESULTS OF THE SURVEY

{33} ALASKA

33 Officials of the Department of Natural Resources, Division of Minerals and Energy Management for the State of Alaska expressed concern that the environmental protection performance standards established in the Federal surface mining legislation would not be ". . . flexible enough to fit the varied geological, topographical and environmental situations existing in known potential coal mining areas in Alaska." The Department claimed that the proposed law could increase the price of electric power, especially in the interior portions of the State. Furthermore, surface mining legislation is not considered critical in Alaska since there is currently only one operation located on a State lease which is required to be reclaimed contemporaneously. In drafting the Federal legislation, the Congress recognized and appreciated the unique conditions that could be encountered by mining coal and reclaiming land in Alaska and accordingly, included the following provisions which take this into consideration.

33 H.R. 13950

33 ALASKAN SURFACE COAL MINE STUDY

33 SEC. 708. (a) The Secretary is directed to contract with the National Academy of Sciences-National Academy of Engineering for an in-depth study of surface coal mining conditions in the State of Alaska in order to determine which, if any, of the provisions of this Act should be modified with respect to surface coal mining operations in Alaska.

33 (b) The Secretary shall report on the findings of the study to the President and Congress no later than two years after the date of enactment of this Act.

33 (c) The Secretary shall include in his report a draft of legislation to implement any changes recommended to this Act.

33 (d) Until one year after the Secretary has made this report to the President and Congress, or three years after the date of enactment of this Act, whichever comes first, the Secretary is authorized to suspend the applicability of any provision of this Act, or any regulation issued pursuant thereto, to any surface coal mining operation in Alaska from which coal has been mined during the year preceding enactment of this Act if he determines that it is necessary to insure the continued operation of such surface coal mining operation. The

Secretary may exercise his suspension authority only after he has (1) published a notice in the Federal Register and in a newspaper of general circulation in the area of Alaska in which the affected surface coal mining operation is located, and (2) held a public hearing on the proposed suspension in Alaska.

33 (e) There is hereby authorized to be appropriated for the purpose of this section $250,000.

33 The Department of Natural Resources also expressed concern that the provisions of the Federal proposal may not apply to the vast expanses of Indian lands that would be awarded in the Alaska Native Claims Settlement action or to the large amounts of Federal lands within the State. Provisions within the legislation, however, require the Secretary of the Interior to implement a surface mining reclamation program for Federal lands which is just as stringent as that for private lands. Furthermore, Section 710 of the bill directs the Secretary to study the problems associated with the regulation of surface mining on Indian lands and to require that, on or after 135 days from the enactment of the Act, surface coal mining on Indian lands comply with selected provisions in Section 515 establishing the environmental protection performance standards.

{34} (d) On and after thirty months from the enactment of this Act, all surface coal mining operations on Indian lands shall comply with requirements at least as stringent as those imposed by sections 507, 508, 509, 510, 515, 516, 517, and 519 of this Act and the Secretary shall incorporate the requirements of such provisions in all existing and new leases issued for coal on Indian lands.

34 Since there has not been any large-scale development of coal in Alaska, the Department of Natural Resources has not found any need to designate lands within the State as unsuitable for mining. The agency reported that no figures were available concerning the amount of land that had been mined and not reclaimed during the ten-year period from 1966 to 1965, although it did indicate that some contouring and revegetation had been done by operators in the Healy and Matanuska areas.

34 In order to indicate the provisions of Section 515 of the Federal bill which would cause compliance problems for surface mine operators, the Department of Natural Resources prepared the analysis as appears on the following pages.

{35} H.R. 13950

35 ENVIRONMENTAL PROTECTION PERFORMANCE STANDARDS

35 SEC. 515. (a) Any permit issued under any approved State or Federal program pursuant to this Act to conduct surface coal mining operations shall require that such surface coal mining operations will meet all applicable performance standards of this Act, and such other requirements as the regulatory

authority shall promulgate.

35 (b) General performance standards shall be applicable to all surface coal mining and reclamation operations and shall require the operation as a minimum to -

35 (1) conduct surface coal mining operations so as to maximize the utilization and conservation of the solid fuel resource being recovered so that reaffecting the land in the future through surface coal mining can be minimized;

35 (2) restore the land affected to a condition at least fully capable of supporting the uses which it was capable of supporting prior to any mining, or higher or better uses of which there is a reasonable likelihood, so long as such use or uses do not present any actual or probable hazard to public health or safety or pose any actual or probable threat of water diminution or pollution, and the permit applicants' declared proposed land use following reclamation is not deemed to be impractical or unreasonable, inconsistent with applicable land use policies and plans, involves unreasonable delay in implementation, or is violative of Federal, State, or local law;

35 (3) with respect to all surface coal mining operations backfill, compact (where advisable to insure stability or to prevent leaching of toxic materials), and grade in order to restore the approximate original contour of the land with all highwalls, spoil piles, and depressions eliminated (unless small depressions are needed in order to retain moisture to assist revegetation or as otherwise authorized pursuant to this Act); Provided, however, That in surface coal mining which is carried out at the same location over a substantial period of time where the operation transects the coal deposit, and the thickness of the coal deposits relative to the volume of the overburden is large and where the operator demonstrates that the overburden and other spoil and waste materials at a particular point in the permit area or otherwise available from the entire permit area is insufficient, giving due consideration to volumetric expansion, to restore the approximate original contour, the operator, at a minimum, shall backfill, grade, and compact (where advisable) using all available overburden and other spoil and waste materials to attain the lowest practicable grade but not more than the angle of repose, to provide adequate drainage and to cover all acid-forming and other toxic materials, in order to achieve an ecologically sound land use compatible with the surrounding region: And provided further, That in surface coal mining where the volume of overburden is large relative to the thickness of the coal deposit and where the operator demonstrates that due to volumetric expansion the amount of overburden and other spoil and waste materials removed in the course of the mining operation is more than sufficient to restore the approximate original contour, the operator shall after restoring the approximate contour, backfill, grade, and compact (where advisable) the excess overburden and other spoil and waste materials to attain the lowest grade but not more than the angle of repose, and to cover all acid-forming and other

toxic materials, in order to achieve an ecologically sound land use compatible with the surrounding region and that such overburden or spoil shall be shaped and graded in such a way as to prevent slides, erosion, and water pollution and is revegetated in accordance with the requirements of this Act;

{36} (4) stabilize and protect all surface areas including spoil piles affected by the surface coal mining and reclamation operation to effectively control erosion and attendant air and water pollution; even though they have not been backfilled. There are often

{37} (5) remove the topsoil from the land in a separate layer, replace it on the backfill area, or, if not utilized immediately, segregate it in a separate pile from other spoil and, when the topsoil is not replaced on a backfill area within a time short enough to avoid deterioration of the topsoil, maintain a successful cover by quick growing plant or other means thereafter so that the topsoil is preserved from wind and water erosion, remains free of any contamination by other acid or toxic material, and is in a usable condition for sustaining vegetation when restored during reclamation, except if topsoil is of insufficient quantity or of poor quality for sustaining vegetation, or if other strata can be shown to be more suitable for vegetation requirements, then the operator shall remove, segregate, and preserve in a like manner such other strata which is best able to support vegetation;

37 (6) restore the topsoil or the best available subsoil which has been segregated and preserved;

37 (7) protect offsite areas from slides or damage occurring during the surface coal mining and reclamation operations, and not deposit spoil material or locate any part of the operations or waste accumulations outside the permit area;

37 (8) create, if authorized in the approved mining and reclamation plan and permit, permanent impoundments of water on mining sites as part of reclamation activities only when it is adequately demonstrated that -

37 (A) the size of the impoundment is adequate for its intended purposes;

37 (B) the impoundment dam construction will be so designed as to achieve necessary stability with an adequate margin of safety compatible with that of structures constructed under Public Law 83-566 (16 U.S.C. 1006);

37 (C) the quality of impounded water will be suitable on a permanent basis for its intended use and that discharges from the impoundment will not degrade the water quality in the receiving stream;

37 (D) the level of water will be reasonably stable;

37 (E) final grading will provide adequate safety and access for proposed water users; and

{38} (F) such water impoundments will not result in the diminution of the quality or quantity of water utilized by adjacent or surrounding landowners for agricultural, industrial, recreational, or domestic uses;

38 (9) plug all auger holes to a minimum of six feet in depth with an impervious and noncombustible material (such as clay) to prevent the flow of water in or out of such holes.

38 (10) minimize the disturbances to the prevailing hydrologic balance at the minesite and in asssociated offsite areas and to the quality and quantity of water in surface and ground water systems both during and after surface coal mining operations and during reclamation by -

38 (A) avoiding acid or other toxic mine drainage by such measures as, but not limited to -

38 (i) preventing or removing water from contact with toxic producing deposits;

38 (ii) treating drainage to reduce toxic content which adversely affects downstream water upon being released to water courses;

38 (iii) casing, sealing, or otherwise managing boreholes, shafts, and wells and keep acid or other toxic drainage from entering ground and surface waters;

38 (B) conducting surface coal mining operations so as to prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow or runoff outside the permit area above natural levels under seasonal flow conditions as measured prior to any mining, and avoiding channel deeping or enlargement in operations requiring the discharge of water from mines;

38 (C) removing temporary or large siltation structures from drainways after disturbed areas are revegetated and stabilized;

38 (D) restoring recharge capacity of the mined area to approximate premining conditions;

38 (E) replacing the water supply of an owner of interest in real property who obtains all or part of his supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source where such supply has been affected by contamination, diminution, or interruption

proximately resulting from mining.

{39} (F) preserving throughout the mining and reclamation process the essential hydrologic functions of alluvial valley floors in the arid and semiarid areas of the country; and

39 (G) such other actions as the regulatory authority may prescribe;

39 (11) with respect to surface disposal of mine wastes, tailings, coal processing wastes, and other wastes in areas other than the mine working or excavations, stabilize all waste piles in designated areas through construction in compacted layers including the use of incombustible and impervious materials, if necessary, and assure the final contour of the waste pile will be compatible with natural surroundings and that the site can and will be stabilized and revegetated according to the provisions of this Act;

39 (12) refrain from surface coal mining within five hundred feet from active and abandoned underground mines in order to prevent breakthroughs and to protect health or safety of miners: Provided, That the regulatory authority shall permit an operator to mine closer to an abandoned underground mine: Provided, That this does not create hazards to the health and safety of miners; or shall permit an operator to mine near, through, or partially through an abandoned underground mine working where such mining through will achieve improved resource recovery, abatement of water pollution or elimination of public hazards and such mining shall be consistent with the provisions of the Act;

39 (13) design, locate, construct, operate, maintain, enlarge, modify, and remove, or abandon, in accordance with the standards and criteria developed pursuant to subsection (e) of this section, all existing and new coal mine waste piles consisting of mine wastes, tailings, coal processing wastes, or other liquid and solid wastes and used either temporarily or permanently as dams or embankments;

{40} (14) insure that all debris, acid forming materials, toxic materials, or materials constituting a fire hazard are treated or disposed of in a manner designed to prevent contamination of ground or surface waters or sustained combustion;

40 (15) insure that explosives are used only in accordance with existing State and Federal law and the regulations promulgated by the regulatory authority, which shall include provisions to -

40 (A) provide adequate advance written notice by publication and/or posting of the planned blasting schedule to local governments and to residents who might be affected by the use of such explosives and maintain for a period of at least

two years a log of the magnitudes and times of blasts; and

40 (B) limit the type of explosives and detonating equipment, the size, the timing and frequency of blasts based upon the physical conditions of the site so as to prevent (i) injury to persons, (ii) damage to public and private property outside the permit area, (iii) adverse impacts on any underground mine, and (iv) change in the course, channel, or availability of ground or surface water outside the permit area;

40 (16) insure that all reclamation efforts proceed in an environmentally sound manner and as contemporaneously as practicable with the surface coal

mining operations;

40 (17) insure that the construction, maintenance, and postmining conditions of access roads into and across the site of operations will control or prevent erosion and siltation, pollution of water, damage to fish or wildlife or their habitat, or public or private property: Provided, That the regulatory authority may permit the retention after mining of certain access roads where consistent with State and local land use plans and programs and where necessary may permit a limited exception to the restoration of approximate original contour for that purpose;

40 (18) refrain from the construction of roads or other access ways up a stream bed or drainage channel or in such proximity to each channel so as to seriously alter the normal flow of water;

{41} (19) establish on the regraded areas, and all other lands affected, a diverse, effective, and permanent vegetative cover native to the area of land to be affected and capable of selfregeneration and plant succession at least equal in extent of cover to the natural vegetation of the area; except, that introduced species may be used in the revegetation process where desirable and necessary to achieve the approved postmining land use plan;

41 (20) assume the responsibility for successful revegetation, as required by paragraph (19) above, for a period of five full years after the last year of augmented seeding, fertilizing, irrigation, or other work in order to assure compliance with paragraph (19) above, except in those areas or regions of the country where the annual average precipitation is twenty-six inches or less, then the operator's assumption of responsibility and liability will extend for a period of ten full years after the last year of augmented seeding, fertilizing, irrigation, or other work: Provided, That when the regulatory authority approves a longterm intensive agricultural postmining land use, the applicable five- or ten-year period of responsibility for revegetation shall commence at the date of initial planning for such long-term intensive agricultural postmining land use: Provided further, That when the regulatory authority issues a written finding

approving a long-term, intensive, agricultural postmining land use as part of the mining and reclamation plan, the authority may grant exception to the provisions of paragraph (19) above; and

41 (21) meet such other criteria as are necensary to achieve reclamation in accordance with the purposes of this Act, taking into consideration the physical, climatological, and other characteristics of the site, and to insure the maximum practicable recovery of the mineral resources.

41 (c)(1) Each State program may and each Federal program shall include procedures pursuant to which the regulatory authority may permit variances for the purposes set forth in paragraph (3) of this subsection.

{42} (2) Where an applicant meets the requirements of paragraphs (3) and (4) of this subsection a variance from the requirement to restore to approximate original contour set forth in subsection 515(b)(3) or 515(d) of this section may be granted for the surface mining of coal where the mining operation will remove an entire coal seam or seams running through the upper fraction of a mountain, ridge, or bill (except as provided in subsection (c)(4)(A) hereof) by removing all of the overburden and creating a level plateau or a gently rolling contour with no highwalls remaining, and capable of supporting postmining uses in accord with the requirements of this subsection.

42 (3) In cases where an industrial, commercial (including commercial agricultural), residential or public facility (including recreational facilities) development is proposed for the postmining use of the affected land, the regulatory authority may grant a variance for a surface mining operation of the nature described in subsection (c)(2) where -

42 (A) after consultation with the appropriate land use planning agencies, if any, the proposed development is deemed to constitute an equal or better economic or public use of the land, as compared with the premining uses;

42 (B) the equal or better economic or public use can be obtained only if one or more exceptions to the requirements of section 515(b)(3) are granted;

42 (C) the applicant presents specific plans for the proposed postmining land use and appropriate assurances that such use will be -

42 (i) compatible with adjacent land uses;

42 (ii) obtainable according to data regarding expected need and market;

42 (iii) assured of investment in necessary public facilities;

42 (iv) supported by commitments from public agencies where appropriate;

42 (v) practicable with respect to private financial capability for completion of the proposed development;

{43} (vi) planned pursuant to a schedule attached to the reclamation plan so as to integrate the mining operation and reclamation with the postmining land use; and

43 (vii) designed by a registered engineer in conformance with professional standards established to assure the stability, drainage, and configuration necessary for the intended use of the site;

43 (D) the proposed use would be consistent with adjacent land uses, and existing State and local land use plans and programs;

43 (E) the regulatory authority provides the governing body of the unit of general-purpose government in which the land is located and any State or Federal agency which the regulatory agency, in its discretion, determines to have an interest in the proposed use, an opportunity of not more than sixty days to review and comment on the proposed use;

43 (F) a public hearing is held in the locality of the proposed surface coal mining operation prior to the grant of any permit including a variance; and

43 (G) all other requirements of this Act will be met.

43 (4) In granting any variance pursuant to this subsection the regulatory authority shall require that -

43 (A) the toe of the lowest coal seam and the overburden associated with it are retained in place as a barrier to slides and erosion;

43 (B) the reclaimed area is stable;

43 (C) the resulting plateau or rolling contour drains inward from the outslopes except at specified points;

43 (D) no damage will be done to natural watercourses;

43 (E) all other requirements of this Act will be met.

43 (5) The regulatory authority shall promulgate specific regulations to govern the granting of variance in accord with the provisions of this subsection, and may impose such additional requirements as he deems to be necessary.

{44} (6) All exceptions granted under the provisions of this subsection shall be reviewed not more than three years from the date of issuance of the permit, unless the applicant is proceding in accordance with the terms of the approved schedule and reclamation plan.

44 (d) The following performance standards shall be applicable to steep-slope surface coal mining and shall be in those general performance standards required by this section: Provided, however, That the provisions of the subsection (d) shall not apply to those situations in which an operator is mining on flat or gently rolling terrain, on which an occasional steep slope is encountered through which the mining operation is to proceed, leaving a plain or predominantly flat area:

44 (1) Insure that when performing surface coal mining on steep slopes, no debris, abandoned or disabled equipment, spoil material, or waste mineral matter be placed on the downslope below the bench or mining cut, except that where necessary soil or spoil material from the initial block or short linear cut of earth necessary to obtain initial access to the coal seam in a new surface coal mining operation can be placed on a limited and specified area of the downslope below the initial cut if the permittee demonstrates that such soil or spoil material will not slide and that the other requirements of this subsection can still be met: Provided, That spoil material in excess of that required for the reconstruction of the approximate original contour under the provisions of paragraph 515(b)(3) or 515(d)(2) or excess spoil from a surface coal mining operation granted a variance under subsection 515(c) may be permanently stored at such offsite spoil storage areas as the regulatory authority shall designate and for the purposes of this Act such areas shall be deemed in all respects to be part of the lands affected by surface coal mining operations. Such offsite spoil storage areas shall be designed by a registered engineer in conformance with professional standards established to assure the stability, drainage, and configuration necessary for the intended use of the site.

{45} (2) Complete backfilling with spoil material shall be required to cover completely the high wall and return the site to the approximate original contour, which material will maintain stability following mining and reclamation.

45 (3) The operator may not disturb land above the top of the highwall unless the regulatory authority finds that such disturbance will facilitate compliance with the environmental protection standards of this section: P Provided, however, That the land disturbed above the highwall shall be limited to that amount necessary to facilitate said compliance.

45 (4) For the purposes of this section, the term "steep slope" is any slope above twenty degrees or such lesser slope as may be defined by the regulatory authority after consideration of soil, climate, and other characteristics of a

region or State.

45 (e) The Secretary, with the written concurrence of the Chief of Engineers, shall establish within one hundred and thirty-five days from the date of enactment, standards and criteria regulating the design, location construction, operation, maintenance, enlargement, modification, removal, and abandonment of new and existing coal mine waste piles referred to in section 515(b)(13) and section 516(b)(5). Such standards and criteria shall conform to the standards and criteria used by the Chief of Engineers to insure that flood control structures are safe and effectively perform their intended function. In addition to engineering and other technical specifications the standards and criteria developed pursuant to this subsection must include provisions for review and approval of plans and specifications prior to construction enlargement, modifications, removal, or abandonment; performance of periodic inspections during construction; issuance of certificates of approval upon completion of construction; performance of periodic safety inspections; and issuance of notices for required remedial or maintenance work.

{35} Analysis by the Alaska Department of Natural Resources

35 515 b(2) - For the reasons pointed out in discussions on other sections, it will sometimes be impossible in Alaska to restore the land to its original use or to meet the standards of a "higher or better" use. "Higher or better use" is subject to too many interpretations to be a useful standard. As long as it is restored to a use compatible with surrounding use and consistent with land use plans and meets the other criteria in this section it should be adequate.

35 515 b(3) - There are several conditions in Alaska which will often make it impossible or impractical to restore to the approximate original contour of the land. Most of the potential coal deposits in Alaska are in steep terrain areas. Even areas of gentle or low relief are cut by numerous drainages which are actively eroding the valley floor and walls so that there are natural cutbanks or scarps with no vegetation.

35 The present and foreseeable other future use for most of these lands is for wildlands, primarily fish and game habitat. Thus from a practical viewpoint as long as the lands are restored to equivalent habitat they have met the criteria for "equal use" natural cuts and scarps in the area that will have much more physical and visual impact than will high walls and other surface mine features.

{36} A much more significant difference in Alaska is that overburden will often be permanently frozen. When this material thaws it becomes very fluid making it difficult or impossible in some cases to maintain cutbanks and spoil piles so that normal backfilling can proceed with mining. Compaction of these materials is impossible. A normal open cut mining and backfilling operation

with this material would impose almost insurmountable safety hazards. The only feasible way to backfill the excavation with the spoil material would be to impound it outside the mining area and return it after mining operations have ceased and the material has dewatered. This not only would be economically prohibitive but would cause more damage in some cases than well planned spoil piles properly rehabilitated.

36 Another important difference is that Alaska coals are low in sulphur and there have been no acid forming or other toxic material problems.

36 Also, in Alaska, because of climatic and market conditions, most stripping is done during the summer months thereby requiring larger areas to be opened and larger spoil areas outside the mining area.

36 The exception of allowing lowering the grade only where materials are not "otherwise available" (page 88 line 7) is not applicable in Alaska. The material will usually be available but if it is frozen or otherwise unstable, disturbing or removing the material will create as many problems as it solves.

36 515 b(4) - Because of the numerous exceptions or variances that will have to be granted in Alaska, this standard would be all that is needed as a basis for state regulation if it was enlarged to include restoring the land to a useful purpose consistent with land use plans for the area. The rest of the sections under b(2) through b(6) are not needed.

37 515 b(5) - In Alaska, topsoil in most of the potential mining areas is thin or nonexistent and is generally very low in nutrients. Often a much more efficient job can be done by adding proper nutrients to common spoil material. The problems of segregation and storage of any strata are complicated by permafrost and unstable soils and will often make an alternate program for re-establishing vegetation more environmentally desirable.

37 515 b(8) - Many of the requirements of this section are already adequately covered under a multitude of other state and federal water laws in Alaska. Subsection (E) should be changed because access will sometimes not be desirable in wildland areas.

{38} (D) needs to be qualified because it may be impossible in some situations to approximate premining conditions and it might not be critical in water surplus areas such as is common in Alaska. For instance, what would be the point in a high rainfall area close to the coast.

{39} 515b(11) - As previously pointed out it will be impossible to compact some spoil materials.

39 515b(12) - Covered under mine safety laws.

39 515b(13) - If the intent of this section is to require operators to comply on old completed working then we do not believe it is feasible.

{40} 515b(15) - This section is covered by both federal safety laws (MESA) and state laws. Overlapping jurisdictions should be eliminated where possible.

{41} 515 b(20) - In many areas of Alaska revegetation will become established very fast and other areas will be extremely slow. We suggest the time limitation be removed and other standards be established which relate to actual re-establishment of vegetation.

{42} 515 c(3) - This section should be enlarged to include wildlands to be used primarily for fish and game habitat. The standard in "A" should be adequate for a variance in any case and we see no need for the first paragraph in (13).

42 515 c(3)(B) - We believe the language in this section could be used to defeat a "better economic or public use". There appears no need to be concerned with compliance with 515 b(3) if the proposed use is an "equal or better" use and otherwise complies with c(3) even though compliance with 515 b(3) is possible.

43 515 c(4)(A) - This section needs to be clarified or eliminated. As we understand it, it would only be applicable to very limited situations.

43 515c(4)(C) - We believe to attempt to accomplish this in some cases could frustrate the best land use plan for the area and see no need to be concerned as long as the area is stabilized, is not causing pollution and is otherwise in compliance.

{45} 515 d(2) - This provision is not consistent with the variance provisions and would prevent surface mining in steep terrain/steep seam areas in Alaska such as in common in the major accessible fields; Beluga, Matanuska and Healy.We believe that alternate reclamation plans can be provided in these areas that will return the land to an equal or better use without complete backfilling to the original contour.

45 515 d(3) - Needs to be enlarged to allow disturbance of the land above the top of the highwall for safety purposes. This could be critical in natural snow slide or land slide areas in the mining area.

{46} ARIZONA

46 The cover letter from the State Land Department indicated that "Arizona does not have statutes pertaining to surface coal mining and reclamation, and

therefore, the questionnaire does not apply."

46 ARKANSAS

46 The Arkansas State Geologist indicated in his cover letter that the current State laws would be compatible with Sections 515 and 516 of the Federal proposal. The Arkansas law covers all open-cut mining in the State with the exception of sand and gravel operations. He did indicate, however, that these exceptions to the law could be changed in the near future. The State law does not have provisions addressing the surface effects of underground mining. With these exceptions, the State felt that the State law would generally conform with the proposed Federal law. The letter also indicated that the mining of lignite may occur in the future. Such mining would involve the disruption of both surface and subsurface water supplies. The current laws, however, would apply to lignite as well as the other types of coal.

46 CALIFORNIA

46 According to the engineering consultant for the State, Sections 515 and 516 of the Federal proposal do not apply to the State since there is no significant coal mining in California. The State agency provided only a token response to the survey and was very reluctant to provide information on the regulation of surface mining activities within the State. This may be due, however, to the fact that mining within the State is regulated at the county or local level.

46 CONNECTICUT

46 The Director of the Natural Resources Center indicated in his cover letter that the State "has no coal mining, no State laws or enforcement programs, and no State strip mine laws or regulations."

46 DELAWARE

46 The Acting Director of the Division of Environmental Control for the State replied that, because the State does not have any coal, "its surface is not impacted by coal mining operations and, therefore, the State does not have any laws or regulations on this subject."

{47} FLORIDA

47 The Department of Natural Resources for the State of Florida indicated that, since the State did not produce any coal, it was unnecessary to respond to the Committee's survey.

47 GEORGIA

47 The Program Manager for the State indicated in a personal cover letter (which did not represent the views of the State) that no distinction should be made between coal and other minerals with regard to the regulation of the industry and the reclamation of mined lands. He also recommended that Congress reconsider the legislation now being drafted. It was suggested that a task force be assembled from the various State reclamationists in order to draft legislation that would be more sensitive to the unique conditions encountered by mine operators in different geographic locations throughout the United States. His final observation was that all of the legislation which has been proposed to date has been "too verbose and complicated, as well as impractical."

47 Georgia law does not regulate the use of explosives and does not require the mine operator to restore the water supply of surface owners that may be affected by coal surface mining. Furthermore, the Georgia law has no provisions which require the plugging or sealing of auger holes, but the respondent stated that if auger mining did occur, the mine operator would be required to seal any such holes. If such an action is required by the appropriate departments within the State, it is not clear how the operators would be harmed if the requirement were to be written into the law.

47 The State requires that a "permanent" vegetative cover be established before the operator is released from his liability. The State Department of Natural Resources indicated that placing a specific time requirement of 5 or 10 years during which the operator is liable for the vegetative cover would be too stringent on the operator and unnecessary. The use of the word "permanent" in the State requirement, however, could be interpreted by the courts as involving a much longer term of liability than would the placing a specific time limit on the liability. The State's requirement could involve the defining of the term "permanent". The Department of Natural Resources stated in its letter that the State law extended the privilege of permit renewal as long as the operator carried out the provisions of the approved Mined Land Use Plan. The Department said that the "three-year review" provision of the Federal proposal would be unnecessary. The Federal proposal, however, does not require a review of the operations every three years. The permit does lapse if mining has not commenced within three years of the date of the permit issuance, but the actual permit does carry with it the right of successive renewal if the requirements of the Act are met. The language of the bill places the burden of proof of compliance upon regulatory authority instead of the operator. The Georgia law has no provisions for the regulation of the surface effects of underground mining.

{48} According to the response from the Department, the State has not designated any areas as being unsuitable for coal mining.

48 The Department indicated that it has not yet suspended or revoked any surface mining permits, although in one instance, it did temporarily interrupt

the operations because the operator failed to follow an approved mining plan.

48 In answering question (f) which asked for the ratio of full-time field inspectors to trained technical staff who are available for backup information, the State responded that it had no technical staff for that purpose. Later in the reply however, in response to a question about the number of permit applications that have been approved without modification, the Department stated that whenever an operator's plan did not conform to the requirements of the State, the technical staff assisted the operator in modifying the mining plan accordingly. The size and function of this staff is not clear.

48 HAWAII

48 According to the Chairman of the Board of the Department of Land and Natural Resources for Hawaii, the State enacted a law some years ago in anticipation of mining of low-grade bauxite in the State. There has not, however, been any surface mining in the State to date, and according to the Department, none is anticipated in the foreseeable future.

48 The regulations which are currently in force contain provisions for the control of surface mining for practically all types of minerals, including coal, although the State has no coal reserves. Furthermore, the regulations require that all types of surface mining conducted within the State be done with a permit issued by the Board of Land and Natural Resources. The law also prohibits the discharging of any "poisonous or noxious" matter into any streams or shore water in a manner that would constitute a public nuisance.

48 The application-for-permit fee required by the State is based on the number of acres involved in the mining operation, with the minimum fee being $100 (for less than 10 acres) and the maximum fee being $5 00 (for 500 acres). The law also requires the operator to post bond to insure the execution of the performance stated in the application permit. The actual requirements for the release of the bond are established on an individual basis. With regards to reclamation, the Hawaiian law requires the stripping, storage, and replacement of the topsoil in the permit area, and requires the operator to strike off the ridges and peaks and fill in deep depressions created by the mining operations and grade the surface in a manner suitable for planting, all actions to be performed as soon as practicable.

{49} The laws requires that the operator perform the following tasks:

49 Dispose of all debris, rubble, and tailings in such manner as to enhance the contour of the pit or to provide erosion and drainage control in adjacent areas.

49 Provide such drains, ditches, and outlets as may be necessary to prevent

the accumulation of water in the pit and to remove water from the pit in such a way as to minimize erosion of the pit and the surrounding land.

49 Utilize the overburden removed from the surface of the pit in such manner as best to recondition or reclaim the mined area, or the area where the tailings have been disposed, if in an area other than the pit.

49 Provide a reasonable means of access to the pit.

49 Revegetate or rehabilitate the pit, which shall include, inter alia, provisions for:

49 (A) Replacing the topsoil, if required;

49 (B) Liming, if mining produces deleterious changes in soil acidity from the original soil condition of the area, or if needed for the establishment of satisfactory fertility under subparagraph (C) hereafter;

49 (C) Applying fertilizer to reestablish satisfactory fertility and crop production in soils of areas cultivated to agricultural crops prior to the inception of mining, and, in areas used for grazing or forest prior to the inception of mining, fertilizer to provide a grass forage cover suitable for an annual carrying capacity of not less than one head of cattle for each three acres;

49 (D) Planting in all instances a cover crop of good pasture grass to stabilize the exposed surface and to minimize erosion, unless immediate crop production shall be affected, or unless relieved therefrom by the board in writing. In pits intended for restoration to forest, rehabilitation shall include a quick cover crop followed by forest plantings, respecting which the board shall advise on types, availability, and spacing of species to be planted;

49 (E) Achieving, where possible, as a minimum goal of restoration, comparable fertility and use of land to that existing prior to strip mining.

MATRIX

11[N/A - Not applicable (according to the State); N/R -

Not reported; N/K - No records kept; Footnote numbers are in parentheses]

	Alaska	Arizona	Arkansas	California	Connecticut	Delaware	Florida	Georgia	Hawaii	Idaho
Mining in alluvial valleys	No laws which apply.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	n10	n(11).
Law requires reclamation of abandoned lands	None	N/A		n(5)		No.				
State appropriations for abandoned mine reclamation from 1966 to 1975.	No figures readily available.	None	None		None		None		None.	
Actual reclamation expenditures durin										

the same period.	do	None	None	None	None.
1975 COAL DATA					
Production: Underground	None	N/R	n(3)		None.
Surface	710,000 total ST	N/R	n(3)	126,000 ST	0.
Number of tons: 250,000 tons	1	N/R	n(3)	0	
250,000 tons	1	N/R	n(3)	7	
Percentage of coal lands within the State which are not affected by the State laws.	0	N/R	N/R	0	0.
Reclamation Field Inspectors: Number of trained full-time inspectors	N/A	1	None	6	1.
Full-					

time inspectors to surface mines under permit.	N/A	1 to 15	N/A	1 to 85	1 to 362.
Method of hiring field inspectors	N/A	Merit	N/A	Merit	Civil service.
Average years of college and type of professional training.	N/A	4	N/A	5	7 yrs college+2 yrs straining
Salary schedule	N/A	N/R	N/A	$ 13,326 to $ 19,302.	$ 14,220.
Numerical distribution	N/A	N/R			N/R.
Median distribution	N/A	N/A		$ 17,544 n7	NR.
Ratio of full-time inspectors to technical people.	N/A		N/A		1 to 1.
Frequency					

onsite inspections:					
Announced	N/A	None	N/A	Quarterly	Annually.
Unannounced	N/A	4 to 6 weeks	N/A	Minimum 8 yearly.	None.
Type of followup field inspection reports	N/A	n(1)	N/A	Written reports.	Written report.
Number of actions ceased without formal action.	N/A	n(1)	N/A	Approximately 12.	None.
CITIZEN ACTION					
Number of citizen complaints against operators which were registered with the State agency.	N/A	2	N/K	5 related to 1 operation.	None.
Number of public hearings held regardi					

ng citizen complaints and action taken.	N/A	None	N/K	None			Do.
Number of citizens suits brought against operators and the State agency.	N/A	N/A	1	N/K	do	N/A	Do.
PERMITS AND LICENSES							
Number approved without modification	1	50 percent	n(4)	Few			60.
Number approved with modification	N/A	do	n(4)	Majority			15.
Number rejected	N/A	None	n(4)	None			0.
Number of applications for permit of license which were modifie							

d or rejecte d upon receipt of a citizen complai nt ("H" denotes that a hearing was held).	N/A	do	n(4)	do	None.
Method of hiring the person respons ible for decisio ns on permit issuanc e and enforce ment.	N/A	Merit		Merit	Civils ervice .
PERFORM ANCE BONDS					
Average amount of perform ance bond require d per acre under permit or license .	$10,000 bond require d thus far.		$900/ acre/ coal $450/ acre for minera ls.		$500/ acre.
Reasons				Failur	

for bond forfeiture if any	N/A	None forfeited.	N/K	e to complete reclamation.	None forfeited.
Average amount of bond forfeited per acre under permit.	N/A	do	N/K	$ 468.42	N/A.
Acreage reclaimed under forfeited bond	N/A	N/A	N/K	None	None.
Method of awarding reclamation contracts under forfeited bond.	N/A	n(2)	N/K	Bidding	N/a.
Reclamation costs per acre under forfeited bond	N/A	N/K	N/K	$ 468.42 n(8)	Do.
VIOLATIONS					
Total fines collected for -					

(A) civil violations	N/A	None	N/K	None	None.				
(B) criminal violations	N/A	None do	N/K	None for coal	Do.				
Average amount of fines collected/acre	N/A	do	N/K	None	Do.				
Total fines imposed but not collected	N/A	do	N/K	do	Do.				
Prison sentences imposed	N/A	do	N/K	n(9)	Do.				
	Illinois	Indiana	Iowa	Kansas	Kentucky	Maine	Massachusetts	Michigan	Minnesota
Mining in alluvial valleys	N/A	N/A	.	N/A	N/A	N/A	Requires special permit See text	N/A	N/A.
Law requires reclamation of abandoned lands	Separate law	Separate law		N/A					

State appropriations for abandoned mine reclamation from 1966 to 1975.	N/R	n12	N/R	n23	$30,000 in 1968 N/K 1,500,000
Actual reclamation expenditures during the same period.	N/R	N/R	do	N/K	$600,000 1975
COAL DATA					
Production:					
Underground	31,880,083	158,33 145,942	6	N/R	69,788,129
Surface	393	143	1975	N/R	162,021 1st half 147,120,849
Total	27,650,	24,944,			77,332,720
Number of mines:					
250,000 tons	19	15	0	N/R	314
250,000 tons	17	95	7	N/R	2,479
Percentage of coal lands within the					

state which are not affected by the state laws.	0	0	0	N/R	n(27)
Reclamation field inspectors: Number of trained full-time inspectors	9	3	1	1	72
Full-time inspectors to surface mines under permit.	1 to 17	1 to 36 n15	1 to 7	1 to 97	75
Method of hiring field inspectors	By Civil service	Civil service	director	Merit	N/R e
Average years of college and type of professional training.	4 years n13	5 years n16	4 years n24	0	2 n28
	$12,000	$13,260	11,700		

Salary schedule | min, $ 15,336 max. | min, $ 16,926 max. | min, $ 15,806 max. | $4,800 n26 | n(29)
Numerical distribution | N/R | n(17) | N/R | N/K | n(29)
Median state income | $15,336 n7 | n(17) | N/R | N/R | $4,871
Ratio of full-time inspectors to technical people. | 8 to 1 | N/A | n25 | N/R | 3 to 1
Frequency of on-site inspections: Announced | i n(18) | Unannounced | 014 n(18) | Rarely made approx. 2-4 weeks | N/R | N/K | 10/yr
Type of followup inspection | Written field inspection report. | Written report when necessary. | None need n(30)
Number of actions ceased without formal action | 6 | 0 n19 | None | 8 during the past 2 years. n(31)
CITIZEN ACTION
Number

of citizen complaints against operators which were registered with the state agency.	None	None	since 1970.	None	130	
Number of public hearings held regarding citizen complaints, and action taken.	21	N/R	do	do	4 n(32)	
Number of citizen suits brought against operators and the state agency.	3 total	None	do	do	None	
PERMITS AND LICENSES						
Number approved						

without modification	None	107	3	virtually	0	
Number approved with modification	36	1	None	virtually all		
Number rejected	16	None	do	None	N/R	n(33)
Number of applications for permit or license which were modified or rejected upon receipt of a citizen complaint - ("H" denotes that a hearing was held).	None(N/A)	do	do	do	10 (H)	
Method of hiring the person responsible for decisions on						

permit issuance and enforce ment. Civil service n(20) Statutory N/R Merit

PERFORMANCE BONDS

Average amount of performance bond required per acre under permit or license $5,000 min. or $3,037.4 7 $660/ acre. $1,000 $750 $561.58

Reasons for bond forfeiture if any late. Reclamation n(21) None None See attachment

Average amount of bond forfeited per acre $212 $268.05/ acre $587.24 N/A do

Acreage reclaimed under the forfeited bond past year. None n(22) None N/A 315 in do 1975

Method of awarding reclamation

contracts under forfeited bond.	Bidding	Bidding	N/A	Bidding	Bidding
Reclamation costs per acre under forfeited bond	Estimated costs-$2,000 to $4,000/acre.	N/R	N/A	N/A	$700/acre
VIOLATIONS					
Total fines collected for-					
(A) Civil violations	$179,000	N/K	None	None	None
(B) Criminal violations	$25	N/K	do	do	None
Average amount of fine collected/acre	$25	N/K	do	do	n(35)
Total fines imposed but not collected	$975	N/K	do	do	Unknown
Prison sentences imposed	0	None	do	do	n(36)
	North		South		

	Missouri	Montana	Nebraska	New Jersey	new York	Carolina	Ohio	Pennsylvania	Rhode Island	Carolina
Mining in alluvial valleys	N/A	n(37)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A.
Law requires reclamation of abandoned	No	No				No				N/K
State appropriations for abandoned mine reclamation from 1966 to 1975.	None	None				n(45)				N/R
Actual reclamation expenditures during the same period.	None	None				None				N/R
1975 COAL DATA										
Production:										
Underground	No	0				15,469,291				45,112,650
Surface	Breakdown	24,000,000				30,394,353				37,093,300
Total	5,669,671	24,000,000				46,863,644				83,020,950
Number										

of mines:				
250,000 tons	8	5	26	n(5)
250,000 tons	3	3	310	n(5)
Percentage of coal lands within the State which are not affected by the State laws.	0	n(38)	0	0
Reclamation field inspectors: Number of trained full-time inspectors	3	2 n39	17 total	47+
Full-time inspectors to surface mines under permit.	1 to 4	2 to 7	1 to 28	n(52)
Method of hiring field inspectors	Merit	n(40)	Civil service	Civil service

Average years of college and type of professional training.	4 years 4 years n41	3.6 n46	n(53)
Salary schedule	$9,900 min, $ 15,722 max.	$ 11,325 min, $ 20,264 n(47) max.	
Numerical distribution	15,000/ yr average n(42)	N/R	
Median State income	$8,914	N/R	N/R
Ratio of full-time inspectors to technical people.	N/R	1.4 to 4 to 1	1
Frequency of onsite inspections:			
Announced	1/month	0	N/K n(54)
Unannounced	1/month	2/month	n(48) n(54)
Type of followup of field inspect	Followup p, no		Follow up

ion reports .	details n(43)		inspec n(48) tions.
Number of actions ceased without formal action.	None necessa ry.	None	See 115 text
CITIZEN ACTION			
Number of citizen complai nts against operato rs which were registe red with the State agency. 5	N/K approx. 50 annuall y.		For inform ation to the follow ing questi N/R ons.
Number of public hearing s held regardi ng citizen complai nts and action taken. 1	None in 1975		N/R
Number of citizen suits brought against operati	2 against		

ors and the state agency.	opr-none against None	agency.	See N/R	text
PERMITS AND LICENSES				
Number approved without modification	90	percent	Approx. 1 percent	
Number approved with modification	10	10 in percent	Approx. 99 1975 percent	
Number rejected	None	None		n(49)
Number of applications for permit or license which were modified or rejected upon receipt of a citizen complaints ("H" denotes that a hearing was				

held). do	1	N/R
Method of hiring the person respons ible for decisio ns on permit issuanc e and enforce ment.	Hired by a commiss ion.	Politic al appoint ment
PERFORM ANCE BONDS		
Average amount of perform ance bond require d per acre under permit or license	$600/ acre	$ 2,000/ acre
Reasons for bond forfeit ure if any	None forfeit ed. None	None forfei ted
Average amount of bond forfeit ed per acre under		

permit. N/A do N/A
Acreage reclaimed under forfeited bond None do None
Method of awarding reclamation contracts under forfeited bond. Would be by bidding . Bidding n(50)
Reclamation costs per acre under forfeited bond. N/A Not available n(44)
VIOLATIONS
Total fines collected for -
(A) civil violations None $22,300 None
(B) criminal violations do None 5 fines
Average amount

of
fines
collect $14/
ed/acre do acre $100
Total
fines
imposed
but not
collect 2
ed do None fines
Prison
sentenc
es
imposed do do None
[See Table in Original]

{139} n1 Notations for recall of mine status.

n2 Presently under consideration. Arkansas may require the bonding company to perform the reclamation.

n3 The response indicated that only one coal mine in California was active and that production data was confidential. The response neither indicated whether the mine was surface or underground.

n4 The cover letter indicated that permit issuance was conducted at the county or local level and that statistics were not available.

n5 Abandoned lands are not subject to reclamation under Georgia law. About 35,000 acres of orphan lands exist in Georgia from all forms of surface mining, and only a token amount has been reclaimed in past 10 years.

n6 Degrees include: MS in Forestry (Silviculture major); MS in Forestry (Recreation major); MS in Agronomy; MS in Business Administration (Environmental Law Major); MS in Forestry; MS in Geology.

n7 Evidently, the Department understood this question to mean the median income of the State inspection officers. The survey actually wanted the statewide median income.

n8 The amount necessary for reclamation cannot exceed the amount of the forfeited bond since there are no other funds which can be used for the purpose.

n9 The State of Georgia indicated that a fine and prison sentence had been imposed on one operator, but this was unrelated to coal mining. For mining fill dirt without a license, the state imposed a $150 fine and a one-year suspended

sentence in this instance.

n10 See the text of the report for an explanation of the Hawaiian law.

n11 In order to control the mining in alluvial valley floors, the State indicated that it retained control of all of the river beds of navigable streams. Furthermore, the State responded that all mining operations within the State are under the jurisdiction of the regulatory agency.

n12 The State of Illinois indicated that the appropriations for abandoned mines reclamation amounted to $1.5 million for fiscal years 1976 and 1977. No amounts were given for the period from 1966 to 1975 which was requested by the Committee.

n13 The Illinois Department of Mines and Minerals indicated that the professional training of the reclamation field inspectors included the disciplines of agronomy, biology, forestry, and soil science.

n14 In response to the question of the number of unannounced inspections conducted by the State regulatory agency, the Illinois enforcement agency responded that "The Department does not believe reclamation inspections need be unannounced. It is this Department's philosophy that a cooperative workmanlike manner is more effective to accomplish good reclamation than a police type relationship."

n15 This number does not include expired permits under which reclamation has not been completed. If these permits were included, the ratio of inspectors to permit would be 1 to 56.68.

n16 Present, "personnel with backgrounds in Forestry, Agronomy, Natural Resources and Geology are presently employed, but persons of other disciplines will also be considered."

n17 Median income for professional, administrative and technical personnel is in the $13,000 to $17,000 annual salary range. Skill level I salary's range from $16,926 to $21,710 per year. Skill level VI salary ranges from $9,724 to $12,662 per year. Reclamation inspectors are considered skill level III with salary ranges of $13,260 to $16,926 presently in 1976.

n18 The frequency of the inspections was not reported by the State. The Department of Natural Resources did indicate, however, that unannounced inspections accounted for 90 to 95 percent of the total inspections conducted by the State.

n19 In Indiana, a permitted operation cannot be ceased without formal action by the Natural Resources Commission.

n20 In Indiana, neither the appointment systems nor the civil service merit system is used to hire the individuals responsible for the approval or denial of mining permits. The approval of mining permits is a joint action by the reclamation field inspectors and the reclamation supervisor. The hiring of these individuals is based on their qualifications and is determined by the Director of Reclamation. The process from initial review to final action on all surface mining permit applications are as follows:

a. Field inspector and review by Reclamation Planning Specialist, Illinois.

b. Review by Reclamation Field Supervisor.

c. Review by Director, Division of Reclamation.

d. Review by Natural Resources Advisory Council.

e. Final action by Natural Resources Commission.

n21 According to the Department, bond forfeitures were involved in actions which included the following:

1. For removal of reclamation equipment. Failure to reclaim operation consistent with permitted land use as stated in Plan of Reclamation.

2. Failure to complete regrading.

3. Removal of reclamation equipment. Failure to reclaim area.

4. Failure to submit report of affected area, with maps, overmining fees and overmining bond.

n22 The Indiana Department of Natural Resources indicated that no reclamation under forfeited bond had been conducted within the State because of the costs involved.

n23 In 1968 the state appropriated $30,000 to establish a coal strip mine demonstration project. The state is not currently contemplating any type of a program to determine the long-term effectiveness of mined land reclamation.

n24 Iowa requires college course work in one of the following fields: agronomy, geology, ecology, agriculture, or related work.

n25 The Director of the Iowa state program indicated that the reclamation field inspector may utilize the services of the Iowa State Geological Survey or the Iowa Coal Research Project team when necessary.

n26 The State of Kansas indicated that the $400 per month was for 80 hours per month. While this ratio of time on the job to income effectively raises the salary of the State inspector to $9,600 per year, it also increases the ratio of inspectors to mines by a factor of two. In other words, the one inspector can only inspect half as many mines since the work week consists of 20 hours.

n27 Attempts have been made to obtain surface mine permits on federal lands but have been denied by this Department and the denials upheld by the local Kentucky circuit courts nSee Section 350-085(4) of Attachment A). The courts have held disallowing mining within 100'-0" of public property also must be construed to mean no mining on public property, federal, state or local. This issue still subject to adjudication.

n28 Kentucky field inspection officers have received technical training in the disciplines of forestry, mining technology, agriculture, geology, engineering, et al.

n29 Salary schedule and numerical distribution of reclamation field inspectors on the salary scale.

Monthly salary:	Number of employees
$710	5
$745	9
$782	7
$821	11
$862	15
$906	3
$951	4
$998	5
$1,048	3
$1,100	2
$1,155	3
$1,213	4
$1,405	1
Total	72

{140} n30 Type of follow-up field inspection reports: Field inspections are followed up by: 1. Mine inspection reports; 2. Notice of non-compliance; 3. Inspection of non-compliance; 4. Order of suspension; 5. Monetary penalty; 6. Revocation of permit; 7. Suit and restraining order by circuit court; 8. Bond forfeiture; 9. Agreed order; 10. Inspections by central office personnel.

n31 The Department of Natural Resources and Environmental Protection for Kentucky indicated that they did not completely understand what was meant by the

question, "List the number of actions ceased without formal action."

n32 1. Citizen/Petitioners: Gilford Maiden, Cora Lee Maiden and Charles Maiden vs. Richland Coal Company. Objection to issuance of a permit.

A hearing was held December 11, 1975, and an Agreed Order was reached deleting a portion of the area sought to be mined.

2. Robert Fields, Petitioner vs. Texas Pioneer Coal Company, Skaggs Creek of Rockcastle River - An objection was made on November 22, 1975 to the issuance of a permit.

The hearing was held on January 5, 1976. The Petitioner failed to introduce any probative evidence to support a denial of the issuance of the permit.

The Secretary's Order ordered the issuance of a permit on March 11, 1976.

3. Jean K. Webb and Mr. and Mrs. Andy Kirk, Petitioners vs. Martin County Coal Corporation - An objection was made on November 10, 1975 to the issuance of a permit.

The hearing was held on December 22, 1975, and the petitioners failed to appear. The Secretary's Order recommended issuance of a permit, providing the application and all required supporting data were in compliance with applicable statutes and departmental rules and regulations.

4. J. C. May, Aaron Oliver, James E. Arnett and Luther G. Carpenter, Petitioners vs. United States Coal Company - An objection was made on June 23, 1975, to the issuance of a permit.

Hearings were held on April 11, 1975, and the Hearing Officers Report and Conclusions of Law was that the applicant was not deficient in failing to comply with the consent provision of KRS 350.060(8). (Note: This statutory provision had previously been held unconstitutional by Kentucky's highest court.) The Secretary's Order held that there be an Order overruling the objection of the Petitioners to the issuance of a surface mining permit to United States Coal Company.

n33 During 1975, there were 317 permits suspended by the Division of Reclamation. Of the 317 suspensions, approximately 56% (178) involved two (2) or more violations. The two (2) most common violations involved were insufficient silt control and illegal method of operation.

Violations pertaining to silt control usually involved improperly constructed and/or maintained silt structures or no silt control at all. The method of operation violations usually involved excessive bench width or improper

placement of spoil.

The following is a list of the ten (10) most common violations cited on the 1975 suspensions and the percentage these violations occurred:

Violation:	Percent occurred
Insufficient silt control	33
Method of operation	28
Stripping off permitted area	18
Non-current grading, backfilling, or seeding	17
100 foot limit on public property	8
Equipment removed prior to reclamation	8
Material blasted off permit	6
Water quality standards violated	5
Water impounded on bench or in pit	3
Access road improperly maintained	1

n34 Civil fines collected by Kentucky during 1975. This amount increased to $367,500 during 1976.

n35 The State Agency indicated that the question asking for the amount of fines collected per acre under permit was not clear.

n36 Although prison sentences were imposed during the year for which the information was requested, the State Agency indicated that in 1976, two operators were incarcerated for violating court orders attained by the regulatory agency.

n37 If an alluvial valley floor is determined to fall under Section 9 of the Montana Reclamation Act it would be deleted. Section 9 of the Act states that:

(2) The Department shall not approve the application for a prospecting, strip mining or underground mining permit where the area of land described in the application includes land naving special, exceptional, critical or unique characteristics, or that mining or prospecting on that area would adversely affect the use, enjoyment or fundamental character of neighboring land have special, exceptional, critical or unique characteristics. For the purposes of this act, land is defined as having such characteristics if it possesses special, exceptional, critical or unique:

(b) ecological fragility, in the sense that the land, once adversely affected, could not return to its former ecological role in the reasonable foreseeable future; or

n38 The Department of State Lands for the State of Montana indicated that the surface mining laws now in effect do not apply to the Indian lands in the State. The Department was unable, however, to give percentage figures for the amount of land in this category.

n39 The Department also employs five part-time inspectors. The Department further indicated that they had experienced a large turnover in reclamation field inspectors and that there was some difficulty in retaining qualified individuals.

n40 Hiring methods in the past have varied with the feelings of the head of the State Land Department in which Reclamation is a Division. In the future, I believe hiring will be done mainly in cooperation with Employment Security Division and its list of applicants. Yes, the patronage system has been utilized on occasion.

n41 All seven (7) present Coal Bureau inspectors have college degrees: 1. Degree - Wildlife (2); 2. Degree - Land Use Planning (1); 3. MS - Forest Hydrology (1); 4. MS - Soil Biology (1); 5. MS - Resource Conservation (1); 6. Dr. - Geology (1): 7. Degree - Mining Engineering (vacant).

n42

Position:	Salary	Number
Coal bureau Chief	$15,722	(1)
Mine Inspector III	13,073	(4)
Mine Inspector II	11,919	(1)
Mine Inspector I	9,900	(2)

n43 Field inspection reports are followed up with a phone call or written communique to the operator if problems or questions are detected. Quite often the operator discusses problems with the inspector at the mine. Meetings are often generated as a result of field inspections.

n44 Cost definitely should be higher if the state had to secure reclamation of the area. No past history to relate actual or a reasonable projected estimate. Each site is different in reclamation cost factors.

n45 Reclamation of lands which were abandoned or not reclaimed by licensed operators and upon which the reclamation bond was forfeited have been reclaimed to the standards required by the law in effect at the time of forfeiture by the Division of Reclamation. During the 10-year period, 1966 to 1975, 710 acres were reclaimed using forfeited funds.

{141} Prior to the enactment of Ohio's first strip mine law in 1948, a total

of 45,213 acres were strip mined and unreclaimed. Except where re-affected by later licensed mining, or by other uses, these acres remain unreclaimed. It is estimated that approximately 50 percent of these acres have been re-affected and reclaimed under later licensed operations. None of these orphan lands have been reclaimed by the Division of Reclamation to date.

n46 Average of 3.6 years of college-level education for all reclamation inspectors. Professional training of inspectors involves training in the fields of Geology, Natural Resource Management and Biology.

n47 (1) Conservationist II - $9,422 to $12,126 (8); (2) Conservationist III - $10,670 to $13,416 (4); (3) Conservationist IV (Supervisors) - $11,066 to $13,874.

n48 The Division of Reclamation for the Ohio Department of Natural Resources does not keep account of inspections by "announced" or "unannounced" categories. In 1975 the average interval between inspections of active operations was 30.0 days; between inspections on inactive operations was 51.3 days.

n49 397 applications were approved for licenses, and 211 applications were approved to amend existing licenses. 87 applications were approved for permits and 1 application was approved to amend an existing permit. 1 application for a license, 3 applications to amend a license, and 1 application for a permit were disapproved in 1975. Records are not maintained as to which applications are modified prior to approval, but probably 99% of the applications are revised in some way so as to meet the requirements of the strip mine law.

n50 Contracts are awarded for reclaiming under forfeited bond in the following manner: (1) If the forfeited bond is less than $5,000, the Chief, Division of Reclamation, shall advertise for sealed bids for reclamation. The contract shall be awarded to the lowest responsible bidder afte sealed bids are received, opened and published at the time and place fixed by the Chief.

n51 39 operators (not operations) produced over 200,000 tons (Bituminous) in 1975 from many operations. Routinely, operations are limited to 10 acres per mining permit. Each permit would be considered an operation. Exceptions may be approved if iustified for ease or economy of operation. There were 1,330 operations in 1975.

n52 The numbers are dynamic rather than static and may vary from 50 to 100 operations [per inspector]. The operations are in various stages from proposed projects to on-going projects to various stages of reclamation. An operation 1, considered active and must be inspected until all bonding is released.

n53 Average number of years of college not reported. Instead, the regulatory agency indicated the educational requirements which were high school graduation

plus mining experience.

n54 All inspections are unannounced. Only where special circumstances dictate the operator's concurrence or the timing of an activity is necessary, are the inspections announced.

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	South Dakota	Tennessee	Texas	Utah	Vermont	West Virginia	Washington	Virginia	Wisconsin
Mining in alluvial valleys	n(55)	N/A	.	N/A	N/A	N/A	Not specifically covered by Law does not apply.	N/A	N/A.
Law required reclamation of abandoned lands	N/R	n(57)	No	n61	N/R	See text	n(89)	n(72)	
State appropriations for abandoned mine reclamation from 1966 to 1975.	N/R	None	None	n62	None	$70,000 for sand, gravel and rock.	do	do	Expenditures based on coal-tax revenues. do
Actual reclamation expenditures 1975	N/R	n(57)	n(62)	None		do	do	do	
COAL DATA									
Production:									

Undergr ound	None	None	6,900,0 n63	00	23,142, 136	16,856	82,186, 189
Surface	None	4,243,1 82	11,730, 000	0	12,363, 644	3,725,3 02	19,527, 391
Total	None	3,559,2 79	11,730, 000	6,900,0 00	35,505, 780	3,742,1 58	101,713 ,580
Number of mines: 250,000 tons	None	2	4	N/A	2	1	N/R
250,000 tons	None	90	2		400+-	1	N/R
Percentage of coal lands within the state which are not affected by the state laws.	Unknown	N/R	0	83	0	36	0
Reclamation field inspectors: Number of trained full-time inspectors	2	8	2	2	20	2	31
Full-time inspectors to surface mines under		1 to 1			1 to		

permit 1 to 70 1 to 27 1 to 6 n64 1 to 50 1 to 1 17.5

Method of hiring

field Not

inspect Civil Appoint indicat Civil Merit Civil Civil

ors service ment ed service system service service

Average years of college and type of profess Approx.

ional 4

trainin 0.375 3.73 Attachm

g 5 years n58 6 yrs 5 years years 3 years ent C.

$1,000/ $950/mo $9,600 $12,000 $15,000

Salary mo min, min, $ min, $ min, $ min,

schedul $1,535/ 1,380/ 13,728 23,136 max.

e N/R n(59) mo max. mo max. max. max. N/R.

Numeric al distrib

ution N/R n(59) N/R N/R n(65) n(70) N/R

Median state $10,504

income N/R n(59) $8,486 $776/mo yr n(71) N/R

Ratio of full-time inspect ors to

technic All the

al same

people None 2 to 1 2 to 4 people. 20 to 1 N/K n(73)

Frequen cy of on-site inspect ions:

Announc Inspect

ed 1/yr None 2/mo 2/year 0 ions

1 ea Not

Unannou Ea. 14 6-8 2/yr schedul

nced None days N/R 2/year wks. min ed.

Type of followup of field inspection reports.	Follow up by technical Staff Written report.	Additional inspection discussion.	Additional inspection Reinspection	n(66)	inspections.	inspections.		
Number of actions ceased without formal action	None	120/yr	N/A	None	0	None	N/K	
CITIZEN ACTION								
Number of citizen complaints against operators which were registered.	50	33	35	None	Complaints too numerous to list.			
Number of public hearings held regarding citizen complaints, and action taken.	1 - action not indicated.		N/A	None	None	None	See attachment D.	
Number of citizen suits								

brought against operators and the state agency.	None	n(60)	N/A	1 (sand and unknown oper.).	Number .	do	N/A.
PERMITS AND LICENSES							
Number approved without modification	N/R	66	N/A	None	80	None	N/R
Number approved with modification	N/R	135	N/A	2	241	None	N/R
Number rejected	N/R	14	N/A	None	5	None	N/R
Number of applications for permit or license which were modified or rejected upon receipt of a citizen complaint ("H" denotes that a							

hearing
was
held). 2 n(56) 4 N/A None None None N/R
Method
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permit
issuanc Appoint
e and ed by Not Elected
enforce governo indicat officia Appoint Civil Civil
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PERFORM
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BONDS
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amount
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acre
under
permit
or $
license $250/ $1,000 10,000/ $800/ $400/
. acre n(61) N/A acre acre acre n(74)
Reasons
for
bond Failure
forfeit to See
ure if reclaim attachm
any None . N/A None ent B. None n(75)
Average
amount
of bond
forfeit
ure per

acre under permit	None	$600	N/A	None	$635.59	None	
Acreage reclaimed under forfeited bond	N/A	60 acres	N/A	None	222	None	
Method of awarding reclamation contracts under forfeited bond.	N/R	Bidding	N/A	None	State purchasing Bidding	Bidding	laws.
Reclamation costs per acre under forfeited bond	N/R	$100/ acre	N/A	None	$266 to $636/ acre.	$1,000/ acre.	Approx. to $ 3,000/ acre.
VIOLATIONS							
Total fines collected for -							
(A) civil violations	None	N/K	N/A	None	None	None	n(76)
(B) criminal violations	None	N/K	N/A	None	$1,150	None	n(76)
Average							

amount of fine collected/acre None N/K N/A None n(68) N/A n(77)
Total fines imposed but not collected None N/K N/A None $200 None None
Prison sentences imposed None N/K N/A None None None None
[See Table in Original]

n55 The South Dakota law contains provisions for the prohibitions of mining on lands if such an action would result in the long-range productivity by watershed lands, aquifer recharge areas, and significant agricultural areas. Surface Mining Land Reclamation 45-6A-9.1(8).

n56 No indication was given by the state whether or not hearings were held.

n57 According to the response, the State of Tennessee has a separate law which authorizes the use of proceeds from surface mining * * * though the Department indicated that the program has generated approximately $200,000 annually since 1974, it did not indicate whether any of the proceeds had actually been expended for reclamation under the program.

In addition to this program, the State is currently involved with Tennessee Valley Authority in a five year joint project for the reclamation of some sixteen thousand acres of old coal mines at a projected cost of $4,780,000. It is anticipated that some $780,000 will be expended in FY beginning July 1, 1976-June 19, 1977.

There are no direct appropriations for abandoned mine reclamation.

n58 One Field inspector has two years of college; One field inspector as one year of college; Six field inspectors have high school education, a minimum requirement. (2) Type of professional training of reclamation field inspectors - None. A potential field inspector must be a high school graduate and have two (2) years of conservation related work experience before he is considered eligible for employment.

n59 Reclamation Field inspectors. Salary schedule and numerical distribution of reclamation field inspectors on the salary scale, and medium income for your

state.

(1) State schedule monthly: Inspector - 1 - $681.00, Number employees - 5; Inspector 2 - $784.00, Number employees - 3; [Special] Investigator - $681.00, Number employees - 1.

(2) Medium income for Tennessee: $4,551 for 1974 reported by Tenn.Dept. of Employment Security, Research Division Office, Nashville, Tennessee.Staff Geologist Sain has extrapolated a medium income for Tennessee of $4,972 for 1975. The U.S. Department of Commerce reported a per capita income for Tenn. of $4,895 for 1975.

n60 Number of suits filed against operators is unknown.Number of suits filed against the State agency was one - no disposition indicated.

n61 The State merely indicated that $1,000 was the average bond - it did not indicate whether this was total bond or bond per acre.

n62 The State did not appropriate funds for the reclamation of abandoned mined lands. However, under sections 22 of the Act, all monies received through payment of fees, loans, grants, penalities, and bond forfeitures will be placed in a land reclamation fund to be used for this purpose.

n63 Due to the fact that regulation of surface mining operations was not in existence prior to January 1, 1976, there has not been any data gathered for 1975 as of this date. The following questions will be answered to the extent of any new program which is just beginning and the figures will be based on an approximation of the 1976 production.

n64 Although the two surface mining operations have received permits, neither is in operation.

n65 We currently have eleven Inspectors at $9,600; two Inspectors at $10,512; and seven Inspectors at $10,992.

n66 An Inspection Report or Special Order is given the operator in charge at time of inspection (1/6-8 weeks). The Inspector keeps a copy, the Area Supervisor is given a copy for his review, then submitted to office (Big Stone Gap). The Review Inspector (office) reviews each report and evaluates the degree of seriousness of same. He then may file or route the report to one or several people in the office responsible for the overall field enforcement. At this point, the report may be field or followed up with the Area Supervisor or Inspector.

The method of follow-up on inspection works well with the exception of actual time log of inspections caused by too many operations than the Inspector can

handle properly.

n67 The Department of Conservation and Economic Development for Virginia provided the same answer to this question as it did for the question requesting the mechanism used to hire field inspection officers in the State. Obviously, the second question was misunderstood.

n68 The Division of Mined Land Reclamation in Virginia cannot levy fines.

n69 We do not have an accurate accounting of lands disturbed by coal mining activities prior to the enactment of the Washington Surface-Mined Land Reclamation Law which became effective January 1, 1971. The publication Surface Mining and Our Environment, published in 1965 by the Department of Interior shows 100 acres of land disturbed by coal surface mining. Of this 100 acres none of the land is considered as abandoned. A rough estimate suggests that 75% of the disturbed land has become revegetated through natural means. Some acres have been reclaimed by other use. The one substantial coal surface mining property operating 1970 to present, which is subject to state law, has disturbed 1,809 acres and reclaimed 1,445 acres. Percentage figures are not appropriate in this instance as the operator, Washington Irrigation Development Co., is conducting experimentation with Washington State University to determine best soil treatment and revegetation techniques. Some of the acreage has been disturbed and reclaimed several times. One other coal mine operator has disturbed a total of 10 acres since 1971 and reclaimed 5 acres.

Item 8.Due to the minimal acreage disturbed by coal surface mining in the state, no expenditures or appropriations of state funds have been involved or considered necessary.For your information, the state has expended $50,000 to $70,000 to reclaim state-owned lands previously disturbed by sand, gravel and rock operations.

n70 Five man years (FTE) have been allocated to the seven areas throught the state to handle the inspection load requirement of the surface mining program. Approximately 165 field personnel contribute to the five-man year allocation. Therefore, salaries are not too meaningful. Field personnel contributing to the five-man year work load usually involves a variety of positions with salaries ranging from $12,000 to $18,132. The two personnel in the Olympia office with full time reclamation duties have salaries ranging from $17,286 to $23,136. A median range would be $13,808. It should also be noted that of all of the personnel indicated, approximately four are currently directly involved with any reclamation activities related to surface coal mining.

n71 Although the State agency indicated that the median income for the State was $13,808 it is obvious that is calculated the median income for the State inspection officers instead of the statewide median income.

n72 The response from the West Virginia Department of Natural Resources indicated that state statutes do provide for the reclamation of abandoned lands. According to a special report included in the materials forwarded by the Department, the amount of reclamation of abandoned lands from 1964 to 1976 was accomplished in the following amounts:

Special reclamation by year:	Acres
1964	25.30
1965	786.60
1966	2,753.57
1967	2,552.68
1968	1,140.98
1969	3,874.14
1970	1,015.57
1971	2,659.76
1972	3,421.54
1973	4,044.54
1974	1,941.60
1975	928.10
1976	882.40

n73 Rather than maintain an underworked staff of full time technical specialists, the Division cooperates extensively with other agencies, departments, and divisions.

n74 According to the cover response, the minimum bond (established by statute) for land actually being surface mined should be $1,000/acre. Dividing the total performance bond posted, however, posted during 1975 ($14,478,142.50) by the acreage bonded (16,965.50) yielded a bond of $853.39 per acre. Using this same method, the average bond for land permitted during 1976 was calculated as $1,255/acre. For the total acreage to date, the average performance bond was calculated as $617.91.

n75 In response to questions concerning the details of bond forfeiture in the State, the Department of Natural Resources refers to the status report which was included in the materials from that office. The information in this report, however, was not explicit enough to answer the questions posed by the Committee. This status report has been included in the report as Attachment E.

n76 All violations of the West Virginia Surface Mining and Reclamation Act are categorized as misdemeanors. Additional information is available on the Status Report.

n77 Fines range from $100 to $10,000. In certain instances, multiple warrants have been filed.More specifically, the majority of first offense fines

range between$100 and $200. More serious and recurring offenses precipitate greater fines, the maximum of which has been $1,000.

ATTACHMENTS

*5*ATTACHMENT A
- REASONS FOR
BOND FORFEITURE
IN KENTUCKY
DURING 1975

Company name: Permit No.	OBF	Amount of bond	Acres	Reason for OBF
Butler County Coal Co.: 1198-67	Sept. 14, 1975	$1,000	10	Grading and backfilling unsatisfactory - over stripped permit area (off permit).
1198-67, S No. 1		1,000	10	
Salem Coals, Inc., No. 1: 2046-69, S No. 3.	July 11, 1975	4,000	20	Violation of 402 KAR 1.040, sec. 1, par. 1(b), KRS 350.050, 350.095, and 350.100. No seeding initiated as directed on inspection report of Sept. 23, 1975.
Williams Bros. Stripping:				(1) KRS 350.100 grading not completed. No seeding started. (2) Permit expired - no

				reclamation work completed or done in 3
2239-70	May 6, 1975	6,000	30	mo.
2570-71		12,600	63	
				KRS 350.090 - Allowed acid water to leave permitted area and enter streams on adjacent property.Water overflowing the spillway of acid
Charles Coal Co.: 2423-70	July 11, 1975	7,200	36	impoundment PH 4.5.
				Noncurrent vegetation -
Charoloza-Crabtree Mine: 2485-70, S No. 1.	do	8,000	40	KRS 350.095, 350.068, SMR Rg. 8, par. 1, sec. 2.
Mid South Coal Co.:				
				Reclamation not yet complete - no equipment on job.Reclamation not complete - no equipment on job - No. 2 silt structure
3291-74	Sept. 24, 1975	14,000	14	breached.
3291-74, S No. 1		23,000	23	
				Permit expired - no equipment on area - backfilling and grading not complete. Improper silt control. No. 3 structure not

3291-74, S No. 2	do	12,000	12	construct. No certification on No. 2.
Triple J. Mining & Mineral Development Co., Inc.: 3412-74.	Sept. 18, 1975	5,000	5	Operator moved equipment off job before completion. No grading or backfilling done. 3d noncompliance issued.
P. & G. Coal Co.: 3451-74	Oct. 24, 1975	9,000	9	3d noncompliance for no reclamation equipment on permitted area and backfilling and grading not current.
Lynn-Ann Coal Co.: 3498-74	do	13,000	13	Failure to grade and backfill as specified by inspector on report setting deadline.
Cumberland Minerals & Mining: 3587-74	Sept. 24, 1975	40,000	40	4th noncompliance for no reclamation equipment on permitted area. Reclamation not current.
Arn Phil Coal Co.: 3315-74	Aug. 4, 1975	20,000	20	No reclamation equipment on permitted area. Reclamation not complete.
3315-74, S No. 1		14,000	14	Grading and

Dirty Diamond: 3289-74	Sept. 18, 1975	5,000	5		backfilling not current - previously suspended.
* * Cage Coal Co.: 3363-74	July 8, 1975	9,000	9		KRS 350.085, sec. 4 - mine within 100 ft of public road. There are over 200 ft of highwall within 10 or 15 of county road (rescinded in 1976).
* Morris Enterprises: 270-67, No. 1	Mar. 17, 1975	2,400	12		Inadequate vegetation must be reseeded (rescinded in 1976).
* * Hightop Coal Co.: 3146-73, No. 2	July 11, 1975	59,000	82		KRS 350.090, sec. 3 allowing material and debris to go beyond permitted area - filling up stream and public road (rescinded Feb. 24, 1976).
* Hewlett Coal Co.: 3339-74	Dec. 2, 1975	23,000	21		Cutting water out of pit. Water running back at least 2 mi from mine. Backfilling not current. (Rescinded Feb. 19, 1976).
Charlozas Corp. Bull Mine:					KRS 350.090, sec. 2 subsec. (d). (Complied and released in

2485-70	July 11, 1975	3,000	30	1976).
2485-72		15,200	38	
Corbin Equipment:				Moved equipment off operation before grading and backfilling completed Failure to clean out natural
2498-70	Sept. 25, 1975	5,000	10	drainway.
2498-70, S No. 1		7,500	15	
Montrie Mining Co.: 2956-73	Dec. 2, 1975	10,000	20	Grading and backfilling not started after previous warning. All machinery removed from site.
Appalachian Land & Fuel: 3000-73	Oct. 9, 1975	4,000	10	Failure to seed and fertilize permitted area.
C. & J. Coal Co.: 3085-73	Sept. 10, 1975	8,400	12	3d noncompliance - disturbed area still not reclaimed. All machinery has been pulled from job site. Extreme acid runoff. Site dam full of silt.
Augers, Inc.:				Failed to complete grading and revegetation of disturbed areas. (Complied with in 1976 and

3173-73	Dec. 2, 1975	6,800	17	rescinded.) Violation of 402 KAR 1:055, sec. 2(1), and sec. 2(3) lack of basin in south area of permit. Water leaving eastern basin has PH of 4.5 and total acidity of 85 ppm and total alkalinity of 17 ppm - basin lacks pipe and
Carroll Coal Co.: 3647-74	Nov. 3, 1975	10,000	10	spillway. Grading and backfilling not on schedule - all equipment has been
Wiser Coal Co.: 3779-74	Oct. 16, 1975	20,000	35	removed from silt. Violation of KRS 350.093(4) removal of necessary
Reeves Coal Co.: 4050-74	Oct. 27, 1975	7,000	7	backgrading equipment.
E. Nickell Coal Co.:				Area was not reclaimed. No backfilling or grading completed. Equipment was puiled off site. Silt dams 2, 3, and 4, on supplement No. 1 were washed out. Silt dams clogged on

3134-73, S No. 1	Oct. 16, 1975	9,000	18	supplement No. 2. (Bonds collected Dec. 22 1975.)
3134-73, S No. 2		10,000	20	
Confederate Coal, Inc.: 3196-73	Oct. 24, 1975	5,000	7	Failure to meet deadline of Sept. 18, 1975, to have equibment back on job and to be reclaiming. (Complied by Feb. 17, 1976 - order lifted.)
Mountain Pulaski Coal Co.: 3380-74, S No. 2.	Sept. 22, 1975	25,000	25	3d noncompliance. Operator failed to perform required reclamation and moved equipment off the site.
Martins Coal Co.: 3610-74, S No. 1	Dec. 19, 1975	6,000	4	Working off permit area 1 acre. Operator moved equipment offsite. No reclamation work done.
Swafford Branch Coal Co.: 3414-74	Jan. 9, 1976	5,000	5	Strip mined area off of permit - seeding not completed.
Boston & Martin Coal Co.: 3772-71	Nov. 20, 1975	5,000	5	Failure to backfill, grade, seed and mulch. Bond payment was made Mar. 29, 1976.
				Worked 2 acres not on permit. Bench width 50

				ft too wide.
Medlin Coal Co.: 2851-74	Dec. 19, 1975	20,000	31	Structure needs to be higher.
Diversified Industrial & Mining Exploration: 3638-74, No. 1.	Oct. 24, 1975	8,500	8	Equipment moved off site before grading and seeding completed.
Total		478,600	815	

[See Table in Original]

143 * These cases resolved in 1976.

143 Note: Average amount of bond forfeiture per acre under permit: $478,600 divided by 815 equals $587.24.

{145} ATTACHMENT B - REASONS FOR BOND FORFEITURE IN VIRGINIA DURING 1975

145 Ace Coal Company - Permit Number 1448: The operation was abandoned. Failure to complete regrading, drainage, and seeding resulted in bond forfeiture. Amount of bond $9,600 - 5 acres treated.

145 Bailey Mining Company - Permit Number 1333: Failure to comply with approved operation, drainage and reclamation plans, rules and regulations, and failure to comply with Notice of Non-Compliance resulted in bond forfeiture. Amount of bond $3,300 - 15 acres treated.

145 B & S Coal Company - Permit Number 1390: Failure to comply with Non-Compliance Notice requesting completion maps, and final mining reports, also planting reports, resulted in bond forfeiture. Amount of bond $1,500 - 2 acres treated.

145 H.F. & J. Coal Company - Permit Number 701: Failure to treat acid material to support vegetation, complete follow-up seeding, and complete planting of required seedlings resulted in bond forfeiture. Amount of bond $5,000 - 5 acres treated.

145 H.F. & J. Coal Company - Permit Number 1119: Failure to treat toxic material, drainage work, seeding and seedling planting resulted in bond forfeiture. Amount of bond $15,000 - 10 acres treated.

145 Suburban Mining, Inc. - Permit Number 1388: Operator failed to comply with regrading, drainage and seeding requirements. Amount to bond $28,700 - 55 acres treated.

145 H.F. & J. Coal Company - Permit Number 702: Failure to treat toxic material, drainage work, seeding and seedling planting resulted in bond forfeiture. Amount of bond $5,000 - 5 acres treated.

145 Troitino Construction Company, Inc., Permit Number 1408: Failure to keep regrading current and failure to comply with treatment of toxic material and drainage resulted in bond forfeiture. Amount of bond $10,600 - 15 acres treated.

145 Troitino Construction Company, Inc. - Permit Number 1614: Failure to keep regrading current and failure to comply with treatment of toxic material and drainage resulted in bond forfeiture. Amount of bond $15,200 - 8 acres treated.

145 Virginia Pacific Coal Corporation - Permit Number 1556: The operator failed to meet haul road requirements, bury toxic material, do regrading and revegetation, which resulted in bond forfeiture. Amount of bond $6,900 - 8 acres treated.

145 Ace Coal Company - Permit Number 1640: Failure to complete regrading, drainage and seeding resulted in bond forfeiture. Amount of bond $3,000 - 10 acres treated.

145 Spade Carbo Coal Corporation - Permit Number 1567: Failure to complete regarding, drainage, seeding and haul road requirements resulted in bond forfeiture. Amount of bond $3,000 - 2 acres treated.

145 Jerauld Brothers, Inc. - Permit Number 1535: Failure to complete road work, establish proper drainage and seeding resulted in bond forfeiture.Amount of bond $9,000 - 12 acres treated.

{146} American Concrete Builders, Inc. - Permit Number 1815: Failure to comply with a Notice of Non-Compliance requiring regrading, drainage, and road surfacing resulted in bond forfeiture.Amount of bond $4, ,000 - 4 acres treated.

146 North Fork Coal Company - Permit Number 1055: Operator failed to comply with Notice of Non-Compliance requiring follow-up seeding. Amount of bond $6,000 - 15 acres treated.

146 North Fork Coal Company - Permit Number 1012: Operator failed to complete follow-up seeding and drainage work on the access road as required on Notice of Non-Compliance. Amount of bond $15,300 - 51 acres treated.

{147}

*4*ATTACHMENT C -

PROFESSIONAL TRAINING OF WEST VIRGINIA'S RECLAMATION INSPECTORS

*4*WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES, DIVISION OF RECLAMATION, ROSTER OF PERSONNEL, NOVEMBER 1976

Employee	Title	Qualifications	Years of DNR tenure
Ailes, John Cornwell, Jr	Surface mining reclamation inspector.	B.S. - Fisheries biology, West Virginia University - 1970, military service.	5
Beymer, Joe Lee	NR administrator II (assistant chief, reclamation).	B.S. - Forestry, West Virginia University - 1950, military service.	24
Browning, Tracey, Jr	Surface mining reclamation inspector.	100 h of college, elementary education, Marshall University, military service.	13
Burdette, Clifford Lee	do	60 h of college, physical education/biology, West Virginia Institute of Technology, graduate of West Virginia College of Beauty Culture, attended West Virginia State Police Academy, military service.	13
Califf, James William	do	112 h of college, business administration, Alderson-Broaddus, military service.	14

			B.S. - Business administration,	
Campbell, William Russell	do		West Virginia University.	5
Cantrell, Emery Isaac	do		High school, military service	16
			B.S. - Education biology/art, West Virginia	
Carney, Owen Lee	do		University.	8
			2 yr architectural course, Cleveland	
Casdorph, Richard Arnold	do		Engineering Institute.	1 11
			B.S. - Fisheries management, West	
Chambers, William Edward	do		Virginia University - 1973.	2
			A.B. - Education math/physical sciences, Glenville State College, 6 h graduate study, West Virginia University,	
Deem, Edwin Lee	do		military service.	12
			High school,	
Frazier, Richard	do		military service.	9
Frye, Roger D		Surface mining reclamation inspector in training.	A.B. - Biology, West Virginia University, 1975.	n(1)
			High school,	
Gilkeson, Don Keith		Surface mining reclamation inspector.	attended West Virginia State Police Academy.	18
			B.S. - Agriculture, West Virginia University - 1974,	
Golden, Larry Mack	do		military service.	1
			B.S. - Agriculture, 12 h graduate study	
Greene, Benjamin Carroll		NR administrator IV (chief of reclamation).	Agriculture, West Virginia University.	15
			A.S. - Forest	

Groves, Virgil Richard	Surface mining reclamation inspector.	technology, Glenville State College - 1970.	5	
Haga, Lowell Lemoine	Surface mining reclamation supervisor.	A.A. - Arts and science, Potomac State College, B.A. - Biology. West Virginia University, military service.	5	
Hall, Roger Theodore	do	B.S. - Biology, Fairmont State College - 1967, M.S. - Wildlife management, West Virginia University - 1974.	5	
Hamilton, Paul Wade	Surface mining reclamation inspector.	High school, military service.	23	
Idleman, David Lawrence	do	B.S. - Agronomy, 9 h graduate study - Soil Science, West Virginia University.	1	
Idleman, Joseph R	Surface mining reclamation inspector in	B.S. - Wildlife biology, 9 h graduate study - Animal science, West Virginia training.	University - 1974.	n(2)
McClung, Samuel P	do	70 hr college, Glenville State - Concord, military service.	8	8
Matheny, Thomas Hunter	Surface mining reclamation inspector.	B.S. - Business administration, West Virginia University.	5	
		36 hr of college, West Virginia State - Glenville State - Fairmont State, attended West Virginia State Police Academy and		

			is retired from the department of	
Minnick, Lowell V	do		public safety.	8
			B.S. - Biology/chemistry, Fairmont State	
Morgan, Charles William	do		College, military service.	3
			B.S. - Mathematics, West Virginia State	
Park, Patrick C	do		College - 1972.	5
Parker, Franklin Joseph	NR administrator II (assistant chief, reclamation).		B.S. - Biology, Concord College, military service.	8
			B.S. - Geology/English, Marshall University, 5 h college - Forest technology,	
Parsons, Harold Maurice, Jr	Surface mining reclamation inspector.		Glenville State College, military service.	5
Pitsenbarger, James Edward	NR administrator II (assistant chief, reclamation).		B.S. - Agriculture, West Virginia University.	8
			40 h of college, University of	
Politino, Tony	Surface mining reclamation inspector.		Michigan, aircraft pilot, military service.	2 21
			AB-Biology MS-Public administration, West Virginia University - 1973,	
Raney, William Ball	NR administrator II		military service.	6
Sasser, William C	Surface mining reclamation inspector in training		BA-Earth science, Dartmouth College - 1975.	n(3)
			BS-Forestry, West	
Seckman, Jimmie Burt, Jr	Surface mining reclamation inspector.		Virginia University, military service.	1
			B.S. - Agriculture,	

		West Virginia	
	Surface mining	University,	
Sheets, Charles	reclamation	aircraft pilot,	
Asbury	supervisor.	military service.	9
		B.S. - Agriculture,	
	Surface mining	8 h graduate study,	
Starcher, Jerry	reclamation	West Virginia	
Edgar	inspector.	University - 1970.	5
Surina, Frank		High school,	
Anthony, Jr	do	military service	19
		A.B. - Business administration, Beckley College,	
Sweeney, Basil Ross	do	military service.	5
		B.S. - Anthropology/ sociology, Bethany College, 9 h graduate study - Geology, West	
Warrick, George		Virginia	
Henry, III	do	University.	5
Willey, Willard		High school,	
Wilson	do	military service	29

[See Table in Original]

147 n1 New (5 mo).

147 n2 New (8 mo).

147 n3 New (10 mo).

{149} ATTACHMENT D - CITIZEN ACTION RELATED TO SURFACE MINING IN WEST VIRGINIA RECLAMATION BOARD OF REVIEW FORMAL HEARINGS CASE AND ATTORNEY GENERAL'S REPRESENTATIVE

149 Sparks Coal Company Vs. T. R. Samsell - Grandview State Park - Frank Ellison.

149 H. L. Kennedy Vs. Ira S. Latimer, Jr. - Laurel Run, Coopers Rock - Frank Ellison.

149 Mertz Land Company Vs. R. N. White - Lease Dispute - Robert Pollitt.

149 Aurora Stone Company Vs. Ira S. Latimer, Jr. - Blasting Assessment - Jim Sago.

149 LaRosa Fuel Co. Vs. Ira S. Latimer, Jr. - Regrading Plan - Robert Pollitt.

149 Jackson Coal Co. Vs. Ira S. Latimer, Jr. - Permit Denial - Cabell County - Jim Sago.

149 Lang Brothers, Inc. Vs. Ira S. Latimer, Jr. - Permit Denial - Shavers Fork - Jim Sago.

149 Capitol Fuels, Inc. Vs. Ira S. Latimer, Jr. - Permit Denial - Lincoln County - Hal Albertson.

149 Allen Trucking Co. Vs. Ira S. Latimer, Jr. - Right of inspector to cease or desist - Nicholas Johnson.

149 Coal River Improvement Assoc. Vs. Ira S. Latimer, Jr. - Coal River.

149 Hornor Coal Company Vs. Ira S. Latimer, Jr. - Fish Kill - Middle Fork - Buckhannon - Robert Pollitt.

149 Energy Enterprises, Inc. Vs. Ira S. Latimer, Jr. - Permit Denial - Shavers Fork - Rudolph Duranti, Jr.

149 Joe Cook Vs. Majestic Mining, Inc. - Mining at Widen.

149 Sugar Lane Community Assoc. Vs. Ira S. Latimer, Jr. - W & S, Inc. - Hal Albertson.

149 Energy Enterprises, Inc. Vs. Ira S. Latimer, Jr. - Pond No. 3 - Modifying Previous Order.

149 Betty Jane Coal Company Vs. Ira S. Latimer, Jr. - Permit Denial - New River Gorge - Robert Pollitt.

149 Rosalie Davis Vs. Ira S. Latimer, Jr. - C & J Coal Corp. - permit issued.

149 Anderson & Anderson Cont. et al. Vs. Ira S. Latimer, Jr. - Nick Johnson.

149 Ramo Mining Company et al. Vs. Ira S. Latimer, Jr.

149 RECLAMATION COMMISSION

149 APPEALS

149 April 18, 1974: Paul J. Brown SMA-929 - Commission unanimously upheld the original decision of Director Latimer not to issue permit. After company resubmitted SMA-929 with the changes requested by the Commission, Surface Mining Permit No. 73-74 was issued.

149 January 30, 1975: Frederick S. Knutti Appeal - Prospecting Permit Denial, Commission upheld Director Latimer's decision to deny permit application.

149 June 4, 1975: Peter White Coal Mining Company - Surface Mining Permit No. 229-74, Attorney Rodecker requested that this permit be revoked.

149 May 20, 1976: Energy Enterprises, SMA-1767 - Denial - Commission unanimously reached a decision to issue SMA-1767 if all conditions of Order of June 25, 1976 were completed.

149 June 9, 1976: Mynu Coals, Inc. - SMA-1780 - Denial - Commission unanimously reached a decision to issue SMA-1780 to Mynu Coals, Inc. to be known as Reclamation Commission 1-76, if Orders dated June 25, 1976 were complied with.

149 August 9, 1976: Commission unanimously agreed to issue S.S. "Joe" Burford, Inc. SMA-1587 to be known as W.Va. Reclamation Commission 2-7.

Selected Bibliography in Strip Mining

{159} Acid mine water: a bibliography. Prepared for Office of Water Research and Technology, Dept. of the Interior. [Springfield, Va.] Distributed by NTIS, 1975. 564 p.

159 "PB-239 523"

159 "This report, containing 365 abstracts, is another in a series of planned bibliographies in water resources to be produced from the information base comprising SELECTED WATER RESOURCES ABSTRACTS (SWRA)."

159 Blakely, J. Wes.

159 One ton of coal produces one ton of paper! Coal mining & processing, v. 13, June 1976: 56-61.

159 Describes and criticizes the paperwork required by Federal, state and local requlatory agencies in order to open a surface coal mine.

159 Bringing back coal. Morgan Guaranty survey, July 1974: 8-13.

159 "All in all, the attempt to bring back coal clearly poses difficult issues of public policy. Apart from the question of incentives for a new synthetic-fuels industry, the basic issue is where to strike the balance between energy needs and concern to protect the environment."

159 Caudill, Harry M.

159 Our maimed land. Defenders of wildlife, v. 50, June 1975: 255-258.

159 Portrays the ravages wreaked against the land by strip mining.

159 Chaplin, Gordon.

159 O Louisa! O Louisa! Potomac [Washington post] Oct. 3, 1976: 10-11, 22, 26, 28-32.

159 Discusses the controversy over the proposed strip mining of the mineral, vermiculite, in the Green Springs Historic District of Louisa County, Virginia. Vermiculite is used in the manufacture of cat litter, as well as in thermal and electric insulation products and in concrete and agricultural soil conditioners.

159 The Coal industry's controversial move West. Business week, no. 2330, May 11, 1974: 134, 136, 138.

159 "Should the U.S. concentrate its coal programs in the deep mines of Appalachia or in the Western plains, from Montana to New Mexico? The answer will set the growth patterns of the nation's major energy suppliers for years to come, decide the fate of the coal-dependent Appalachian economy, and determine the environmental quality and economic development of the West."

{160} Coles, Robert. Davey, Tom.

160 Defending the land. New republic, v. 175, Nov. 20, 1976: 10-12.

160 Authors discuss how the Northern Plains Resource Council is fighting against the strip mining of coal in Montana.

160 Conaway, James.

160 Stripping the West: a new social contract for mining. New York, Alicia Patterson Foundation, 1974. 11 p.

160 "JC-1"

160 Comments on some of the issues involved in H.R. 11500, the Surface Mining Control and Reclamation Act of 1974; land reclamation, East versus West in future coal production, and on the social responsibility of the coal industry.

160 Cook, C. Wayne.

160 Surface-mine rehabilitation in the American West. Environmental conservation, v. 3, autumn 1976: 179-184.

160 Stresses the need for land-reclamation planning to be an integral part of surface mining plans and surveys vegetation types and methods of revegetation on Western mineral lands.

160 Corrigan, Richard.

160 Amid lawsuits and debates, Western coal mining is picking up.National journal, v. 8, Aug. 7, 1976: 1112-1115.

160 "This is the second report in a three-part series on western energy developments. The first, on uranium mining, appeared in Vol. 8, No. 31, p. 1072. The third will cover community impact."

160 Council for agricultural Science and Technology.

160 Surface mining reclamation; a report by a task force. [Ames, Iowa] 1973. 7 p.

160 Cranston, Alan.

160 The battle for Death Valley. National parks & conservation maqazine, v. 50, Jan. 1976: 4-5, 7-9.

160 Senator Cranston describes the history of mining in Death Valley and briefly alludes to a bill to forbid mining there and in five other units of the National Park System.

{161} Dames & Moore.

161 Development of pre-mining and reclamation plan rationale for surface coal mines. Springfield, Va., Reproduced by NTIS, 1976. 3 v. (U.S. Bureau of Mines. Open file report 100(1)-76)

161 "PB-258 042"

161 "PB-258 043"

161 "PB-258 044"

161 Vol. 1. - The rationale for data acquisition. - Vol. 2. - Methods of data acquisition. - Vol. 3. - Legal controls of surface mining.

161 Democratic Study Group.

161 Strip mining. Washington, 1975. 19 p. (Democratic Study Group. Fact sheet 94-3)

161 " . . . deals with H.R. 25, the Surface Mining Control and Reclamation Act of 1975 . . . The major provisions of the bill include detailed environmental protection controls, reclamation of mined lands, a fee-funded program for the reclamation of existing abandoned mines, prohibition of strip mining in certain designated areas, and protection of the rights of surface owners."

161 Dials, George E. Moore, Elizabeth C.

161 The cost of coal. Appalachia, v. 8, Oct.-Nov. 1974: 1-13, 15-29.

161 Estimates the additional cost of producing coal safely - both for coal miners and for the environment - over the period 1970-2000 to be $.87 per ton for deep-mined and $1 .003 per ton for surface mined coal, increases of 9% and 18%, respectively, over the average 1972 selling prices.

161 Evans, Robert J. Bitler, John F.

161 Coal surface mining reclamation costs: Appalachian and Midwestern coal supply districts. [Washington] U.S. Bureau of Mines [1975] 50 p. (U.S. Bureau of Mines. Informatior. circular 8695)

161 The purpose of this study is to determine "the actual costs involved with the reclamation of coal surface mined land done in conjunction with active mining operations." "As the result of comparisons of reclamation costs by region, by mining method, by slope, and by size of operation, the most important reclamation cost difference is between area mining methods ($1.73 per ton) and contour mining methods ($3 .81 per ton)."

161 Faltermayer, Edmund.

161 Clearing the way for the new age of coal. Fortune, v. 89, May 1974: 214-219, 334, 336, 338.

161 "In the rush for energy, the U.S. will be tearing coal from the ground

as never before. Moonscapes and dustbowls must not be the result."

162 Federal regulation of strip mining. Editorial opinion reports, Aug. 1974: 1-4.

162 "Sixty-four per cent of the prestige daily newspapers monitored by Public Issues Fesearch Bureau in recent weeks have editorially spoken out - all favorably - on federal regulation of strip mining."

162 Gates, Lathrop M.

162 Strip mine reclamation regulation.Misscuri law review, v. 39, summer 1974: 429-446.

162 "In September, 1971, Missouri enacted a new set of regulations dealing with strip mining. This comment will explore the impact this legislation has had on the environmental and economic aspects of surface mining in Missouri and the extent to which the proposed federal legislation on strip mining would affect this impact."

162 Greenbaum, Marguret Elaine. Harvey, Cutis E.

162 Surface mining, land reclamation, and acceptable standards. Lexington, College of Business and Economics, University of Kentucky [distributed by NTIS] 1974. 40 p.

162 "PB-234 254"

162 "This paper proposes an alternative to the reclamation tax. The performance bond system, already used by many coal mining states, is discussed, along with policy implications that arise from efforts to internalize external costs. The theoretical framework of the externality problems is also explored."

162 Grim, Elmore C. Hill, Ronald D.

162 Environmental protection in surface mining of coal. Cincinnati, National Environmental Research Center, for sale by the Supt. of Docs., U.S.Govt.Print.Off., 1974. 277 p. (Environmental protection technology series)

162 "EPA-670/2-74-093"

162 " . . . discusses damages caused by surface mining (with emphasis on coal), outlines techniques that will hold damages to a minimum, discusses procedures to restore the land after mining has occurred, and highlights areas requiring further research and development."

162 Highlights of a busy year for coal. Coal age, v. 79, Feb. 1974: 69-99.

162 Partial contents. - Definitions and parameters for U.S. coal-reserve estimates. - Roundup of what's new in mining and preparation. - Industry's safety record improves; more changes on the way. - Coal can crank up in 1974, with concerned assistance. - Management makes a difference in "picture book" surface mining. Holloran, william. McCormick, John.

{163} Strip mining battle tears up Congress. Environmental action, v. 5, Mar. 30, 1974: 3-6.

163 "The Senate, under the tutelage of Senator Henry Jackson (D-Wash.), has passed a strong strip mining bill . . . and a fierce struggle is underway in the House Interior Committee over the provisions of a similarly strict measure. But opponents of strip mining control have not given up. The energy crisis has given the coal and utilities lobbies new life in their struggle to delay and dilute the legislation."

163 House Republican Conference.

163 Background report on the strip-mining bill; U.S. coal resources.Washington, 1974. 35 p.

163 Contents. - Consumption patterns. - Technologies affecting use. - Reserves and production. - Strip-mining methods. - Reclamation technigues and costs.

163 Imhoff, Edgar A.Friz, Thomas O. LaFevers, James R.

163 A guide to state programs for the reclamation of surface mined areas. [Washington, U.S. Geological Survey] 1976. 33 p. (U.S. Geological Survey. Circular 731)

163 Presents a "display, analysis, and interpretation of the state programs for the reclamation of surface mine lands. Underground mining, lands underlying freshwater lakes, and submarine lands of the Continental Shelf are not covered. 'Orphan' mined lands (lands mined but not reclaimed) are not discussed."

163 Investor Responsibility Research Center.

163 Surface mining of coal.Washington, 1973. 53 p. (Investor Responsibility Research Center. Special report no. 6)

163 Report offers "a basic understanding of the factors affecting the market for coal, the controversy about surface mining, and the provisions and probable impact - assuming enactment - of the surface mining legislation recently passed

by the United States Senate."

163 Katell, Sidney. Hemingway, E. I.

163 Basic estimated capital investment and operating costs for coal strip mines. [Washington] U.S. Bureau of Mines [for sale by the Supt. of Docs., U.S.Govt.Print.Off., 1974] 31 p. (U.S. Bureau of Mines. Information circular

8661)

163 Krebs, Girard.

163 Technological and social impact assessment of resource extraction: the case of coal. Environment and behavior, v. 7, Sept. 1975: 307-329.

163 Seeks to delineate a number of significant parameters in the social impact assessment of coal extraction.

163 Lifshits, Lazar.

{164} Rejuvenated soil. Soviet life, no. 3, Mar. 1976: 44-47.

164 Discusses land reclamation of strip mined areas in the U.S.S.R.

164 Mason, Richard H.

164 Innovative mining group emphasizes reclamation. Coal mining & processing, v. 13, May 1976: 54-57.

164 Discusses the coal mining and reclamation technigues employed by several West Virginia firms.

164 Melcher, John.

164 Developing our energy resources. American Gas Association monthly, v. 57, Jan. 1975: 16-17, 33.

164 Congressman from Montana discusses Actions by Congress on energy-related legislation - Alaska pipeline bill and coal strip mine reclamation bill.

164 Michaelson, S.D.

164 Wanted: new systems for surface mining. Engineering and mining journal, v. 175, Oct. 1974: 63-69.

164 Says recent and current productivity trends in U.S. surface mining show

the industry to be noncompetitive in comparison with other industries both in the U.S. and abroad. Discusses mining concepts requiring physical removal and transport of ore and cverburden.

164 Minear, Poger A. Tschantz, Bruce A.

164 The effect of coal surface mining on the water quality of mountain drainage basin streams. Journal [of the] Water Pollution Control Federation, v. 48, Nov. 1976: 2549-2569.

164 Account of a study in Tennessee "which incorporated the simultaneous examination of streams in disturbed and undisturbed watersheds of similar size, drainage area, and geology."

164 Mintz, Robert E.

164 Strip mining: a policy evaluation. Ecology law guarterly, v. 5, no. 3, 1976: 461-529.

164 Article analyzes "the relationships between strip mining and the various social values connected with it" and presents the "policy conclusions of this analysis as well as considerations going to the effective implementation of the suggested policy. Finally, these results are compared to the approach taken by recent Congressional legislation and recommendations are made for future lawmaking on the subject."

164 Moomau, Henry F. Zachar, Frank R. Leonard, Joseph W.

{1 mau, Henry F. Zachar, Frank R.Leonard, Joseph W.

{165} Feasibility study of a new surface mining method "longwall stripping." [Washington, office of Research and Development, U.S. Environmental Protection Agency] for sale by the Supt. of Docs., U.S.Govt.Print.Off., 1974. 67 p. (Environmental protection technology series)

165 "EPA-670/2-74-002"

165 Morton, Rogers C.B.

165 Strip-mining reform - some political and economic ideas. Environmental affairs, v. 2, fall 1972: 294-302.

165 Says the movement for strip mining reform has become a three-pronged educational effort involving the mining industry, the Congress, and the environmentally aware public. Feels the third part of the teaching effore - involving the public - will be the most difficult, because it takes for granted

the material benefits that industrial technology supplies.

165 Mutmansky, Jan M.

165 Analysis of effects of legislation upon reserves and profits in contour surface mining. Coal age, v. 79, Sept. 1974: 104-108.

165 "This is an attempt to analyze the effects on strip mining form three types of legislation: (1) legislation which affects the reclamation standards and costs, (2) legislation which affects the overburden handling costs, and (3) legislation which attaches a severance tax or other type of tonnage cost upon the coal removed."

165 Noone, James A.

165 Strip mining lobby groups focus on House Interior Committee. National journal reports, v. 6, Jan. 26, 1974: 137-142.

165 "The House Interior and Insular Affairs Committee will have to move faster than it did last year if it is to produce controls for strip mining of coal in 1974. Its work will be harder. Energy shortages will mean intensified pressures from industry and environmental lobbyists. The most controversial proposals still pending are a tax that would equalize the production costs of strip and deep mined coal and a provision that could cut deeply into coal output in the Far West."

165 Paone, James. Morning, John L. Giorgetti, Leo.

165 Land utilization and reclamation in the mining industry, 1930-71. [Washington] U.S. Bureau of Mines [for sale by the Supt. of Docs., U.S.Govt.Print.Off., 1974] 61 p. (U.S. Bureau of Mines. Information circular 8642)

165 Pennsylvania. State University. Coal Research Section.

{166} An analysis of strip mining methods and equipment selection; a report submitted to the Office of Coal Reseanch, United States Department of Interior. Washington, U.S. Office of Coal Pesearch, for sale by the Supt. of Docs., U.S.Govt.Print.Off., 1973. 134 p. (U.S. Office of Coal Research. Research and development report no. 61. Interim report no. 7)

166 Phillips, James G.

166 Coal industry problems hamper production goals. National journal reports, v. 6, June 29, 1974: 951-961.

166 "Production must increase 10 per cent a year between now and 1980 and 20 per cent between 1980 and 1985 to reach the goals of Project Independence. Coal producers say they can't meet those goals unless steps are taken to alleviate problems that include shortages of capital, eguipment, manpower and transportation and regulations affecting air guality, strip mining and employee safety."

166 Rose, Dietmar W.

166 Fuel forest versus strip-mining: fuel production alternatives. Journal of forestry, v. 73, Aug. 1975: 489-493.

166 "A proposal for a 'fuel forest' is reexamined as one alternative to the stripmining of coal in Iowa, and an analvtical framework to compare energy alternatives is described."

166 Schlottmenn, Alan. Spore, Robert L.

166 Economic impacts of surface mine reclamation. Land economics, v. 52, Aug. 1976: 265-277.

166 "The primary purpose of this paper is to analyze the regional economic impact of back-to-contour surface mining regulations on the dominant coal market (the use of 'steamelectric' coal by electric utilities) and its coal suppliers." Focuses on Appalachia, the Midwest, and the West.

166 Stephenson, Lee.

166 House passes tough stripping control bill. Environmental action, v. 6, July 20-Aug. 3, 1974: 9-11.

166 The bill (H.R. 11500) "won't stop the practice but, if enacted, will be the first firm control of strip mining destruction."

166 Stephenson, Lee.

{167} We have more sense than AEP has dollars - let's use it. Environmental action, v. 6, May 11, 1974: 3-7.

167 Argues that the American Electric Power Company (AEP), a major holding company in the electric power area, is printing misleading holding company in the electric power area, is printing misleading advertisements power area, is printing misleading advertisements in an attempt to get gublic support for ship mining.

167 Surface Mining Control and Reclamation Act of 1974. [Debate and vote in

the House] Congressional record [daily ed.] v. 120. July 25, 1974: H7098-H7177.

167 U.S. Congress. Conference Committees, 1974.

167 Surface Mining Control and Reclamation Act of 1974; conference report to accompany S. 425. [Washington, U.S.Govt.Print.Off.] 1974. 87 p. (93d Cong., 2d sess. House. Report no. 93-1522)

167 U.S. Congress. Conference Committees, 1975.

167 Surface Mining Control and Reclamation Act of 1975; conference report to accompany H.R. 25. [Washington, U.S.Govt.Print.Off.] 1975. 91 p. (94th Cong., 1st sess. Senate. Report no. 94-101)

167 Also, available as House report no. 94-189.

167 U.S. Congress. House. Committee on Interior and Insular Affairs.

167 Surface Mining Control and Reclamation Act of 1974; report together with additional, dissenting, separate, and supplemental views to accompany H.R. 11500. Washington, U.S.Govt.Print.Off., 1974. 295 p. (93d Cong., 2d sess. House. Report no. 93-1072)

167 U.S. Congress. House. Committee on Interior and Insular Affairs.

167 Surface Mining Control and Reclamation Act of 1976; report together with concurring, additional, separate, and dissenting views and including the Congressional Budget Office cost estimate to accompany H.R. 13950. Washington, U.S.Govt.Print.Off., 1976. 152 p. (94th Cong., 2d sess. House. Report no. 94-1445)

167 U.S. Congress. House. Committee on Interior and Insular Affairs. Subcommittee on Energy and the Environment.

{168} Surface mining veto justification briefing. Hearing before the Subcommittee on Energy and the Environment and the Subcommittee on Mines and Mining of the Committee on Interior and Insular Affairs, House of Representatives, 94th Cong., 1st sess., on the President's veto of H.R. 25. June 3, 1975. Washington, U.S.Govt.Print.Off., 1975. 342 p.

168 U.S. Congress. Senate. Committee on Interior and Insular Affairs.

168 Federal Coal Leasing Amendments Act of 1975; report together with minority and additional views to accompany S. 391. [Washington, U.S.Govt.Print.Off.] 1975. 67 p. (94th Cong., 1st sess. Senate.Report no. 94-296)

168 U.S. Congress. Senate. Committee on Interior and Insular Affairs.

168 Surface Mining Control and Reclamation Act of 1975; report together with minority and additional views to accompany S. 7. [Washington, U.S.Govt.Print.Off.] 1975. 252 p. (94th Cong., 1st sess. Senate. Report no. 28)

168 U.S. Environmental Protection Agency.

168 Processes, procedures, and methods to control pollution from mining activities. Washington, For sale by the Supt. of Docs., U.S.Govt.Print.Off., 1974. 390 p.

168 Bibliography: p. 367-390.

168 "EPA-430/9-73-011"

168 U.S. General Accounting Office.

168 Opportunities for improvements in reclaiming stripmined lands under coal purchase contracts; Tennessee Valley Authority. [Washington] 1972. 53 p.

168 "B-114850, Aug. 9, 1972"

168 U.S. President, 1974-1977 (Ford).

168 Proposing legislation to provide for cooperation between the Secretary of the Interior and the states with respect to the regulation of surface coal mining operations; communication. Washington, U.S.Govt.Print.Off., 1975. 64 p. (94th Cong., 1st sess. House. Document no. 94-44)

168 U.S. Soil Conservation Service.

{169} Status of land distributed by surface mining as of January 1, 1974, by states. In Remarks of Clifford P. Hansen.

169 Congressional record [daily ed.] v. 120, Apr. 11, 1974: S5912-S5914.

169 Presents detailed tables on strip mined land in the U.S., with a breakdown for the nature of the material removed (coal, gravel, etc.).

169 U.S. Soil Conservation Service.

169 Status of land disturbed by surface mining as of January 1, 1974, by states. In Extension of remarks of Robert H. Michel. Congressional record

[daily ed.] v. 120, Apr. 8, 1974: E2184-E2186.

169 The 1973 survey is the first to break down the disturbed acreages into three categories of minerals - specifically, into coal, sand and gravel.

169 US mining industry reclaims 80% of surface acreage used in 1971. Mining engineering, v. 26, Oct. 1974: 59-60.

169 "No other industry has taken so little land and returned so much, according to the latest Bureau of Mines study."

169 Waldbieser, William C.

169 Recent developments in open cut mining and machines. Mining engineering, v. 26, Oct. 1974: 43-45.

169 "While domestic coal production increased only 5% in the past four years, AMAX Coal's production went up 48% in the same period - thanks to a sustained effort in technological innovetion."

RESULTS OF THE SURVEY

49 IDAHO

49 In their reply to the survey, the Idaho Department of Lands indicated that there was little similarity between the existing State regulations and the Federal proposal. Furthermore, the State indicated that although laws for the regulation of surface mining did exist, the State was currently in the process of drafting regulations pursuant to the law. The Department of Lands for the State enclosed a copy of the present laws regulating mining. Although coal is not presently being produced in Idaho, the mineral is included in the list of minerals which the current law covers. The other requirements of the law include:

49 1. A map showing the location of existing roads and anticipated access and main haulage roads which would be constructed in conjunction with the mining operation;

49 2. The approximate boundaries of the land to be utilized in the mining operation;

49 3. A description of the hydrologic regime in the affected area;

49 4. The names and addresses of the persons to whom notices are to be sent;

49 5. A description of the drainage patterns which would be affected by the mining operation;

{50} 6. And the boundaries of the adjacent lands which would be affected by the mining operation.

50 In addition, the law requires that the operator file with the regulatory agency, a reclamation plan which details the actions that will be required of the operator to remain in compliance with the law. If the reclamation plan submitted by the operator is not in compliance with the State law, the regulatory board is required to notify the operator of the plan's inadequacies and of ways in which it can be modified in order to comply with the law.

50 In the case of exploration operations, the law further requires that the mine operator notify the Department of Lands within seven days after commencing exploration which will involve any significant disturbance of the earth.

50 For the purpose of determining whether or not the amended reclamation plan complies with the provisions of the State law, the regulatory board can hold hearings in which any interested party can present testimony. Any such hearings does not, however, extend the time limit that the board must act on the plan submitted by the operator. The law also contains provisions for the operator to submit requests for amendments to the reclamation plan.The actual reclamation standards established by the Idaho law are as follows:

50 47-1509. PROCEDURES IN RECLAMATION. - (a) Except as otherwise provided in this act, every operator who conducts exploration or surface mining operations which disturb two (2) or more acres within the state of Idaho shall perform the following reclamation activities:

50 (1) Ridges of overburden shall be leveled in such manner as to have a minimum width of ten (10) feet at the top.

50 (2) Peaks of overburden shall be leveled in such a manner as to have a minimum width of fifteen (15) feet at the top.

50 (3) Overburden piles shall be reasonably prepared to control erosion.

50 (4) Where water run-off from affected lands results in stream or lake siltation in excess of that which normally results from run-off, the operator shall prepare affected lands and adjacent premises under the control of the operator as necessary to meet the requirements authorized under chapter 1, title 39, Idaho Code or the conditions of the water run-off prior to commencing surface mining or exploration operations, whichever is the lesser standard.

50 (5) Roads which are abandoned shall be cross-ditched insofar as necessary

to avoid erosion gullies.

50 (6) Exploration drill holes shall be plugged or otherwise left so as to eliminate hazards to humans or animals.

50 (7) Abandoned affected lands shall be topped to the extent that such overburden is reasonably available from the pit, with that type of overburden which is conducive to the control of erosion or the growth of the vegetation which the operator elects to plant thereon.

50 (8) The operator shall conduct revegetation activities on the mined areas, overburden piles, and abandoned roads in accordance with the provisions of this act.

50 (9) Tailings ponds shall be reasonably prepared in such a condition that they will not constitute a hazard to human or animal life.

50 (b) The board may request, in writing, that a given road or portion thereof not be cross-ditched or revegetated, and upon such request, the operator shall be excused from performing such activities as to such road or portion thereof.

50 (c) Every operator who conducts exploration or surface mining operations which disturb less than two (2) acres within the state of Idaho shall, wherever possible, contour the lands so disturbed to approximate the previous contour of the lands.

50 (d) The operator and board may agree, in writing, to do any act with respect to reclamation above and beyond the requirements herein set forth.

{51} With regard to the time limit required for the completion of the actual reclamation work associated with drilling, the Idaho law states that the work shall be done within one year following the abandonment. Otherwise, the reclamation activities are required to be commenced within one year following the permanent cessation of the surface mining activities.

51 The Idaho law also contains provisions for the posting of performance bond in an amount not to exceed $5 00/acre and the law delegates the authority of prescribing the form of the bond to the regulatory board.Proceedings for the forfeiture of the performance bond can be initiated by the regulatory board and in the event of such a complaint, a hearing would be required within 30 days of the time that the complaint is received by the operator. The hearing officer in charge of the proceedings is required to designate a reasonable time for the rectification of the violation. If the violation is not remedied by the operator in the time period specified, the regulatory board may request that the Attorney General of the State institute proceedings to have the performance bond

of the operator forfeited.

51 The law also provides for civil penalties to be assessed by the board in the amounts of not less than $100 or more than $1 ,000 for each day during which the violation continues. In addition, the law provides for a penalty of "not less than one thousand dollars ($1,000) and not more than five thousand dollars ($5 ,000) or imprisonment not to exceed one (1) year or both" for anyone who willfully refuses to comply with the provisions of the law, or who falsifies any records or information required by the regulatory board. Any operator who may be dissatisfied with the ruling of the board may seek relief from the court system of the State of Idaho.

51 ILLINOIS

51 In response to the Committee's question regarding the similarities and differences of the existing State law with that of the Federal proposal, the State felt that in many instances, the State's regulations were superior to the proposed Federal legislation. According to the Department of Mines and Minerals for the State:

51 The provisions of the Illinois law would achieve the same or in some cases better reclamation than the proposed Federal statute.For example, the Illinois law requires the replacement of darkened surface materials plus a prescribed rooting medium to a total dept of 4 feet when the lands are determined suitable and capable based upon Soil Conservation Service's soil capability.

51 In other areas the Illinois law deals with a philosophy different than the proposed Federal statute.A few examples are: creation of good waters in Illinois is considered an asset as final cuts and depressed areas are encouraged to form good sources of water for irrigation, wildlife, recreation, reservoirs, etc. This is believed to be good as several governmental agencies spend huge sums to achieve impoundment; strip mining creates impoundment with little or no extra cost. The federal reclamation statute allows such structure only upon receiving what amounts to be a variance. The Illinois law does not specifically address underground water reserves and secondly do not know if technology is available to adequately appraise or rectify if an aquifer is adversely affected. The Illinois law does not require publication or notice of planned blasting. The Illinois law requires vegetation standards but not for five years as in the Federal statute, and this has caused no problems to date.As previously mentioned, the highwalls and final custs are allowed for water impoundment but highwalls are reduced to 2 to 1 slopes. The Illinois law is not directed to accommodate contour mining which is presently non-existent in the state.

{52} In addition, the Department indicated that no areas in the State had been officially designated as "unsuitable for mining." The regulatory agency

has, however, discouraged surface mining for coal in some areas by emphasizing the high cost of reclamation that could be incurred to the prospective operators.

52 Included in the more important provisions of the law are requirements that operators obtain permit from the Department of Mines and Minerals before engaging in surface mining unless any such operation would involve the disturbance of less than 10 acres of land during the permit year or involve the moving of less than 10 feet of overburden. Also, the prospective operator must include, as part of his application for a permit, basic fee of $50 minimum plus $2 5 for each full acre or fraction thereof which would be affected by the proposed mining operation. A surety bond of between $600 and $5 ,000 per acre as determined by the Director of the Department must be posted by the operator.In lieu of the bond, the operator may elect to deposit cash or government securities with the Department of Mines.

52 The bond or security remains in effect until the affected lands have been reclaimed, approved and released by the Department. When the Department determines that grading and covering with materials capable of supporting vegetation in accordance with the plan has been satisfactorily completed, the Department releases the bond or security except for $1 00 per acre which is retained by the Department until the reclamation according to Section 6 of this Act has been completed.Where an anticipated water impoundment has been approved by the Department in the reclamation plan and where the Department determines the impoundment will be satisfactorily completed upon completion of the operation, the bond covering such anticipated water impoundment area is released.

52 The Illinois law in most instances requires the replacement of topsoil unless such an action would involve the replacement of less than 8 inches of material. Generally, in determining the degree of reclamation that the operator must perform under the law, the State Department of Mines and Minerals considers the local conditions which may include the following: the short and long-term impact of the proposed mining on vegetation, wildlife, fish, land use, land values, local tax base, the economy of the region and the State, employment opportunities, air pollution, water pollution, soil contamination, noise pollution and drainage. The degree to which the above items affect the requirements of the operator is left to the discretion of the Department of Mines and Minerals.

52 With regards to question 9 on the survey which asked for a list of programs in Illinois which monitored the long-term effectiveness of reclamation programs, the Department of Mines and Minerals indicated that the Illinois Institute for Environmental Quality sponsors several such programs. The Department also reported that formal action had been taken against an operator for mining outside the permitted area, but the Agency did not indicate whether

or not the permit had been revoked or merely suspended.

{53} Based on information contained in the information forwarded by the Department as part of a study n1 conducted by the Southern Illinois University, reclamation efforts in Illinois have not been very successful.

53 n1 Illinois Lands Surface Mined for Coal, by Ronnie J. Haynes and W. D. Klimstra, Cooperative Wildlife Research Laboratory, Southern Illinois University at Carbondale, June 1975.

53 As shown in the following tables taken from that study, 45.5 percent of the land that has been surface mined for coal before and after the passage of the State reclamation law has not been utilized for any purpose. As of June 30, 1971, acreage in this category which had been mined prior to the passage of the Illinois reclamation law totaled 37,993 acres, while that which had been mined after the passage of the law totaled 38,660 acres. The nearest competing land use was agricultural (pastureland) with total acreage of 32,084 acres of lands mined prior to the law and 14,303 acres of post-law mined lands. Other categories are shown in the following tables.

*7*ABLE 29. - OBSERVED UTILIZATION OF PRE-LAW LAND SURFACE MINED FOR COAL IN ILLINOIS AS OF JUNE 30,1971

Utilization	Management region					
	I	II	III	IV	V	Total
None	8,322	3,855	3,113	12,613	10,090	37,993
Active areas:						
Mine	0	0	0	0	0	0
Slurry	193	16	0	21	248	478
Gob	70	14	0	28	14	126
Tipple	0	0	0	39	0	39
Agriculture:						
Pasture	21,018	1,852	594	299	8,321	32,084
Hay	1,706	0	0	0	38	1,744
Tilled crop	705	0	0	0	0	705
Grain crop	0	0	0	0	0	0
Orchard	45	0	0	0	80	125
Timber n1	0	5	0	0	1,126	1,131
Organized recreation:						
Land	4,926	7,121	1,231	32	3,155	16,465
Water	1,092	2,122	319	0	375	3,908
Unorganized recreation:						
Land	415	796	17	79	196	1,503
Water	1,789	536	295	279	1,165	4,064

Fish farm	12	0	0	0	34	46
Water consumption	1,808	136	49	76	483	2,552
Residential	350	1,369	0	0	19	1,738
Airport	20	0	0	0	0	20
Industrial	17	112	0	0	11	140
Educational	69	131	0	0	10	210
Storage or waste disposal:						
Authorized	329	166	146	101	267	1,009
Unauthorized	21	57	4	21	56	159
Public highway	97	21	42	25	64	249
Other	820	76	50	70	41	1,057
Undetermined n2	46	0	25	0	7	78
Total	43,870	18,385	5,885	13,683	25,800	107,623

53 n1 Acreage was tabulated only if a sawmill was observed in operation, or timber harvest was observed.

53 n2 Unable to locate and classify this acreage (see footnotes, app. H, Table A).

53 Source: Illinois Lands Surface Mined For Coal, by Ronnie J. Haynes and W. D.

53 Klimstra, Cooperative Wildlife Research Laboratory, Southern Illinois University at Carbondale, June 1975.

{54}

*7*TABLE 30. - OBSERVED UTILIZATION OF POST-LAW LAND SURFACE MINED FOR COAL IN ILLINOIS AS OF JUNE 30, 1971

7[Acres]

Utilization	Management region					
	I	II	III	IV	V	Total
None	14,169	1,815	1,331	9,238	12,107	38,660
Active areas:						
Mine n1	1,814	549	0	128	590	3,081
Slurry	33	0	0	16	0	49
Gob	32	0	0	0	0	32
Tipple	3	0	0	0	0	3
Agricultural:						
Pasture	8,278	164	439	689	4,773	14,303
Hay	1,997	0	0	0	110	2,107
Tilled crop	93	0	3	0	0	96

Grain crop	144	0	0	0	0	144
Orchard	0	0	0	0	0	0
Timber n2	0	0	0	0	0	0
Organized recreation:						
Land	252	30	10	0	0	292
Water	48	17	0	0	1	66
Unorganized recreation:						
Land	17	0	0	0	0	17
Water	971	46	99	39	307	1,462
Fish farm	0	0	0	0	0	0
Water consumption	650	14	30	31	198	923
Residential	0	0	6	0	0	6
Airport	0	0	0	0	0	0
Industrial	0	0	0	0	0	0
Educational	0	0	0	0	0	0
Storage or waste disposal:						
Authorized	4	0	2	17	0	23
Unauthorized	0	0	0	21	0	21
Public highway	33	0	0	1	5	39
Other	24	0	0	12	0	36
Undetermined	0	0	0	0	0	0
Total	28,562	2,635	1,920	10,192	18,051	61,360

54 n1 Includes pits where coal was being removed and areas mined during the 6-mo period prior to the survey.

54 n2 Acreage was tabulated only if a sawmill was observed in operation, or timber harvest was observed.

54 Source: Illinois Lands Surface Mined For Coal, by Ronnie J. Haynes and W. D. Klimstra, Cooperative Wildlife Research Laboratory, Southern Illinois University at Carbondale, June 1975.

54 INDIANA

54 According to information supplied by the Indiana Department of Natural Resources, the State law requires that land which is reclaimed pursuant to the existing laws must be capable of supporting land uses at least equal to that for which the land was used prior to mining. Based on the figures supplied by the Department, the State has done a commendable job of requiring reclamation by mine operators. Of the acreage (6,282 acres) in the State which has been reclaimed, 2,011 acres or 32 percent has been restored to a condition capable of supporting row-crops. The categories of reclamation within the State are as follows:

Maximum grade

	(percent)	Acres	Percent
Forest	33 1/3	251	4
Rangeland	33 1/3	2,073	33
Pasture-hay	25	1,947	31
Row crop	8	2,011	32
Total		6,282	100

{55} These figures indicate that of the total acreage reclaimed in Indiana, approximately 96 percent of the land affected under 1977 permits may be restored to agricultural land uses of beef production and cereal crops.Furthermore, the Department reported that over the past nine years, 85 percent of the land reclaimed in the State has been used for agriculture. One of the major coal producers in the State is actively engaged in the reclamation of mined lands for the purpose of producing beef cattle, and has established a division expressly for that purpose.The philosophy that the company has espoused is that the mining of coal should be an "interim land use." The Department claims that the State has been achieving the goal of Section 515b.2. of the Federal proposal, which requires that the land be returned to a condition at least capable of supporting the uses which it was capable of supporting prior to mining.

55 The Department felt that many of the terms used in the Federal proposal were too ambiguous to be effectively applied in actual mining situations. For example, the Indiana law does not require the operators to restore the approximate original contour, but instead requires that the condition of the land after mining be improved over its condition prior to mining. This may involve grading the land to a contour that is flatter than the original and preparing the land for agricultural uses. The Department also stated that it felt that the Indiana law was superior to the Federal proposal in that it stipulated the exact percentage of grade allowable during reclamation, whereas the surface mining bill used terms such as "the angle of repose", etc. The State also considered requiring soil separation during the 1960's before passing its own regulations, but it came to the conclusion that any such requirement would be almost impossible to enforce. The State now requires, therefore, that the topsoil or uppermost layer of soil be sufficient to support the post mining land use which was approved in the reclamation plan. The Department noted that the provisions of Section 515 in the Federal proposal which pertain to coal mining in mountainous terrain would not apply to mining in the State. Included in these are provisions dealing with the problems of landslides and the placing of overburden on areas outside the permit area, a procedure that is often used in contour mining.

55 The Indiana law requires a bond of $5 ,000 minimum or $6 00/acre, whichever is greater. Based on the information offered by the Department of Natural Resources, however, this amount of bond from the operators may be insufficient to perform the reclamation necessary in the event of forfeiture.

During the period from 1970 to 1975, the Department reported that bond in the amount of $2 68.05 per acre had been forfeited but that no reclamation by the State had been conducted because of the cost involved. In addition, the Agency stated that recent bids submitted for one permit area estimated the reclamation costs to be between $2,000 and $4 ,000 per acre, meaning that the performance bond posted by the operators amounted to an approximate shortfall of between $1,732 and $3 ,732 per acre. This situation could be avoided by requiring the bond to be sufficient to cover reclamation if performed by a third party.

{56} IOWA

56 According to the Iowa Department of Soil Conservation, Mines and Minerals Division, the regulating agency for surface mining in the State, some of the provisions of the State law are comparable to Section 515 of the Federal proposal. Although the Department did not draft a comparison, it did indicate whether the following provisions in the Federal proposal contained counterparts in their own State law.

	Subject	Covered in the State law
H.R. 13950, sec. 515 -		
5(a)	Mining permits must conform to the provisions of the Act.	Yes.
(b)(1)	Operator must maxilize the utilization of the resource	Yes.
(b)(2)	Land must be capable of supporting prior uses	Yes.
(b)(3)	Land must be retored to its original contour	Yes.
(b)(4)	Spoil piles must be stabilized	Yes.
(b)(5)	Topscil must be segregated and preserved	Yes.
(b)(6)	Restore the topsoil after mining	Yes.
(b)(7)	Requires protection of offsite areas	Yes.
(b)(8)(A)(B)	Pertains to the construction of safe and adequate impoundments.	Yes.
(C)(D)(E)	Pertain to the maintenance of water quality in any impoundments.	Yes. Covered by the Department of Natural Re-Source law.
	Plugging and sealing auger	

(b)(9)	holes	Not applicable to Iowa.
(b)(10)(A)(B)(C)	Minimizing the disturbance to the prevailing hydrologic balance.	Yes.
(D)	Restoring the recharge capacity of the aquifer	Not applicable.
(E)	Restoring the water supply of surface owners in the area who may be affected.	Do.
(F)	Alluvial valley floor provisions	Do.
(G)	Other necessary actions to insure minimal distrubance to the hydrology of the area	Yes.
(b)(11)	Requires mine waste disposal	Yes.
(b)(12)	Restricts surface mining near old or existing under ground mines.	Not covered by Iowa law.
(b)(13)	Requires the stabilization of mine waste piles	Do.
(b)(14)	Disposal of toxic materials	Do.
(b)(15)	Controlled use of explosives	Do.
(b)(16)	Requires orderly and contemporaneous reclamation	Yes.
(b)(17)	Requires the minimizing of damage caused by access roads.	Yes.
(b)(18)	Prohibits the placing of access roads in streambeds	Not covered by Iowa law
(b)(19)	Requires vegetative cover on regraded areas	Do.
(b)(20)	Requires the maintenance of vegetative cover for a specified number of years following mining.	Do.
(b)(21)(c)(1)	Contains variances for the approval of a reclamation provisions	Covered by the Iowa law except that the States does not require the "registered" engineer.
	Reclaimed area must be	

		consistent with adjacent	
(D)		land uses.	Y Yes.
		Establishes a review period on proposed	
(E)		variance land uses.	N Not covered by Iowa law
		Provides for public	
(F)		hearings on variances	Do.
		Steep slope mining requires the retention of the toe of the lowest seam to prevent sliding of the spoil material after	
(4)(A)		regarding.	Not applicable.
		Insure that the reclaimed	
(B)		area is stable	Yes.
		Provides for the inward drainage of the reclaimed	
(C)		area.	Not covered by Iowa law.
		Requires minimizing the damage to natural watercourses in the mined	
(D)		area.	Yes.
		Empowers the regulatory agency to issue regulation for variances under the	
(5)		law.	Yes.
		Requires a review of the	
(6)		variance within 3 years	Not covered by Iowa law.
		Contains steep slope	Not applicable to Iowa
(D)		provisions	law.
		Surface effects of	
Sec. 516		underground mining	Not covered by Iowa law.

[See Table in Original]

56 In response to the question regarding the difficulty that could be encountered by trying to comply with the Federal proposal, the State Department of Soil Conservation indicated that:

{57} It is not so much a case of being impossible to comply with those standards as is the question of the need to comply. We have reasonable legislators and when we see the need for additional rules or amendments to our law we secure them. We believe that concerned Iowans are best qualified to define our reclamation goals.

57 The Department further indicated that no areas in Iowa had been designated as unsuitable for coal mining. In response to one of the questions

in the survey, it indicated that the State is not contemplating any type of program to monitor the long-term effectiveness of reclamation pursuant to the existing State reclamation laws.

57 In a November 10, 1976 letter to the Subcommittee on Minerals, Materials, and Fuels, the Director of the Mines and Minerals Division of the Department of Soil Conservation indicated that the State felt that it was already doing an adequate job of enforcing mining land reclamation within its jurisdiction. The Director claimed that under a system of enforcement at the State level, the various State agencies could adapt reclamation requirements to the conditions native to each particular area. Furthermore, the Director maintained that Section 515 of the Federal proposal contained restrictions on the industry that reflected the thinking of environmentalists "who, looking to the past and being unaware of recent progress, have demanded vindictive, restrictive strip mine legislation." "As future research discloses the need for either amendments to the law or additional departmental rules, we will secure them and the mine operators will comply with them."

57 According to the information provided in the response to the questionnaire, the Iowa law delegates the authority to the Department of Soil Conservation to determine the standards under which the operators mine coal within the State.The law requires the operators to first obtain a permit before engaging in mining. This license is valid for one year and can be renewed upon application 30 days prior to its expiration. The Department has the authority under the law to suspend, revoke or refuse to renew the license of any operator for just cause, although the operator does have the right to a hearing prior to the final disposition of the violation. In similar fashion to the Federal proposal, the Iowa law requires the registration by the operator of the minesite with the inclusion of a description of the land tracts involved along with the number of acres that is likely to be affected. Generally, the law requires the operator to perform certain reclamation actions including the grading of the spoil banks in order for them to blend with the surrounding terrain. The operator is required to construct impoundments whenever necessary in order to contain acid waters and cover acid-forming materials with at least two feet of earth or spoil material unless the acid-forming materials are submerged in such an impoundment. With regard to bonding provisions of the law, the operator is required to post bond in an amount necessary to rehabilitate the minesite as required by the Act. Furthermore, the Administrator of the Department of Soil Conservation or someone designated by him is given the authority to enter at any time any lands on which an operator is authorized to mine in order to determine whether or not the operator is in compliance with the Act.The law requires the operator to have completed the rehabilitation of the mined land within 24 months of the time of filing of a report indicating that mining on the tracts has been completed. Extensions on this time limit, however, may be obtained from the Department.

{58} KANSAS

58 The information which was returned by the Kansas State Corporation Commission, the agency responsible for the regulation of surface coal mining within the State, was incomplete and not very specific. In the response, the Assistant General Counsel stated that the Commission did not have the technical staff in order to analyze the similarities and differences between the State law and proposed Federal legislation. Furthermore, the Commission did not provide any information regarding the following questions:

58 1. Areas within the State which had been designated as unsuitable for surface coal mining;

58 2. An explanation of how the State law deals specifically with alluvial valley floor, if applicable;

58 3. An analysis of the reclamation of lands which were abandoned and reclaimed prior to enactment of State reclamation laws, including a showing of reclamation achieved during the ten-year period from 1966 to 1975, and the amount and percent of acreage still to be reclaimed;

58 4. Levels of State appropriations for abandoned mined lands reclamation, covering the ten-year period 1966 to 1975, and actual reclamation expenditures during the same period;

58 5. A description of the State program, if any, for monitoring the long-term effectiveness of reclamation required by law;

58 6. Coal production within the State by type of mining (surface or underground) along with figures on the number of mines greater and smaller than 250,000 tons annual production;

58 7. The method of hiring the State's reclamation field inspector;

58 8. The frequency of both announced and unannounced on-site inspections of surface mining operations within the State.

58 According to the limited information in the response, it appears that either most of the records regarding surface mining and its regulation within Kansas remain with their one field inspector and are not available to other individuals (not even the governing board), or the State regulatory agency does not keep records of the type requested by the Senate Committee. In either case, it appears that the record-keeping procedures of the State are inadequate to provide the information necessary to administer the State surface mining law.

58 Like the Federal legislation, the Kansas law prohibits, surface mining

without a permit issued by the governing board of the State of Kansas. The permit is issued for a period of one year and requires the operator to file an annual statement setting forth the full amount of coal mined or taken from each source or deposit and to identify the specific source or deposit from which it was taken. Although the law requires this statement to be filed within 30 days after the end of each calendar year, the regulatory agency, as mentioned earlier, was unable to furnish coal production data for the calendar year 1975. Furthermore, the application for a mining permit requires that the prospective operator submit the following information to the governing board:

{59} (b) The application for said permit shall include: (1) Two copies of a United States Geological Survey topographic map on which the operator has indicated the location of the area of land affected, the course which would be taken by drainage from the area of land affected to the nearest stream or streams to which such drainage would normally flow, the name of the applicant and the date.

59 (2) The owner or owners of the surface of the area of land to be affected by the permit and the owner or owners, if known by the operator, of all surface area within five fundred (500) feet of any part of the affected area.

59 (3) All persons with any interest in the coal to be mined.

59 (4) The source of the applicant's legal right to mine the coal or other minerals affected by the permit.

59 (5) The permanent and temporary postoffice address of the applicant.

59 (6) Whether the applicant or any person, firm, partnership or corporation associated with the applicant holds or has held any other permits under this act; and, if so, an identification of such permits.

59 (7) The written consent of the applicant and such other persons, if any, necessary to grant such access to the commissioner and board members or representatives thereof to the area of land affected under application from the date of application until the expiration of any permit granted under such application and thereafter for such time as is necessary to assure compliance with all provisions of this act or any rule or regulation promulgated hereunder.

59 (c) The application for a permit shall be accompanied by an enlarged United States Geological Survey topographic map prepared and certified by a professional engineer containing the following: (1) An identification of the area to correspond with the application.

59 (2) The boundaries of surface properties and names of owners on the area of land affected, and, if known to the operator, adjacent deep mines, and the

name of the owner or owners of the surface area within five hundred (500) feet of any part of the area of land affected.

59 (3) Be of a scale of not less than four hundred (400) feet to the inch and not to exceed six hundred and sixty (660) feet to the inch.

59 (4) Show the names and locations of all streams, creeks or other bodies of public water, roads, buildings, cemeteries, oil and gas wells and utility lines on the area to be mined and within five hundred (500) feet of such area.

59 (5) Show by appropriate markings the boundaries of the area of land affected, the cropline of the seam or deposit to be mined, and the total number of acres involved in the area of land affected.

59 (6) Show the date on which the map was prepared, the north point and the quadrangle name.

59 (7) Show the drainage plan on and away from the area of land affected. Such plan shall indicate the directional flow of water, constructed drainways, natural waterways used for drainage, and the nearest streams or tributaries receiving the discharge.

59 (8) A verified statement by the operator containing the proposed method of operation, grading, reclamation and conservation plan for the affected area including dates and approximate time of completion, and that said operation will meet the requirements of this act, or any rule or regulation promulgated hereunder.

59 (9) The certification of the maps by the professional engineer shall read as follows: "I, the undersigned, hereby certify that this map is correct and shows to the best of my knowledge and belief all the information required by the surface mining laws of this state." The certification shall be signed and the engineer's seal affixed.

60 (d) The application for a permit shall be accompanied by a plan of reclamation that meets the requirements of this act, and the rules and regulations promulgated hereunder.

60 (e) The board shall not approve the application for a permit to mine where such mining would constitute a hazard to a residence, public building, school, church, cemetery, commercial or residential building, public road, stream, lake or other property. Surface mining operations which remove and do not replace the lateral support shall not, unless approved by the board, approach within fifty (50) feet of property lines, public roads, streams, lakes or other property.

60 (f) A basic fee of fifty dollars ($5 0) plus a fee in an amount to be fixed by the board of not to exceed twenty-five dollars ($2 5) for every acre and fraction of an acre of land to be affected shall be paid before the permit required herein shall be issued.

60 (g) Contemporaneously with and as condition precedent to the issuance of the permit, there shall be filed by the operator with the board a bond payable to the state treasurer, conditioned that the operator shall faithfully perform all requirements of the board in accordance with the provisions of this act and any rules or regulations pursuant thereto. Such a bond shall be signed by the operator as principal, and by a corporate or individual surety approved by the board. The penal sum of such bond shall be determined by the board as not less than three hundred dollars ($300) nor more than one thousand dollars ($1 ,000) for each acre, or fraction thereof, of the area of land affected, with a minimum bond of three thousand dollars ($3,000).

60 In determining the amount of the bond within the above limits, the board shall take into consideration the character and nature of the overburden, the future suitable use of the land involved and the cost of reclamation to be required. In a particular instance where the circumstances are such to warrant an exception, the board, in its discretion, may reduce the amount of the bond for a particular operation to less than the required minimum.

60 (h) Where one operator succeeds another at any uncompleted operation, either by sale, assignment, lease or otherwise, the board may release the first operator from all liability under this act as to that particular operation: Provided, however, That if two or more operators have been issued a permit for the same operation and have otherwise complied with the requirements of the act and regulations promulgated pursuant thereto, the successor operator shall assume as part of his obligation under the act, all liability for the reclamation of the area of land affected by the former operator. [L. 1968, ch. 395, @ 6; L. 1974, ch. 229, @ 2; July 1.]

60 Within 20 working days the governing board must either approve the application for the mining permit or advise the prospective operator of the reasons his application does not meet the requirements of the state law for coal surface mining. If the operator objects to the determination of the board, he has the right to request a hearing on the board's ruling. Afterwards, any person aggrieved by the final decision of the board may appeal the decision to the district court of Shawnee County, Kansas.

60 With respect to the requirements for the restoration of the contour of the land mined for coal, the law requires that the operator shall grade the affected land to a rolling topography with slopes having no more than 25 percent grade. The law encourages impoundments on the mined area but requires that they be constructed so as to minimize seepage. The law also states that "all waters

in existence on mined land after reclamation is completed shall become public waters to the extent they may be stocked with fish from the state or Federal hatcheries and shall be under the law enforcement jurisdiction of the forestry, fish and game commission. The owner of the mined land containing such waters shall retain all other rights consistent with the ownership thereof." The law provides for the following reclamation actions to be taken by the operator:

{61} 1. Cover the face of the coal or other minerals with compacted non-acid bearing and non-toxic materials to a distance of at least two feet above the seam being mined or by a permanent water impoundment.

61 2. Minimize the damage to agricultural lands and pollution to waters in the area of the mining by controlling undesirable runoff from the actual mining area.

61 3. Grade the overburden with appropriate soil material that will support the type of vegetation which existed on the land prior to mining.

61 4. Eliminate the refuse resulting from the mining operation.

61 5.Refrain from placing any type of refuse on adjacent public or private lands that are not included in the approved mining permit area. This particular section also sets forth a timetable for the completion of the required grading of the mine spoils.

61 The State law requires the commencement of reclamation as soon as possible after the completion of mining and establishes a requirement that all of the reclamation must be completed within 12 months after the expiration of the mining permit. The governing board for surface mining in Kansas does have the authority, however, to issue variances for the vegetation requirements of the law, and in some instances, can release the operator from his obligation to revegetate altogether. In order to facilitate the maximum development and conservation of land, the operator may preplan the reclamation of more acres than may be mined in one permit period of one year.

61 The seeding and planting required by the law must be carried out in accordance with the revegetation plan which must be filed with the Board before November 30 of the year preceding planting. The plan must include information on the number of plants to be included in the operation or the variety of plants intended to be used.

61 Based on the information provided by the Board, the State reclamation law in Kansas is not as specific as the Federal proposed legislation.Nearly all of the provisions in the State law contain variances which allow the governing board to waive the requirements of the statute in special instances. Because the final decision regarding the State's requirements of the mine operators

rests with the Board, this body would apparently be the primary repository of all of the records of past, present, and proposed coal surface mining within the State. In spite of this responsibility, the board was unable to provide the information requested by the Senate Committee in the survey.

61 KENTUCKY

61 Kentucky has for a long time been the leader in state production of coal. In the eastern part of the State, the production comes primarily from underground mines and contour surface mining operations, while in the western portion of the State, area type surface mining is used by the operators.

{62} Therefore, the mining operations in the State could be affected by the proposed Federal regulations in at least three different ways, restoration of agricultural lands in Western Kentucky, reduction or elimination of the ills of steep-slope contour surface mining in the eastern part of the State, and the abatement of the adverse surface effects of underground coal mining. Furthermore, the determination of the impact of the Federal legislation on the State's existing and proposed operations is extremely important for at least two reasons. First, during 1976 the State produced 140 million tons or 21.1 percent of the U.S. total of 665 million tons and any disruption of this production could have a significant effect on National production. Second, any energy policy which emphasizes increasing production from states such as Kentucky could be adversely effected by unreasonable restrictions on mine operators.

62 The officials of the Kentucky regulatory agency presented one of the most detailed responses of any of the states surveyed.During the year for which the information was requested, the agency issued permits, required modifications in the permit applications submitted by operators, suspended permits, held hearings, assessed civil penalties, and conducted other activities appropriate to an agency that has jurisdiction over almost 2800 coal mining operations. Regardless of the fact that Kentucky may not, in some instances, detect all mining violations, the information provided is much more credible than that of some of the states which reported that, in the presence of coal mining operations, no citizen complaints were lodged with the regulating agency.From the information contained in its response, the Kentucky state enforcement agency indicated that complaints are made, that violations do occur from time to time, and that actions must be taken by State officials to insure compliance with the laws in an industry that has both conscientious and indifferent mine operators.

62 The Department of Natural Resources performed a comparison of the environmental protection performance standards in the Federal proposal with those in the existing Kentucky law. At the time the information was forwarded to the Senate Interior Committee, the Department had not determined the provisions of the Federal proposal with which operators within the State would

be unable to comply, although it did state that the agency was in the process of studying the situation and should be able to provide the results early in 1977.

62 The results of the Department's comparison of the Kentucky law and the proposed legislation follows. In instances where the Department made no comparison, it was assumed that the State law contains no comparable provisions.

62 Based on the information contained in the responses from the State's Department of Natural Resources, the provisions of the Kentucky law and the regulations enacted pursuant to the law contain many of the elements of the proposed Federal legislation. A cursory comparison of th eprovisions of the two sets of regulations revealed the similarities and differences described on the following pages.

{63

Federal legislation (Sec. 515)	Kentucky law and regulations
Generally requires the operator to:	
Maximize the utilization of the resource in the mining methods in order to avoid disturbing the land more than necessary.	Not specifically mentioned in the Ky. laws and regulations
Restore the land to a condition capable of supporting its prior uses.	Do.
Restore the approximate original contour eliminating depressions, highwalls, and soil piles.	Highwalls must be eliminated only when the mining will not result in a bench.
Cover all acid-forming and toxic materials.	Essentially in the Ky law.
Prevent slides and erosion.	Ky. law and regulations contains detailed requirements for grading the land to prevent slides.
Stabilize all spoil piles.	Not specifically mentioned in Ky. laws and regulations.
Segregate topsoil.	Do.
Restore topsoil.	Do.
Protect offsite areas.	Essentially in the Ky. law.
Create (if authorized permanent impoundments which are safe, serve the intended use, and don't pollute off-site areas.	402 KAR 1:060 requires the filing of a drainage, erosion, and sediment control plan prepared by a "registered professional engineer" and the regulations prohibit damage to the hydrology of offsite areas.
	The Department of Natural Resources suggested that KRS 350.093 was similar,

Plug auger holes.	however, this section does not require the plugging of auger holes specifically.
M Minimize the disturbance to the hydrology at the minesite.	4 402 KAR 1:055 establishes standards for water emanating from the minesite but does not address disturbances to the hydrology at the minesite.
Replace water supplies to affected surface owners.	No similar specific provisions.
Preserve alluvial valley floor integrity.	Not applicable to eastern surface mining.
Stabilize mine wastes, tailings, etc.	The provisions (KRS 350.010(1)) and Ky. law cited as being similar contained no such provisions.
Refrain from mining within 500 feet of old underground mines unless the removal of any such coal would result in overall greater resources recovery without endangering life or property.	The section of the Ky. law cited as being similar to this provision actually pertained to "permit denial."
Dispose of all fire hazards.	Essentially in the Ky. law.
Use explosives according to the regulations issued pursuant to the Federal law.	Essentially in the Ky. law (402 KAR 1:050).
Provide for contemporaneous reclamation.	Not covered by the Ky. law according to their analysis, but is in KRS 350.100(1).
Provide guidelines for the construction and use of access roads.	The section of the Ky. law cited as being similar to these provisions actually pertained to permit fees. The regulations pursuant to the Ky. law do, however, describe the specifications for access roads in detail. Also, 402 KAR 1:025 prohibits the use of streams or streambeds as access roads
Establish vegetation after reclamation and assume the responsibility for the vegetation for a period of five years after the completion of mining.	The Ky. law does have provisions for the revegetation of mined areas and the regulation are quite specific, however, no time period for liability is specifically mentioned.

[See Table in Original]

{65} The requirements for a variance to the restoration of the approximate original contour are quite specific in the Federal legislation. Under that bill, the operator must be engaged in mountaintop-removal mining and the area under permit must have been included in a land use plan compatible with that particular type of coal mining. With this one exeception, the mine operator

must restore the original contour unless the final cut in the mining operation is to be contained in a permanent impoundment. The Kentucky law, however, does not require removal of the highwall if the mining operation will result in a bench. Also, the Federal legislation requires that no spoil materials be placed on the downslope in a contour-mining operation with the exception that the head-of-the hollow fill method may be used when the initial cut in the mountainside, and that the operator may not disturb the overburden above the highwall in a contour-mining operation. The Kentucky law does not specifically prohibit these two actions although it does prohibit the placing of any materials from the mining operation on areas outside the permitted area. Technically, disturbances to the land above the highwall or to the downslope would be prohibited only if such disturbances were outside the permitted area or if specifically prohibited by the Department.

65 Furthermore, in contour mining situations, the law limits the amount of overburden that may be placed beyond the solid bench to 40% or less of the material disturbed. If the mineral is being recovered by the auger method of mining only and is located on what the Department defines as a "precipitous slope", then the operator is prohibited from placing any overburden on the downslope.

RESULTS OF THE SURVEY

65 MAINE

65 In its reply, the Department of Environmental Protection for the State of Maine reported that because the State has no reserves of coal, it is not likely to be affected by the implementation of any legislation regulating the surface mining of coal. The Department did, however, send a copy of the mining-reclamation regulations that have been enacted by the State. Included in these regulations are the following requirements of mine operator in the State.

65 1. Prior to engaging in any mining operations, the mine operator is required to submit a mining plan for approval to the Board. The required plan must include a designation of the area to be affected.

65 The plan must also include the following:

65 physical characteristics of the mining operation, an approximate time schedule for the mining operation, a reclamation plan for the affected area.

65 2.The mine operator is required to post a bond in an amount determined by the Board which must be at least $100 but not more than $1 ,500 for each acre of fraction thereof which is disturbed by the mining operation.

65 The Maine Board of Environmental Protection has been granted the authority to revoke or suspend a mining plan after notifying the operator and hearings have been held on the violation. The law is not specific on the type of reclamation which must be performed by the operator but delegates this authority to the Board which may treat each operation independently.

{66} MASSACHUSETTS

66 In response to the questionnaire from the Committee, the spokesman for Massachusetts forwarded the following letter:

66 NOVEMBER 3, 1976.

66 Dear Mr. HARVEY,

66 I take this method as the quickest method of informing you that your form does not apply to Massachusetts at the present time. We have no coal mining industry. We also do not have any body of law relative to coal mining.

66 We are currently exploring a large Carboniferous basin and have encountered large quantities of Anthracite coal at depths exceeding three and four hundred feet. If we are able to proceed to mine-mouth power generation we anticipate only tunnel and shaft mining with no visible surface manifestation of the activity. I cannot conceive of our liberal government policy permitting any form of strip mining.

66 Very truly yours, JOSEPH A. SINNOTT, State Geologist.

66 MICHIGAN

66 The information which was forwarded by the Michigan Department of Natural Resources was not detailed enough to be included in the matrix. Generally, the spokesman for the Department indicated that the State has minimum funding for the mine reclamation program. The total expenditure for the program is $30 0,000 annually which must cover the salary of the mine inspector along with all of the other expenses, including travel and administration. One individual performs all of the staff functions along with conducting the field inspections of existing operations. Due to its brevity, the entire response to the questionnaire can be included in the text, as follows:

66 COAL DATA

66 Presently, Michigan does not have active coal mining, but there is resource potential. The first recorded coal production was in 1860, production peaked in 1907 when 37 operating underground mines produced 2 million tons. From 1953 through 1975 there was no coal production in Michigan. In 1975, a

small open-pit operation produced about 3,000 tons of coal, but operations have now ceased.

66 PERSONNEL

66 Michigan's mine reclamation program is funded to about $3 0,000 per annum. This includes one full time employee (myself), travel and supplies and materials.Not only do I perform the staff functions, I also must make mine inspections.

66 CITIZEN ACTION

66 The rules which were promulgated under the MRA just went into effect on November 16, 1976. Up to the present, we have no record as to citizen complaints relating specifically to the MRA and rules.

{67} PERMITS AND LICENSES

67 Michigan's MRA statute does not grant the Department of Natural Resources authority to issue permits or license.

67 PERFORMANCE BONDS

67 Security and surety bonds, if required, would be in an amount equal to the expected cost of reclamation for each acre, or fraction thereof. But, the statute allows as the Geological Survey Division to require a performance bond only if we have "reasonable doubts as to an operator's financial ability to comply with the rules as to actions to be taken after completion of mining operations or any phase thereof. . . . "

67 VIOLATIONS

67 Sec. 8 of the MRA allows us to request the attorney general to "institute an action in circuit court . . . for a restraining order or injunction or other appropriate remedy . . . ."

67 In response to the Committee's request for an analysis of the Michigan laws to the requirement of the Federal proposal, the respondent indicated that the Federal proposal was far superior to the State regulations, and that it was his personal opinion that "reasonable and realistic Federal legislation should be enacted to insure not only environmental controls but to insure good mining practices."

67 Generally, the Michigan law which was enacted in 1972 authorizes the supervisor of the Geological Survey Division of the Michigan Department of Natural Resources to determine which lands in the State, if any, are unsuitable

for mining of the type proposed. "On completion of the study and survey, the supervisor may promulgate rules pertaining to mining operations conducted subsequent to their effective date and subject to the provisions of any rights existing pursuant to any permit, license, lease or other valid existing authorization issued by a governmental entity, and subject to applicable mine safety laws or rules. . . . " In instance where erosion may occur, the Department can require that the affected lands be terraced or otherwise treated to mitigate the effects to fish and wildlife, the pollution of public waters, or injury to the property or person of others. Revegetation of the area may be required by the Department in instances where natural revegetation is not likely within five years. Furthermore, the law does not make a performance bond necessary except in the event that the supervisor has doubts about the mine operator's ability to complete the prescribed reclamation.

67 The operating regulations filed by the Department of Natural Resources with the Secretary of State on November 1, 1976 contain requirements which, when compared with the Federal proposal, cannot be considered too demanding of the operators. In most cases, minimum standards for reclamation have not been determined, but instead, have been left to the determination of the Department of Natural Resources. In most instances, the law and the resulting regulations authorize the enforcing agency to take actions only after the environmental problems have materialized. In view of the information contained in the cover letter, which indicated that the total mine reclamation program was funded to the extent of $3 0,000 per year and employed only one full-time reclamation official, it is highly questionable that the reclamation program can devote the time necessary to establish individual requirements for each mining situation and inspect every mining operation often enough to insure that mine operators are in compliance with these tailored regulations.

{68} MINNESOTA

68 In a reply to the Committee, the spokesman for the Department of Natural Resources for the State of Minnesota indicated that, since there was no coal mining in the State, the Department felt that the questions contained in the survey did not apply to Minnesota. The Department did, however, return a copy of the State's law for the reclamation of lands mined for metallic ores.

68 The law requires that all mining within the State be conducted with a permit. Furthermore, the Commission of Reclamation has been granted the authority to enter upon any property in order to determine whether or not the mine operator is in compliance with the rules set forth for that particular mining operation, as determined by the Commissioner. The Commissioner has the authority whether or not the mine operator is in compliance with the rules set forth for that particular mining operation, as determined by the Commission. The Commissioner has the authority to permit variances to the State rules and regulations "if he shall determine that such modification or variance is

consistent with the general welfare."

68 The application for the mining permit must contain a plan for the reclamation of the area to be affected and the operator must present to the regulating body a certificate issued by an insurance company authorized to do business in the United States that the applicant has a public liability insurance policy in force for the mining operation for which the permit is sought. In lieu of the insurance certificate, the mine operator must provide evidence that the applicant has satisfied other state or Federal self-insurance requirements and provide personal injury and property damage protection in an amount adequate to compensate any persons who might be damaged as a result of the mining operation or any reclamation or restoration operations connected with the mining operation.

68 The law does contain provisions for persons whose property may be damaged by the mining operations to file complaints with the governing body. Upon the receipt of any such complaints, the commissioner is required to hold a hearing and publish the date, time, and location of the hearing. Further operations of the law resulting from the hearing are not explained. The Minnesota law does contain provisions for the revocation, modification, and suspension of mining permits. Any such action by the Commissioner is at his own discretion or can be done by operation of the law if the mine operator has not commenced substantial "construction of plant facilities or actual mining within three years of issuance of the permit; . . . "

{69} The Minnesota law, however, appears to have one major weakness. Part 93.49 of the law makes it look as though the State has opted for a "pound of cure" rather than an "ounce of prevention." This provision of the law requires a bond from the mine operator if he "(a) fails to take reclamation measures set forth in the permit or any amendment thereto, (b) fails to comply with rules and regulations promulgated by the commissioner pursuant to section 93.47, or (c) fails to perform research which may be agreed upon by the permittee and the commissioner or required by Minnesota Statutes 1971, Section 93.44 to 93.51, and acts amendatory thereof in regard to reclamation of mining areas under the control of the operator."

69 Although later provisions within this section authorize the Commissioner to require a bond from operators if he has reasonable doubts about the operator's ability to comply with the rules and regulations, it is often very difficult to determine any such problems before the fact. This problem is compounded by the lack of assurance that an operator who has already violated the reclamation act will subsequently post bond in order to remedy the results of his earlier violations.

69 MISSISSIPPI

69 In response to the survey, the spokesman for the Mississippi Geological Economic and Topographical Survey indicated that there are currently no laws in the State which pertain to the mining of coal and the reclamation of mined lands. He made the following observations:

69 Several bills were introduced in the Mississippi Legislature in the 1976 session, and one was actually passed in one House but failed to gain final approval.

69 I am sure that a number of bills will be introduced in this session and it is highly probable that one of them will be passed.

69 MISSOURI

69 The organization within the State responsible for the regulation of surface mining is the Missouri Department of Natural Resources. In its response to the Committee, the Department indicated that the Missouri law contained provisions similar to those in the Federal proposal. Included in these are requirements pertaining to the following elements of surface coal mining:

69 (A) Water quality provisions.

69 (B) Distance to underground mines.

69 (C) Coal waste (gob) disposal.

69 (D) Acid or toxic bearing material handling.

69 (E) Revegetation requirements.

69 (F) Public hearings.

{70} (G) Granting of public hearing before permits are issued.

70 (H) Grading similar except on highwall and top soil requirements.

70 The Department further indicated that some of the areas in the State have insufficient topsoil to justify its segregation and restoration. The State agency was concerned that the Federal proposal would not allow for the creation of water impoundments even if the State had determined that such impoundments were desirable. The Department also is reluctant to totally eliminate the highwall in the final pit area because any such reduction would probably preclude the creation of impoundments. Regarding the provisions of the Federal proposal related to alluvial valley floors, the agency indicated that such requirements would not pertain to the State's coal surface-mining operations. Finally, the Department of Natural Resources expressed its policy views

concerning the idea of legislating surface mining control and reclamation at the Federal level with the following statement:

70 We feel that a federal surface mine law must be flexible enough to allow for the various different problems that are faced by the arid Southwest and West with their saline problems to the thin seams of coal of the Midwest west of the Mississippi and the fertile farm lands of Illinois, Indiana, and Ohio to the rugged mountain areas of Eastern Kentucky and Appalachia.

70 We are more concerned about a severance tax bill that would provide funds to reclaim orphaned lands. I feel this could be handled separately from a surface mine bill and could require that state laws meet certain standards of reclamation before they could participate in the federal funds for orphan lands program.

70 The responsibility for the enforcement of the coal surface mining law for the State of Missouri is vested in a land reclamation commission which consists of seven persons including the following:

70 1. The State Geologist

70 2. The Director of the Department of Conservation

70 3. The Director of Staff of the Clean Water Commission

70 4. And four other persons selected from the general public who are residents of Missouri and who shall have an interest in and knowledge of conservation and land reclamation (one of these individuals is also required to have some knowledge of surface mining).

70 The law states that six months after September 28, 1971, every person engaging in coal surface mining is required to obtain a permit (issued by the Commission) which designates the area of land which will be affected by the mining operation.The permit which is issued by the Commission is, according to the law, valid for one year. This same provision, however also states that no permit shall be valid for a period which exceeds December 31st of the year in which it was issued. The second statement contradicts the first. The application for the mining permit must contain certain pertinent information including the names of all persons with any interest in the land to be mined, the source of the applicant's legal right to mine the land affected by the permit, and the permanent and temporary post-office address of the applicant. The application for the mining permit must be accompanied by a fee in the amount of $1 7.50 per acre (or fraction thereof) of the land which will be affected by the mining and by a map prepared and certified by a professional engineer containing the following information in a scale and form specified by the Commission:

{71} (1) An identification of the area to correspond with the application;

71 (2) The boundaries of surface properties and names of owners of the area of land to be affected, and, if known to the operator, adjacent deep mines, and the name of the owner or owners of the surface area within six hundred and sixty feet of any part of the area of land to be affected.

71 (3) The names and locations of all streams, creeks, or other bodies of public water, roads, buildings, cemeteries, oil and gas wells and utility lines on or within six hundred and sixty feet of the area to be mined;

71 (4) The boundaries of the area of land affected shown by appropriate markings, the cropline of the seam or deposit to be mined, except that for the mining of barite, a cropline need not be shown, and the total number of acres involved in the area of land affected;

71 (5) The date on which the map was prepared, the north point and the section, township and range;

71 Prior to the issuance of a permit, the prospective operator must post a bond with the Commission in an amount of not less than $300/acre or more than $7 00/acre. The Commission has the authority to waive the bonding requirement it it feels that the surface mining operation will not result in significant damage to the environment.

71 PERFORMANCE STANDARDS

71 Coal mine operators are required by the law to grade the spoils to a rolling topography which, although it does not conform to the approximate original contour, is transversable by farm machinery, "but such slopes need not be reduced to less than the original grade of that area prior to mining, and the slope of the ridge of overburden resulting from a box cut need not be reduced to less than twenty-five degrees from horizontal whenever the same cannot be practically incorporated into the land reclaimed for wildlife purposes . . . Operators may also set aside areas for the construction of water impoundments to be used in the mining and milling operations. Impoundments that are not included in the mining plan are not allowed and the drainage from the mining operation shall be by way of lateral drainage ditches connected to the natural waterways."

71 The Missouri law also provides that mining shall not be conducted in areas where such an activity would endanger a residence, public building, school, church, cemetery, commercial or residential building, stream, lake, public road or other property. In a fashion similar to those required by other state laws on the subject, the mine operator is required to cover the face of a

mineral seam where acid-forming materials are present "to a depth of not less than two feet with earth that will support plant life or with a permanent water impoundment, terraced or otherwise so constructed as to prevent a constant inflow of water from any stream and to prevent surface water from flowing into such impoundment, . . . "

71 The post-mining land use has been left to the discretion of the operator by the provision of the law which allows the operator to determine what the land will be used for: "forest, pasture, crop, horticultural, homesite, recreational, industrial or other use." The operator may also determine whether conifer or hardwood trees will be planted on the reclaimed area. In a requirement similar to the Federal proposal, however, the Missouri law requires the mine operator to begin reclamation as soon as possible after the beginning of the actual mining in the permitted area and requires that grading be completed within 12 months after the expiration of the permit and revegetation be completed within 24 months following the same date. The law also contains a mechanism for the filing of reports on the progress of the reclamation outlined in the permit.

72 The law authorizes the appropriate officials and members of the Commission to enter upon the land under permit for the purpose of inspections at reasonable times, although the entry may not be made without the issuance of a search warrant describing the area to be searched and the probable cause for the search. In the event of noncompliance, the law provides for the conduct of a hearing by the Commission and for judicial review by the permit holder.

72 The law also creates a mined-land conservation fund which is to be replenished by the collection of fees or from bond forfeiture, the proceeds of which are to be used for the "reclamation of lands affected by strip mine operation and for no other purpose."

72 Although the Missouri law does contain some specific demands from mine operators, this law, like many of the other state laws on the subject, extends considerable latitude to the operator in determining what will be done with the land after the mining operation has been completed. A noticeable feature by the Missouri law was that it did not provide much of an opportunity for the general public to oppose proposed mining operations or to complain about existing operations which are being conducted in violation of the law and the regulations. The State's surface mining law is not as stringent as the Federal proposal.

72 MONTANA

72 Based on the information forwarded by the Montana Department of State Lands, the regulatory agency in the State appears to be doing a conscientious job of permitting and monitoring surface coal mining. The respondents indicated that a number of civil penalties have been assessed and the total fines levied

amounted to over $2 2,000 during 1975. Furthermore, the surface mining law under which the regulatory agency operates delegates sufficient authority to the agency to require compliance by the coal-mine operators. A brief comparison of the applicable provision of the State law with the corresponding provisions of the Federal proposal appears on the following pages. The comparison was performed by the Department of State Lands in response to the Committee's request.

{73} H.R. 13950 - Sec. 515(b)

73 (b) General performance standards shall be applicable to all surface coal mining and reclamation operations and shall require the operation as a minimum to -

73 (1) conduct surface coal mining operations so as to maximize the utilization and conservation of the solid fuel resource being recovered so that reaffecting the land in the future through surface coal mining can be minimized;

73 (2) restore the land affected to a condition at least fully capable of supporting the uses which it was capable of supporting prior to any mining, or higher or better uses of which there is a reasonable likelihood, so long as such

use or uses do not present any actual or probable hazard to public health or safety or pose any actual or probable threat of water diminution or pollution, and the permit applicants' declared proposed land use following reclamation is not deemed to be impractical or unreasonable inconsistent with applicable land use policies and plans, involves unreasonable delay in implementation, or is violative of Federal, State, or local law;

73 (3) with respect to all surface coal mining operations backfill, compact (where advisable to insure stability or to prevent leaching of toxic materials), and grade in order to restore the approximate original contour of the land with all highwalls, spoil piles, and depressions eliminated (unless small depressions are needed in order to retain moisture to assist revegetation or as otherwise authorized pursuant to this Act): Provided, however, That in surface coal mining which is carried out at the same location over a substantial period of time where the operation transects the coal deposit, and the thickness of the coal deposits relative to the volume of the overburden is large and where the operator demonstrates that the overburden and other spoil and waste materials at a particular point in the permit area or otherwise available from the entire permit area is insufficient, giving due consideration to volumetric expansion, to restore the approximate original contour, the operator, at a minimum, shall backfill, grade, and compact (where advisable) using all available overburden and other spoil and waste materials to attain the lowest practicable grade but not more than the angle of repose, to provide adequate drainage and to cover all acid-forming and other toxic materials, in order to achieve an ecologically

sound land use compatible with the surrounding region: And provide further, That in surface coal mining where the volume of overburden is large relative to the thickness of the coal deposit and where the operator demonstrates that due to volumetric expansion the amount of overburden and other spoil and waste materials removed in the course of the mining operation is more than sufficient to restore the approximate original contour, the operator shall after restoring the approximate contour, backfill, grade, and compact (where advisable) the excess overburden and other spoil and waste materials to attain the lowest grade but not more than the angle of repose, and to cover all acid-forming and other toxic materials, in order to achieve an ecologically sound land use compatible with the surrounding region and that such overburden or spoil shall be shaped and graded in such a way as to prevent slides, erosion, and water pollution and is revegetated in accordance with the requirements of this Act;

{74} (4) stabilize and protect all surface areas including spoil piles affected by the surface coal mining and reclamation operation to effectively control erosion and attendant air and water pollution;

74 (5) remove the topsoil from the land in a separate layer, replace it on the backfill area, or, if not utilized immediately, segregate it in a separate pile from other spoil and, when the topsoil is not replaced on a backfill area within a time short enough to avoid deterioration of the topsoil, maintain a successful cover by quick growing plant or other means thereafter so that the topsoil is preserved from wind and water erosion, remains free of any contamination by other acid or toxic material, and is in a usable condition for sustaining vegetation when restored during reclamation, except if topsoil is of insufficient quantity or of poor quality for sustaining vegetation, or if other strata can be shown to be more suitable for vegetation requirements, then the operator shall remove, segregate, and preserve in a like manner such other strata which is best able to support vegetation;

{75} (6) restore the topsoil or the best available subsoil which has been segregated and preserved;

75 (7) protect offsite areas from slides or damage occurring during the surface coal mining and reclamation operations, and not deposit spoil material or locate any part of the operations or waste accumulations outside the permit area;

75 (8) create, if authorized in the approved mining and reclamation plan and permit, permanent impoundments of water on mining sites as part of reclamation activities only when it is adequately demonstrated that -

75 (A) the size of the impoundment is adequate for its intended purposes;

75 (B) the impoundment dam construction will be so designed as to achieve

necessary stability with an adequate margin of safety compatible with that of structures constructed under Public Law 83-566 (16 U.S.C. 1006);

75 (C) the quality of impounded water will be suitable on a permanent basis for its intended use and that discharges from the impoundment will not degrade the water quality in the receiving stream;

75 (D) the level of water will be reasinably stable;

75 (E) final grading will provide adequate safety and access for proposed water users; and

75 (F) such water impoundments will not result in the diminution of the quality or quantity of water utilized by adjacent or surrounding landowners for agricultural, industrial, recreational, or domestic uses;

{76} (9) plug all auger holes to a minimum of six feet in depth with an impervious and noncombustible material (such as clay) to prevent the flow of water in or out of such holes.

76 (10) minimize the disturbances to the prevailing hydrologic balance at the minesite and in associated offsite areas and to the quality and quantity of water in surface and ground water systems both during and after surface coal mining operations and during reclamation by -

76 (A) avoiding acid or other toxic mine drainage by such measures as, but not limited to -

76 (i) preventing or removing water from contact with toxic producing deposits;

76 (ii) treating drainage to reduce toxic content which adversely affects downstream water upon being released to water courses;

76 (iii) casing, sealing, or otherwise managing boreholes, shafts, and wells and keep acid or other toxic drainage from entering ground and surface waters;

76 (B) conducting surface coal mining operations so as to prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow or runoff outside the permit area above natural levels under seasonal flow conditions as measured prior to any mining, and avoiding channel deepening or enlargement in operations requiring the discharge of water from mines;

76 (C) removing temporary or large siltation structures from drainways after disturbed areas are revegetated and stabilized;

76 (D) restoring recharge capacity of the mined area to approximate premining conditions;

76 (E) replacing the water supply of an owner of interest in real property who obtains all or part of his supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source where such supply has been affected by contamination, diminution, or interruption proximately resulting from mining.

{77} (F) preserving throughout the mining and reclamation process the essential hydrologic functions of alluvial valley floors in the arid and semiarid areas of the country; and

77 (G) such other actions as the regulatory authority may prescribe;

77 (11) with respect to surface disposal of mine wastes, tailings, coal processing wastes, and other wastes in areas other than the mine working or excavations, stabilize all waste piles in designated areas through construction in compacted layers including the use of incombustible and impervious materials, if necessary, and assure the final contour of the waste pile will be compatible with natural surroundings and that the site can and will be stabilized and revegetated according to the provisions of this Act;

77 (12) refrain from surface coal mining within five hundred feet from active and abandoned underground mines in order to prevent breakthroughs and to protect health or safety of miners: Provided, That the regulatory authority shall permit an operator to mine closer to an abandoned underground mine: Provided, That this does not create hazards to the health and safety of miners; or shall permit an operator to mine near, through, or partially through an abandoned underground mine working where such mining through will achieve improved resource recovery, abatement of water pollution or elimination of public hazards and such mining shall be consistent with the provisions of the Act;

77 (13) design, locate, construct, operate, maintain, enlarge, modify, and remove, or abandon, in accordance with the standards and criteria developed pursuant to subsection (e) of this section, all existing and new coal mine waste piles consisting of mine wastes, tailings, coal processing wastes, or other liquid and solid wastes and used either temporarily or permanently as dams or embankments;

77 (14) insure that all debris, acid forming materials, toxic materials, or materials constituting a fire hazard are treated or disposed of in a manner designed to prevent contamination of ground or surface waters or sustained combustion;

{78} (15) insure that explosives are used only in accordance with existing State and Federal law and the regulations promulgated by the regulatory authority, which shall include provisions to -

78 (A) provide adequate advance written notice by publication and/or posting of the planned blasting schedule to local governments and to residents who might be affected by the use of such explosives and maintain for a period of at least two years a log of the magnitudes and times of blasts: and

78 (B) limit the type of explosives and detonating equipment, the size, the timing and frequency of blasts based upon the physical conditions of the site so as to prevent (i) injury to persons, (ii) damage to public and private property outside the permit area, (iii) adverse impacts on any underground mine, and (iv) change in the course, channel, or availability of ground or surface water outside the permit area;

78 (16) insure that all reclamation efforts proceed in an environmentally sound manner and as contemporaneously as practicable with the surface coal mining operations;

78 (17) insure that the construction, maintenance, and postmining conditions of access roads into and across the site of operations will control or prevent erosion and siltation, pollution of water, damage to fish or wildlife or their habitat, or public or private property; Provided, That the regulatory authority may permit the retention after mining of certain access roads where consistent with State and local land use plans and programs and where necessary may permit a limited exception to the restoration of approximate original contour for that purpose;

78 (18) refrain from the construction of roads or other access ways up a stream bed or drainage channel or in such proximity to each channel so as to seriously alter the normal flow of water;

{79} (19) establish on the regarded areas, and all other lands affected, a diverse, effective, and permanent vegetative cover native to the area of land to be affected and capable of self-regeneration and plant succession at least equal in extent of cover to the natural vegetation of the area; except that introduced species may be used in the revegetation process where desirable and necessary to achieve the approved postmining land use plan;

79 (20) assume the responsibility for successful revegetation, as required by paragraph (19) above, for a period of five full years after the last year of augmented seeding, fertilizing, irrigation, or other work in order to assure compliance with paragraph (19) above, except in those areas or regions of the country where the annual average precipitation is twenty-six inches or less,

then the operator's assumption of responsibility and liability will extend for a period of ten full years after the last year of augmented seeding, fertilizing, irrigation, or other work: Provided, That when the regulatory authority approves a long-term intensive agricultural postmining land use, the applicable five- or ten-year period of responsibility for revegetation shall commence at the date of initial planting for such long-term intensive agricultural postmining land use: Provided further, That when the regulatory authority issues a written finding approving a long-term, intensive, agricultural postmining land use as part of the mining and reclamation plan, the authority may grant exception to the provisions of paragraph (19) above; and

79 (21) meet such other criteria as are necessary to achieve reclamation in accordance with the purposes of this Act, taking into consideration the physical, climatological, and other characteristics of the site, and to insure the maximum practicable recovery of the mineral resources.

79 (c) (1) Each State program may and each Federal program shall include procedures pursuant to which the regulatory authority may permit variances for the purposes set forth in paragraph (3) of this subsection.

80 (2) Where an applicant meets the requirements of paragraphs (3) and (4) of this subsection a variance from the requirement to restore to approximate original contour set forth in subsection 515(b)(3) or 515(d) of this section may be granted for the surface mining of coal where the mining operation will remove an entire coal seam or seams running through the upper fraction of a mountain, ridge, or hill (except as provided in subsection (c)(4) (A) hereof) by removing all of the overburden and creating a level plateau or a gently rolling contour with no highwalls remaining, and capable of supporting postmining uses in accord with the requirements of this subsection.

80 (3) In cases where an industrial, commercial (including commercial agricultural), residential or public facility (including recreational facilities) development is proposed for the postmining use of the affected land, the regulatory authority may grant a variance for a surface mining operation of the nature described in subsection (c)(2) where -

80 (A) after consultation with the appropriate land use planning agencies, if any, the proposed development is deemed to constitute an equal or better economic or public use of the affected land, as compared with the premining use;

80 (B) the equal or better economic or public use can be obtained only if one or more exceptions to the requirements of section 515(b)(3) are granted;

80 (C) the applicant presents specific plans for the proposed postmining land use and appropriate assurances that such use will be -

80 (i) compatible with adjacent land uses;

80 (ii) obtainable according to data regarding expected need and market;

80 (iii) assured of investment in necessary public facilities;

80 (iv) supported by commitments from public agencies where appropriate;

80 (v) practicable with respect to private financial capability for completion of the proposed development;

{81} (vi) planned pursuant to a schedule attached to the reclamation plan so as to integrate the mining operation and reclamation with the postmining land use; and

81 (vii) designed by a registered engineer in conformance with professional standards established to assure the stability, drainage, and configuration necessary for the intended use of the site;

81 (D) the proposed use would be consistent with adjacent land uses, and existing State and local land use plans and programs;

81 (E) the regulatory authority provides the governing body of the unit of general-purpose government in which the land is located and any State or Federal agency which the regulatory agency, in its discretion, determines to have an interest in the proposed use, an opportunity of not more than sixty days to review and comment on the proposed use;

81 (F) a public hearing is held in the locality of the proposed surface coal mining operation prior to the grant of any permit including a variance; and

81 (G) all other requirements of this Act will be met.

81 (4) In granting any variance pursuant to this subsection the regulatory authority shall require that -

81 (A) the toe of the lowest coal seam and the overburden associated with it are retained in place as a barrier to slides and erosion;

81 (B) the reclaimed area is stable;

81 (C) the resulting plateau or rolling contour drains inward from the outslopes except at specified points;

81 (D) no damage will be done to natural watercourses;

81 (E) all other requirements of this Act will be met.

81 (5) The regulatory authority shall promulgate specific regulations to govern the granting of variances in accord with the provisions of this subsection, and may impose such additional requirements as he deems to be necessary.

{82} (6) All exceptions granted under the provisions of this subsection shall be reviewed not more than three years from the date of issuance of the permit, unless the applicant affirmatively demonstrates that the proposed development is proceeding in accordance with the terms of the approved schedule and reclamation plan.

82 (d) The following performance standards shall be applicable to steep-slope surface coal mining and shall be in those general performance standards required by this section: Provided, however, That the provisions of this subsection (d) shall not apply to those situations in which an operator is mining on flat or gently rolling terrain, on which an occasional steep slope is encountered through which the mining operation is to proceed, leaving a plain or predominantly flat area:

82 (1) Insure that when performing surface coal mining on steep slopes, no debris, abandoned or disabled equipment, spoil material. or waste mineral matter be placed on the downslope below the bench or mining cut, except that where necessary or spoil material from the initial block or short linear cut of earth necessary to obtain initial access to the coal seam in a new surface coal mining operation can be placed on a limited and specified area of the down-slope below the initial cut if the permittee demonstrates that such soil or spoil material will not slide and that the other requirements of this subsection can still be met: Provided, That spoil material in excess of that required for the reconstruction of the approximate original contour under the provisions of paragraph 515(b)(3) or 515(d)(2) or excess spoil from a surface coal mining operation granted a variance under subsection 515(c) may be permanently stored at such offsite spoil storage areas as the regulatory authority shall designate and for the purposes of this Act such areas shall be deemed in all respects to be part of the lands affected by surface coal mining operations. Such offiste spoil storage areas shall be designed by a registered engineer in conformance with professional standards established to assure the stability, drainage, and configuration necessary for the intended use of the site.

{83} (2) Complete backfilling with spoil material shall be required to cover completely the highwall and return the site to the approximate original contour, which material will maintain stability following mining and reclamation.

83 (3) The operator may not disturb land above the top of the highwall unless the regulatory authority finds that such disturbance will facilitate

compliance with the environmental protection standards of this section: Provided, however, That the land disturbed above the highwall shall be limited to that amount necessary to facilitate said compliance.

83 (4) For the purposes of this section, the term "steep slope" is any slope above twenty degrees or such lesser slope as may be defined by the regulatory authority after consideration of soil, climate, and other characteristics of a region or State.

83 (e) The Secretary, with the written concurrence of the Chief of Engineers, shall establish within one hundred and thirty-five days from the date of enactment, standards and criteria regulating the design, location, construction, operation, maintenance, enlargement, modification, removal, and abandonment of new and existing coal mine waste piles referred to in section 515(b)(13) and section 516(b)(5). Such standards and criteria shall conform to the standards and criteria used by the Chief of Engineers to insure that flood control structures are safe and effectively perform their intended function. In addition to engineering and other technical specifications the standards and criteria developed pursuant to this subsection must include provisions for review and approval of plans and specifications prior to construction, enlargement, modification, removal, or abandonment; performance of periodic inspections during construction; issuance of certificates of approval upon completion of construction; performance of periodic safety inspections; and issuance of notices for required remedial or maintenance work.

{73} Montana Law

73 Comment: in Section 515(b):

73 (1) The state of Montana has a Coal Conservation Act with the same basic intent, however, primarily because of insertion of the phrase economically feasible in the definition of "Marketable Coal" merchantable and strippable coal is being left unmined in at least one significant instance. Companies also enter into contract market agreements prior to receiving a permit to mine. If contract commitments will be infringed upon in mining a deeper strippable and merchantable vein the company has not been required to mine it.

73 (2) Montana Law basically requires return to primarily native rangeland. Alternative reclamation objectives are available if approved by Reclamation Division.

73 (3) This provision is generally similar; however "angle of repose" is way too steep and not used in Montana Reclamation statutes.

{74} (4) Similar.

74 (5) Similar. At present, Montana is requiring suitable topsoiling "materials" to be salvaged. The feeling is that a two lift salvage operation, that is A & B horizons separate from the underlying C horizon, may be the way to go.

{75} (6) Similar.

75 (7) Also do not place materials in such a way that normal erosive forces or slides will permit the materials to go beyond the permit boundaries. Otherwise similar.

75 (8) Similar. Initial approved, if given, is tentative pending successful completion of the impoundment.

{76} (9) Similar. State law may require sealing of individual aquifers.

76 (10) Similar.

{77} (11) A waste or refuse disposal site must be approved by the Reclamation Division. Basically similar.

77 (12) Nothing in Montana law regarding distances from underground mine workings.

77 (13) Not in Montana Law.

77 (14) Similar. Should not adversely affect critical revegetative root zones (Montana Law).

{78} (15, 16, 17, 18, and 19) Similar.

{79} (20) Federal proposal is stricter. Montana Law requires that vegetative bond be retained until reclaimed but at least five (5) years after initial seeding begins. There is no provision for precipitation levels on agricultural reclamation.

79 (21) Similar.

79 In Section 515(c):

79 (1) Montana Law allows for alternative plans not variances.

{80} (2, 3, and 4) Montana Law does not require consultation with "appropriate land use planning agencies". A public hearing is not a required function under Montana Law. No contour mining is allowed. Otherwise alternative reclamation plans are approved under the same basic similar

criteria.

{81} (5) Montana Law does not require promulgation of specific variance or alternative regulations.

{82} (6) Not in Montana Law.

82 In Section 515(d): (1, 2, 3, and 4) No "contour mining" in Montana is legal, therefore, no provisions are addressed.

{83} The Montana Department of State Lands made no statements regarding the similarities or differences in 515(e) with the current state surface mining laws.

{84} The Department of State lands indicated that the regulations which the State intends to promulgate are similar to Section 516 of the Federal proposal (surface effects of underground mining). According to Department officials, Section 516(b) of the Federal bill contains language that could constitute a loophole for mine operators. The specific phrase which was cited as being vague was that requiring mine operators to "adopt measures consistent with known technology in order to prevent subsidence to the extent technologically and economically feasible." According to the State officials, the concept of "to the extent feasible" is extremely difficult to determine and administer. They also pointed out similar language in the subsection 516(b)(3) which requires mine operators to "fill or seal exploratory holes no longer necessary for mining, maximizing to the extent practicable return of mine and processing waste, tailings, and any other waste incident to the mining operation, to the mine workings or excavations; . . ." Here again, the phrase "to the extent practicable" would be left open to interpretation and would make the law difficult to administer.

84 The Department stated that it had not made a list of lands within the State considered to be unsuitable for surface mining.

84 A list is not available because detailed resource and reclamation potential inventories have not been accomplished. Obviously concern is felt over mining highly productive agriculture ranching wildlife areas. Reclamation is still very much unproven in Montana to so called lower cases (range land) much less to higher productive uses. I prefer to defer the mining of these highly productive lands until more information is accrued and a measure of success is evident. It is a high risk that we do not have to take at this time.

84 In response to the Committee's inquiry about the success of reclamation efforts in the State, the Department replied that:

84 Reclamation, in general, of abandoned strip mined coal lands is poor to

fair depending on existing natural conditions that were encountered (soils, toxic overburden, etc.) and rainfall levels prevalent at that site.

84 Between 1966 and 75 has revealed marked improvement especially since 1973 when the new law was passed. Improvements in preplanning, topsoil salvage and grading are the major categories. Revegetative efforts since 1973 are too early to judge. I would judge that of the approximately 5,000 acres mined since 1966 approximately 1,000 acres have been reclaimed to criteria under older repealed reclamation laws. No areas mined under the present law have been totally reclaimed.

RESULTS OF THE SURVEY

84 NEBRASKA

84 The Office of Planning and Programming for the State of Nebraska indicated in its response to the Committee that the State has no legislation regulating coal surface mining "because of the relative absence of any exploitable minerals, therefore, this office is unable to respond to your questionnaire."

{85} NEW JERSEY

85 The spokesman for the New Jersey Department of Environmental Protection indicated in a letter that, because the State did not have any coal resources, the problems associated with coal surface mining did not apply to New Jersey. The entire letter to the Committee follows:

85 DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF GEOLOGY AND TOPOGRAPHY,
Trenton, N.J., November 10, 1976.

85 MR. LEE METCALF, Chairman, Committee on Interior and Insular Affairs, U.S. Senate, Washington, D.C.

85 DEAR MR. METCALF: New Jersey has no coal mines so we do not have the problems for which you seek answers in your questionnaire.

85 We have about 125 sand pits in operation in any given year. We also have 7 or 8 trap rock quarries. All of these, of course, are open-pit operations conducted for various purposes. There are no state laws governing these operations from the point of view of protection of the environment except a law covering sedimentation in streams. I believe this is part of the implementation of the Clean Streams Act and at this point, I cannot tell you who in the bureaucratic maze actually is in charge of enforcement, nor can I provide you with a copy of the law. It does not seem to be a problem with any of the

operating quarries as they either do the quarrying operation dry or in a few instances lagoon, the waste from a washing plant, or resulting from the decanting of the dredge product.

85 Sand is easy to come by in New Jersey pretty well throughout the state. Gravel is more difficult, and at least two operations are concerned with the extraction of ilmenite, a heavy mineral which runs about 4 percent. They also make other sand and mineral products as a result of these operations. They also have somewhere around 5 to 7 glass sand and molding sand operations. All of these are controlled by local municipal ordinances usually as part of the zoning code. Where the sand pits have been worked out, particularly the wet ones, they rather quickly are turned into recreational lakes.

85 As far as the stone quarries go, these do not constitute a large area or a serious problem. They are used for various purposes once the extraction of the stone has been completed.In one instance it is a swimming pool, and in others it is a site of a sanitary landfill operation.

85 New Jersey has a State Mines Inspector who is concerned with safety and the use of explosives. The result of his activity, and we cooperate with him on occasion, is that quarries and sand pits are not allowed to maintain attractive nuisances or slopes that are too steep which might endanger the public.

85 The competition for various uses is so great in New Jersey that reclamation does not represent a serious problem.

85 I trust this is all the information you need and perhaps it is more than enough since your whole inquiry seems to be based on the problems of the coal mine operations. If you have any further questions, please do not hesitate to call upon us.

85 Sincerely yours,

85 KEMBLE WIDMER, State Geologist.

85 NEW YORK

85 The New York State Department of Environmental Conservation, Bureau of Minerals indicated in their letter to the Committee that, since the State did not have any coal deposits, many of the questions in the survey were inappropriate.

85 The mining laws of the State of New York, while they do not pertain to coal mining, have some provisions which are similar to the Federal proposal.The Department has adopted a permitting system for surface mining which involves the moving of more than 1,000 tons of material annually. Furthermore, the State has

required a fee of the applicants in the amount of $100/year or $2 00 for a period of three years. The law contains a lengthy definition section which contains such terms as tailings, spoil bank, operator, overburden, permitee, person, etc. It is interesting to note that the State has differentiated between the terms "strip mining" and "surface mining". The former term is defined as meaning an operation which extracts minerals lying near the surface by means of removing the overburden above the deposits in rows or strips, . . . while the term "surface mining" is defined as meaning the extraction of minerals by means other than strip mining but not including underground mining.

{8 strip mining but not including underground mining.

{86} The law also provides that all applications for a surface mining permit be accompanied by a mining and reclamation plan which includes a detailed map of the area affected. After the plan has been approved, the operator must adhere to the approved plan or be in violation of the law, unless changes have been approved by the regulatory agency.

86 Mine operators are required to furnish a reclamation bond in an amount, form, and according to the terms of the Department of Environmental Conservation.Finally, the regulatory agency has been authorized by the law to suspend or revoke a permit for repeated or willful violation of any of the terms of the permit.

86 Unlike the Federal proposal, the New York State mining law does not establish the minimum requirements that mine operators must meet in their reclamation activities, but rather, authorizes the regulatory agency to establish these minimum on a case-by-case basis. Even the rules and regulations pursuant to the law are not very detailed. With few exceptions, the standards by which the mining is conducted are established by the Department of Environmental Conservation. Provisions of the law which would provide a mechanism for aggrieved persons to take legal action against either the regulatory agency or the mine operator were not apparent if they exit at all.

86 The complete response to the Committee follows.

86 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, BUREAU OF
MINERALS, Albany, N.Y.

86 Mr. D. MICHAEL HARVEY, Deputy Chief Counsel, Senate Interior Committee, Dirksen Senate Office Building, Washington, D.C.

86 DEAR MR. HARVEY: The following is in reply to your October 25, 1976 State Surface Mine Reclamation Questionnaire.

86 1. A copy of the current State law and its amendments are enclosed.The law became effective April 1, 1975 and encompasses all mineral substances of commercial value found in or on the earth.

86 2. A copy of the initial rules and regulations, promulgated September 28, 1976, is enclosed. Until December 31, 1976, only an abbreviated application (see section 421.2) is required.

86 3. Staff limitations preclude an analysis of the Federal law and its relationship to the State law at this time.

86 4. See 3 above.

86 5. There are no known coal deposits in the State of New York.

86 6. The State law does not specifically deal with alluvial valley floors.

86 7. There have been no State studies relative to the reclamation of abandoned mined lands.

86 8. There have been no State appropriations for the reclamation of abandoned mined lands.

{87} 9. The State law is new, the program unfunded, hence not yet fully implemented; therefore, long range studies or programs have not been formulated.

87 10. Coal Data:

87 a through c - There are no coal deposits in New York State.

87 Reclamation Field Inspections - a through j - None.

87 Citizen Action - a - A few; b and c - None.

87 Permits and Licenses - a through e - None.

87 Performance Bonds - a through f - Due to the recent promulgation of rules and regulations, performance bonds are not required until January 1, 1977.

87 Violations - a through e - Due to the recent promulgation of rules and regulations, no action was taken against alleged violators in 1975.

87 I regret our inability to offer you a more significant response, but the New York State Mined Land Reclamation Law in its infancy. In addition, the total absense of any coal deposits within our State renders many of your questions inappropriated

87 Sincerely,

87 RICHARD A. ARIEDA, Senior Petroleum Engineer.

87 Enclosures. * 87 * Retained in committee files.

87 NORTH CAROLINA

87 The spokesman for the North Carolina Department of Natural Economic Resources indicated in the cover letter that the State had not experienced any coal mining since the early 1950's and there was no expectation of any such mining in the foreseeable future. The complete reply of the Department follows.

87 DEPARTMENT OF NATURAL AND ECONOMIC RESOURCES, DIVISION OF EARTH
RESOURCES, Raleigh, N.C., November 10, 1976.

87 Mr. D. MICHAEL HARVEY, Senate Interior Committee, Dirksen Senate Office Building, Washington, D.C.

87 DEAR MR. HARVEY: In response to the letter from Senator Lee Metcalf of October 25, 1976 requesting information concerning coal mining regulation in North Carolina, only limited underground coal mining has ever been conducted in the State and no coal mining has been conducted since the early 1950's.I have no knowledge of any plans to mine coal in the State in the foreseeable future. Consequently, the questionnaire from Senator Metcalf does not appear to be applicable in North Carolina.

87 However, considerable mining of non-metallic minerals as well as aggregate mining is being conducted in the State and North Carolina does have a law regulating surface mining and reclamation, a copy of which I am enclosing.

87 I shall be happy to provide further information concerning regulation of noncoal mining in North Carolina if so desired.

87 Sincerely,

87 JAMES D. SIMONS, Minority Specialist.

87 [Enclosure.] *

87 * Retained in committee files.

87 Generally, the laws and regulations governing mining in the State of North Carolina are not too specific. Although the law does require that all

persons engaging in surface mining in the State first obtain a permit, file a permit application plan, and post an acceptable performance bond with the appropriate State agency, the law itself does not detail the environmental standards which must be met by the mine operator. As in the New York law, many of the specific determinations of the level of environmental standards are made by the regulatory agency on a case-by-case basis. In these matters, the law cannot be considered comparable to the Federal proposal. Although, as it was indicated in the cover letter, the State has no real concern about the adverse effects from surface mining of coal, the surface mining of other minerals such as phosphates has the potential for creating significant environmental problems. Because the Department of Natural and Economic Resources did not indicate that such problems has actually occurred, however, the degree of effectiveness of the State's laws and regulations cannot be determined.

{88} OHIO

88 Ohio is another major coal-producing state. According to the information forwarded by the Department of Natural Resources, Division of Reclamation, during 1975, Ohio produced 45.8 million tons of coal or about 7.1% of the total U.S. production for that year. Of this production, 30.4 million tons (about 60%) came from surface mines in the State. The degree to which surface miners in Ohio could adapt to Federal regulations, therefore, could be crucial to their operations. A review of the State surface-mining law along with the comparison forwarded by the regulatory agency indicated that Ohio had adopted regulations very similar to the proposed Federal legislation.

88 The State requires all operators to first obtain a license, which carries a $1 50 fee, prior to initiating any mining activities. Also, the prospective operator must include extensive detailed information in the application for the license which includes the following items:

88 1. The name and address of the applicant;

88 2. A statement of whether or not the applicant has ever held a license in the State; and

88 3. A statement of whether or not the applicant has ever had a license or permit denied or revoked by the state regulatory agency or if the applicant has ever had a performance bond forfeited.

88 The application must also inlcude a certificate of public liability insurance issued by an insurance company authorized to do business in this state which must be in the amount of $1 00,000 for all claims arising out of damage to property as the result of any one occurrence including completed operations, with an aggregate limit of $3 00,000 for all property damage to which the policy applies.

88 The law also requires that mine operators obtain a surface-mining permit prior to beginning mining operations. The permit fee is $3 0 per acre for the affected area. The application for the mining permit shall contain the following information:

88 1. The name, address, and business telephone number of the applicant, and the license number issued to the applicant pursuant to the law;

88 2.A description of the land upon which the applicant proposes to engage in a strip-mining operation which will include the following:

88 a. the name of the county of the operation;

88 b. the name of the township of the operation;

88 c. the name of any municipal corporations which may be affected by the mining operation.

88 3. The application must also include an estimate of the number of acres of land which will comprise the area of land to be affected within each year for which the permit is requested;

{89} 4. The name and address of the owner of surface rights in the land upon which the applicant proposes to engage in strip mining;

89 5. A copy of the deed, lease, or other instrument which authorizes entry upon such land by the applicant;

89 6. A statement of whether or not the applicant now holds any surface mining permits;

89 7. A report of testing in the area of land to be affected, which shall include the location of test boring holes in the area and the results of the test borings including the nature and depth of overburden and material underlying the coal seam, the thickness of the seam, and the crop line of the seam;

89 NOTE: The language in this section is almost identical to that in the Federal bill.

89 8. A complete plan for mining and reclaiming the area of land to be affected, according to the information contained in the law, this plan is extremely detailed and very similar to the Federal proposal;

89 9 An estimate of the cost of reclamation per acre;

89 The law also requires a surety bond in the following amount: in an amount equal to the estimated cost to the State to perform reclamation required by the Act, although no surety shall be for an amount less than $5,000.

89 Cash or certificates of deposit can be substituted for the bond. In addition to the information above, the State also requires a surety bond to be posted in an amount equal to the estimated cost to the State to perform reclamation required by the Act, although no surety small be for an amount less than $5 ,000. Cash or certificates of deposit can be substituted for the bond.

89 With respect to the field inspection officers, the State requires all applicants for the job to pass a test prepared and administered by the State Department of Personnel. After appointment, the inspection officers must serve in a provisional capacity for one year. The law also contains conflict-of-interest provisions which prohibit inspection officers from engaging in surface mining either as a sole proprietor, a partner, or as the officer of a corporation which is actively mining. In addition, no reclamation inspector can be employed by any other person engaged in surface mining.

89 The law also created a Reclamation Board of Review consisting of seven members appointed by the Governor of the State with the advice and consent of the Senate.The tenure of office of the Board members is such that only part of the Board will be replaced at any time.

89 In addition to requiring the detailed map of the area to be affected, which was mentioned earlier, the law also required that mine operators submit quarterly reports indicating the progress made in the mining and reclamation activities. At the end of each year, the mine operator is also required to file an annual plan, including the information contained in the quarterly reports and an indication of the areas that will be affected in the following year.

89 In conjunction with the performance standards of the law, the mine operator is required to reclaim the affected area in conformance with the mining and reclamation plan which was filed with the State enforcement agency. The law requires that the operator perform the tasks shown on the following page in order to comply with the law.

{90} (1) Conspicuously post at each entrance to the operation a sign which clearly shows the name, business address, and telephone number of the operator and the license number of the operation. The sign shall be at least three feet by three feet in size.

90 (2) Remove the topsoil from the land in a separate layer and segregate the topsoil in a separate pile until needed so that the soil is kept in a usable condition for sustaining vegetation, unless other soil placement procedures or

soil conditioning, as may be necessary to better establish and maintain vegetation in the area of land affected, have been approved by the chief;

90 (3) Cover immediately with nontoxic material any toxic material, roof coal, pyritic shale, or other material determined by the chief to be acid-producing, toxic, or creating a fire hazard and bury such toxic material under adequate fill. Before completion of reclamation the operator shall remove or bury any metal, lumber, equipment, or other refuse resulting from the mining, and dismantle and remove all abandoned or useless structures.

90 (4) Construct and maintain access roads and fire lanes in the affected area, when required to do so by rule, order of the chief, or the plan for mining and reclamation required as part of the application;

90 (5) Prevent pollution of waters of the state, substantial erosion, substantial deposition of sediment, landslides, accumulation or discharge of acid water, and flooding, and shall maintain ditches, dikes, pumps, and other drainage facilities necessary to prevent acid water from draining into or accumulating in the pit.

90 (C) An operator shall reclaim the area of land affected in accordance with the plan for mining and reclaiming approved by the chief in the operator's application for a permit. In the process of reclamation, the operator shall:

90 (1) Contour the area of land affected, unless the plan for mining and reclaiming approved by the chief under division (A)(8) of section 1513.07 of the Revised Code provides for terracing or for use of the area of land affected for water impoundments, water-oriented real estate developments, recreational area development, commercial or industrial site development, sanitary landfill, or agricultural development, in which case the operator shall comply with the plan as approved by the chief. If contouring of the area of land affected presents, in the opinion of the chief, a danger that soil erosion or acid water drainage will occur before the planned vegetation will grow, or other natural conditions will not permit contouring, the operator shall backfill and grade according to a plan of terracing and drainage approved by the chief that will eliminate such danger. Approval of terracing shall not be construed as reducing the responsibility of an operator to prevent stream pollution. A body of water may be formed if its formation will not result in siltation, acid water accumulation, or acid water drainage, and if the mining and reclamation plan prescribes formation of a body of water. No body of water shall be less than six feet deep, measured from the low water mark, except that the chief may approve a lesser depth for the purpose of waterfowl refuge and habitat if this portion of the plan is properly planned and desirable from the standpoint of wildlife management. The bank abutting at least half the perimeter of a body of water shall be graded to the water line at a uniform grade not steeper than fifteen degrees extending back from the water at least twelve feet.

90 (2) Replace the topsoil which has been segregated, unless the chief has approved or required other soil placement or soil conditioning, including the application of soil amendments, as necessary to sustain vegetation, in which case such procedures shall be followed. There shall be no rocks or other materials within the topsoil or subsoil of any size which would impede any intended future use of the area as set forth in the application for a permit or for an amendment to a permit.

90 (3) Plant and grow vegetative covering as required by the mining and reclamation plan approved by the chief.

90 (4) Reestablish all boundary, section corner, government, and other survey monuments which were removed by the operator.

90 (D) When the reclamation other than planting of the area of land affected as shown on an annual or final map is completed, the operator shall file a request on a form provided by the chief, for inspection of the area.

90 In response to the Committee's request, the Ohio Department of Natural Resources prepared a comparison of the key provisions of the State's law with Section's 515 and 516 of the Federal proposal which pertain to the environmental protection performance standards required of the mine operators, with the following results.

{91} H.R 13950

91 ENVIRONMENTAL PROTECTION PERFORMANCE STANDARDS

91 SEC. 515. (a) Any permit issued under any approved State or Federal program pursuant to this Act to conduct surface coal mining operations shall require that such surface coal mining operations will meet all applicable performance standards of this Act, and such other requirements as the regulatory authority shall promulgate.

91 (b) General performance standards shall be applicable to all surface coal mining and reclamation operations and shall require the operation as a minimum to -

91 (1) conduct surface coal mining operations so as to maximize the utilization and conservation of the solid fuel resource being recovered so that reaffecting the land in the future through surface coal mining can be minimized;

91 (2) restore the land affected to a condition at least fully capable of supporting the uses which it was capable of supporting prior to any mining, or higher or better uses of which there is a reasonable likelihood, so long as such

use or uses do not present any actual or probable hazard to public health or safety or pose any actual or probable threat of water diminution or pollution, and the permit applicants' declared proposed land use following reclamation is not deemed to be impractical or unreasonable, inconsistent with applicable land use policies and plans, involves unreasonable delay in implementation, or is violative of Federal State, or local law;

91 (3) with respect to all surface coal mining operations backfill, compact (where advisable to insure stability or to prevent leaching of toxic materials), and grade in order to restore the approximate original contour of the land with all highways, spoil piles, and depressions eliminated (unless small depressions are needed in order to retain moisture to assist revegetation or as otherwise authorized pursuant to this Act): Provided, however, That in surface coal mining which is carried out at the same location over a substantial period of time where the operation transects the coal deposit, and the thickness of the coal deposits relative to the volume of the overburden is large and where the operator demonstrates that the overburden and other spoil and waste materials at a particular point in the permit area or otherwise available from the entire permit area is insufficient, giving due consideration to volumetric expansion, to restore the approximate original contour, the operator, at a minimum, shall backfill, grade, and compact (where advisable) using all available overburden and other spoil and waste materials to attain the lowest practicable grade but not more than the angle of repose, to provide adequate drainage and to cover all acid-forming and other toxic materials, in order to achieve an ecologically sound land use compatible with the surrounding region: And provided further, That in surface coal mining where the volume of overburden is large relative to the thickness of the coal deposit and where the operator demonstrates that due to volumetric expansion the amount of overburden and other spoil and waste materials removed in the course of the mining operation is more than sufficient to restore the approximate original contour, the operator shall after restoring the approximate contour, backfill, grade, and compact, (where advisable) the excess overburden and other spoil and waste materials to attain the lowest grade but not more than the angle of repose, and to cover all acidforming and other toxic materials, in order to achieve an ecologically sound land use compatible with the surrounding region and that such overburden or spoil shall be shaped and graded in such a way as to prevent slides, erosion, and water pollution and is revegetated in accordance with the requirements of this Act;

{92} (4) stabilize and protect all surface areas including spoil piles affected by the surface coal mining and reclamation operation to effectively control erosion and attendant air and water pollution;

92 (5) remove the topsoil from the land in a separate layer, replace it on the backfill area, or, if not utilized immediately, segregate it in a separate pile from other spoil and, when the topsoil is not replaced on a backfill area within a time short enough to avoid deterioration of the topsoil, maintain a

successful cover by quick growing plant or other means thereafter so that the topsoil is preserved from wind and water erosion, remains free of any contamination by other acid or toxic material, and is in a usable condition for sustaining vegetation when restored during reclamation, except if topsoil is of insufficient quantity or of poor quality for sustaining vegetation, or if other strata can be shown to be more suitable for vegetation requirements, then the operator shall remove, segregate, and preserve in a like manner such other strata which is best able to support vegetation;

{93} (6) restore the topsoil or the best available subsoil which has been segregated and preserved;

93 (7) protect offsite areas from slides or damage occurring during the surface coal mining and reclamation operations, and not deposit spoil material or locate any part of the operations or waste accumulations outside the permit area;

93 (8) create, if authorized in the approved mining and reclamation plan and permit, permanent impoundments of water on mining sites as part of reclamation activities only when it is adequately demonstrated that -

93 (A) the size of the impoundment is adequate for its intended purposes;

93 (B) the impoundment dam construction will be so designed as to achieve necessary stability with an adequate margin of safety compatible with that of structures constructed under Public Law 83-566 (16 U.S.C. 1006);

93 (C) the quality of impounded water will be suitable on a permanent basis for its intended use and that discharges from the impoundment will not degrade the water quality in the receiving stream;

93 (D) the level of water will be reasonably stable;

93 (E) final grading will provide adequate safety and access for proposed water users; and

93 (F) such water impoundments will not result in the diminution of the quality or quantity of water utilized by adjacent or surrounding landowners for agricultural, industrial, recreational, or domestic uses;

{94} (9) plug all auger holes to a minimum of six feet in depth with an impervious and noncombustible material (such as clay) to prevent the flow of water in or out of such holes.

94 (10) minimize the disturbances to the prevailing hydrologic balance at the minesite and in associated offsite areas and to the quality and quantity of

water in surface and ground water systems both during and after surface coal mining operations and during reclamation by -

94 (A) avoiding acid or other toxic mine drainage by such measures as, but not limited to -

94 (i) preventing or removing water from contact with toxic producing deposits;

94 (ii) treating drainage to reduce toxic content which adversely affects downstream water upon being released to water courses;

94 (iii) casing, sealing, or otherwise managing boreholes, shafts, and wells and keep acid or other toxic drainage from entering ground and surface waters;

94 (B) conducting surface coal mining operations so as to prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow or runoff outside the permit area above natural levels under seasonal flow conditions as measured prior to any mining, and avoiding channel deepening or enlargement in operations requiring the discharge of water from mines;

94 (C) removing temporary or large siltation structures from drainways after disturbed areas are revegetated and stabilized;

94 (D) restoring recharge capacity of the mined area to approximate premining conditions;

94 (E) replacing the water supply of an owner of interest in real property who obtains all or part of his supply of water for domestic, agricultural, industrial, or other legitimate use from an undergound or surface source where such supply has been affected by contamination, diminution, or interruption proximately resulting from mining.

{95} (F) preserving throughout the mining and reclamation process the essential hydrologic functions of alluvial valley floors in the arid and semiarid areas of the country; and

95 (G) such other actions as the regulatory authority may prescribe;

95 (11) with respect to surface disposal of mine wastes, tailings, coal processing wastes, and other wastes, and other wastes in areas other than the mine working or excavations, stabilize all waste piles in designated areas through construction in compacted layers including the use of incombustible and impervious materials, if necessary, and assure the final contour of the waste pile will be compatible with natural surroundings and that the site can and will

be stabilized and revegetated according to the provisions of this Act;

95 (12) refrain from surface coal mining within five hundred feet from active and abandoned underground mines in order to prevent breakthroughs and to protect health or safety of miners: Provided, That the regulatory authority shall permit an operator to mine closer to an abandoned underground mine: Provided, That this does not create hazards to the health and safety of miners; or shall permit an operator to mine near, through, or partially through an abandoned underground mine working where such mining through will achieve improved resource recovery, abatement of water pollution or elimination of public hazards and such mining shall be consistent with the provisions of the Act;

95 (13) design, locate, construct, operate, maintain, enlarge, modify, and remove, or abandon, in accordance with the standards and criteria developed pursuant to subsection (e) of this section, all existing and new coal mine waste piles consisting of mine wastes, tailings, coal processing wastes, or other liquid and solid wastes and used either temporarily or permanently as dams or embankments;

95 (14) insure that all debris, acid forming materials, toxic materials, or materials constituting a fire hazard are treated or disposed of in a manner designed to prevent contamination or ground or surface waters or sustained combustion;

{96} (15) insure that explosives are used only in accordance with existing State and Federal law and the regulations promulgated by the regulatory authority, which shall include provisions to -

96 (A) provide adequate advance written notice by publication and/or posting of the planned blasting schedule to local governments and to residents who might be affected by the use of such explosives and maintain for a period of at least two years a log of the magnitudes and times of blasts; and

96 (B) limit the type of explosives and detonating equipment, the size, the timing and frequency of blasts based upon the physical conditions of the site so as to prevent (i) injury to persons, (ii) damage to public and private property outside the permit area, (iii) adverse impacts on any underground mine, and (iv) change in the course, channel, or availability of ground or surface water outside the permit area;

96 (16) insure that all reclamation efforts proceed in an environmentally sound manner and as contemporaneously as practicable with the surface coal mining operations;

96 (17) insure that the construction, maintenance, and postmining conditions

of access roads into and across the site of operations will control or prevent erosion and siltation, pollution of water, damage to fish or wildlife or their habitat, or public or private property: Provided , That the regulatory authority may permit the retention after mining of certain access roads where consistent with State and local land use plans and programs and where necessary may permit a limited exception to the restoration of approximate original contour for that purpose;

96 (18) refrain from the construction of roads or other access ways up a stream bed or drainage channel or in such proximity to each channel so as to seriously alter the normal flow of water;

96 (19) establish on the regraded areas, and all other lands affected, a diverse, effective, and permanent vegetative cover native to the area of land to be affected and capable of selfregeneration and plant succession at least equal in extent of cover to the natural vegetation of the area; except, that introduced species may be used in the revegetation process where desirable and necessary to achieve the approved postmining land use plan;

{97} (20) assume the responsibility for successful revegetation, as required by paragraph (19) above, for a period of five full years after the last year of augmented seeding, fertilizing, irrigation, or other work in order to assure compliance with paragraph (19) above, except in those areas or regions of the country where the annual average percipitation is twenty-six inches or less, then the operator's assumption of responsibility and liability will extend for a period of ten full years after the last year of augmented seeding, fertilizing, irrigation, or other work: Provided, That when the regulatory authority approves a long-term intensive agricultural postmining land use, the applicable fiveor ten-year period of responsibility for revegetation shall commence at the date of initial planting for such long-term intensive agricultural postmining land use: Provided further, That when the regulatory authority issues a written finding approving a long-term, intensive, agricultural postmining land use as part of the mining and reclamation plan, the authority may grant exception to the provisions of paragraph (19) above; and

97 (21) meet such other criteria as are necessary to achieve realamation in accordance with the purposes of this Act, taking into consideration the physical, climatological, and other characteristics of the site, and to insure the maximum practicable recovery of the mineral resources.

97 (c)(1) Each State program may and each Federal program shall include procedures pursuant to which the regulatory authority may permit variances for the purposes set forth in paragraph (3) of this subsection.

97 (2) Where an applicant meets the requirements of paragraphs (3) and (4) of this subsection a variance from the requirement to restore to approximate

original contour set forth in subsection 515(b)(3) or 515(d) of this section may be granted for the surface mining of coal where the mining operation will remove an entire coal seam or seams running through the upper fraction of a mountain, ridge, or hill (except as provided in subsection (c)(4)(A) hereof) by removing all of the overburden and creating a level plateau or a gently rolling contour with no highwalls remaining, and capable of supporting postmining uses in accord with the requirements of this subsection.

{98} (3) In cases where an industrial, commercial (including commercial agricultural), residential or public facility (including recreational facilities) development is proposed for the postmining use of the affected land, the regulatory authority may grant a variance for a surface mining operation of the nature described in subsection (c)(2) where -

98 (A) after consultation with the appropriate land use planning agencies, if any, the proposed development is deemed to constitute an equal or better economic or public use of the affected land, as compared with the premining use;

98 (B) the equal or better economic or public use can be obtained only if one or more exceptions to the requirements of section 515(b)(3) are granted;

98 (C) the applicant presents specific plans for the proposed postmining land use and appropriate assurances that such use will be -

98 (i) compatible with adjacent land uses;

98 (ii) obtainable according to data regarding expected need and market;

98 (iii) assured of investment in necessary public facilities;

98 (iv) supported by commitments from public agencies where appropriate;

98 (v) practicable with respect to private financial capability for completion of the proposed development;

98 (vi) planned pursuant to a schedule attached to the reclamation plan so as to integrate the mining operation and reclamation with the postmining land use; and

98 (vii) designed by a registered engineer in conformance with professional standards established to assure the stability, drainage, and configuration necessary for the intended use of the site;

{99} (D) the proposed use would be consistent with adjacent land uses, and existing State and local land use plans and programs;

99 (E) the regulatory authority provides the governing body of the unit of general-purpose government in which the land is located and any State or Federal agency which the regulatory agency, in its discretion, determines to have an interest in the proposed use, an opportunity of not more than sixty days to review and comment on the proposed use;

99 (F) a public hearing is held in the locality of the proposed surface coal mining operation prior to the grant of any permit including a variance; and

99 (G) all other requirements of this Act will be met.

99 (4) In granting any variance pursuant to this subsection the regulatory authority shall require that -

99 (A) the toe of the lowest coal seam and the overburden associated with it are retained in place as a barrier to slides and erosion;

99 (B) the reclaimed area is stable;

99 (C) the resulting plateau or rolling contour drains inward from the outslopes except at specified points;

99 (D) no damage will be done to natural watercourses;

99 (E) all other requirements of this Act will be met.

99 (5) The regulatory authority shall promulgate specific regulations to govern the granting of variances in accord with the provisions of this subsection, and may impose such additional requirements as be deems to be necessary.

99 (6) All exceptions granted under the provisions of this subsection shall be reviewed not more than three years from the date of issuance of the permit, unless the applicant affirmatively demonstrates that the proposed development is proceeding in accordance with the terms of the approved schedule and reclamation plan.

{100} (d) The following performance standards shall be applicable to steep-slope surface coal mining and shall be in those general performance standards required by this section: Provided, however, That the provisions of this subsection (d) shall not apply to those situations in which an operator is mining on flat or gently rolling terrain, on which an occasional steep slope is encountered through which the mining operation is to proceed, leaving a plain or predominantly flat area:

100 (1) Insure that when performing surface coal mining on steep slopes, no

debris, abandoned or disabled equipment, spoil material, or waste mineral matter be placed on the downslope below the bench or mining cut, except that where necessary soil or spoil material from the initial block or short linear cut of earth necessary to obtain initial access to the coal seam in a new surface coal mining operation can be placed on a limited and specified area of the downslope below the initial cut if the permittee demonstrates that such soil or spoil material will not slide and that the other requirements of this subsection can still be met: Provided, That spoil material in excess of that required for the reconstruction of the approximate original contour under the provisions of paragraph 515(b)(3) or 515(d)(2) or excess spoil from a surface coal mining operation granted a variance under subsection 515(c) may be permanently stored at such offsite spoil storage areas as the regulatory authority shall designate and for the purposes of this Act such areas shall be deemed in all respects to be part of the lands affected by surface coal mining operations. Such offsite spoil storage areas shall be designed by a registered engineer in comformance with professional standards established to assure the stability, damage, and configuration necessary for the intended use of the site.

101 (2) Complete backfilling with spoil materials shall be required to cover completely the highwall and return the site to the approximate original contour, which material will maintain stability following mining and reclamation.

101 (3) The operator may not disturb land above the top of the highwall unless the regulatory authority finds that such disturbance will facilitate compliance with the environmental protection standards of this section: Provided, however, That the land disturbed above the highwall shall be limited to that amount necessary to facilitate said compliance.

101 (4) For the purposes of this section, the term "steep slope" is any slope above twenty degrees or such lesser slope as may be defined by the regulatory authority after consideration of soil, climate, and other characteristics of a region or State.

101 (e) The Secretary, with the written concurrence of the Chief of Engineers, shall establish within one hundred and thirty-five days from the date of enactment, standards and criteria regulating the design, location, construction, operation, maintenance, enlargement, modification, removal, and abandonment of new and existing coal mine waste piles referred to in section 515(b)(13) and section 516(b)(5). Such standards and criteria shall conform to the standards and criteria used by the Chief of Engineers to insure that flood control structures are safe and effectively perform their intended function. In addition to engineering and other technical specifications the standards and criteria developed pursuant to this subsection must include provisions for review and approval of plans and specifications prior to construction, enlargement, modification, removal, or abandonment; performance of periodic inspections during construction; issuance of certificates of approval upon

completion of construction; performance of periodic safety inspections; and issuance of notices for required remedial or maintenance work.

{91} Ohio Law

91 There is no consideration given under Ohio law to maximizing the resource or future mining.

91 Ohio's law is similar.

91 Ohio law is similar but the regulating agency is not as stringent with regards to the issuing of variances.

{92} Ohio's law is similar but does not address potential air pollution.

92 Ohio has similar topsoil requirements.

{93} Ohio's law is similar.

93 Do.

93 Ohio's law and rules basically requires the operator to demonstrate similar details regarding permanent impoundments.However, not quite as extensive details are required as are described in the Federal proposal.

{94} Ohio's law is similar.

94 Do.

{95} The Ohio Strip Mine Law does not include regulation of disposal of mine wastes, tailings, etc. The Division of Water within the Department of Natural Resources has control over the safety and stability of water holding embankments associated with coal processing. There is no physical reason why the Ohio Strip Mine Law would not be similar to the proposed Federal legislation with regards to this item.

95 Ohio has similar language in the proposed Strip Mine Rules.

95 Same response as in Sec. 515(b)(11). Control is presently exerted only with consideration to safety and stability by the Division of Water.

95 Ohio's law has similar language.

{96} Ohio has similar blasting rules.

96 Ohio's law is similar.

96 Do.

96 Ohio law does not specifically prevent construction of haul roads up stream beds.

96 Ohio's revegetation requirements are similar.

{97} Responsibility for maintaining successful vegetation is only required until total bond release.In Ohio this can occur following just one growing season.

97 Ohio has no such similar language.

97 Ohio's law has a similar allowance for variances.

97 Do.

{98} Ohio can grant variances from "original contour" for agriculture, residential or public facilities but does not require the detailed information as proposed in the Federal law Sec. 515(c)(3)(C). However, other variance provisions are similar.

{99} Ohio law does not specifically consider the leaving of the toe of the lowest coal seam.

99 Ohio's Chief of the Division of Reclamation may promulgate regulations governing variances.

99 Ohio law does not consider a three-year review of these types of permits.

{100} Ohio's law does not have special provisions regarding steep slope mining.However, the Division effectively requires that special mining techniques be utilized whenever needed.

100 While there is no specific wording in the Ohio law discussing the downslope, the Division does not permit this.

100 Ohio's law is similar.

100 No such wording in the Ohio law.

100 Ohio has no such steep slope definition. However, 20 degrees is a good cutoff point for Ohio conditions. We have problems on slopes steeper than 20 degrees.

{102} The Department of National Resources for the State reported that Ohio does not have any provisions in its law which deal specifically with the surface effects of underground mining. All of the State's law pertain to the safety aspects of underground mining or the sealing off of abandoned underground mines. Finally, the state law requires the Chief of the Reclamation Division to disapprove any application for mining in an area in which he feels that adequate reclamation cannot be achieved. The spokesmen for the State also indicated, to the best of their knowledge, there are no geologic conditions within the State that would prohibit the implementation of the proposed Federal reclamation law.

RESULTS OF THE SURVEY

102 PENNSYLVANIA

102 The Pennsylvania Department of Environmental Resources used the Survey by the Committee as an opportunity to express its opposition to some of the elements of the proposed Federal legislation. Mr. W. E. Guckert, the Director of the Bureau of Surface Mine Reclamation for the State, said in his cover letter that:

102 We are taking this opportunity to make some general comments as well.We do not feel the Federal legislation should be such that it establishes specific criteria, performance standards, operating procedures, and administrative procedures. Federal legislation must be applicable to all situations on a national scene. Therefore, the legislation should be so structured that individual States can work within the parameters of the legislation; but be able to develop the specificity needed to achieve the environmental, economic, and social goals desired at both levels of government.

102 Mr. Guckert also claimed that unnecessary specificity in Federal legislation would lead to confusion within the industry and the various state regulatory agencies. He observed that "specific criteria values are often developed arbitrarily without a technical basis." He noted that the State was already experiencing this type of difficulty in the non-coal mining industry with the implementation of Federal regulation relating to mine safety, water and air quality, and occupational health, which have been superimposed on existing State standards. He said that:

102 Federal legislation should provide the parameters within which a State can develop supplemental or adjunct legislation specifically for its needs. Federal legislation should require regulation of the industry and establish basic non-specific criteria to achieve specific objectives pertaining to water quality control, public and employee health, safety, and restoration of affected areas.

102 According to the Department, no analysis of abandoned and unreclaimed lands was available. Currently, the State is reportedly achieving whatever reclamation is possible of these lands by allowing the mining industry to reaffect them and then requiring concurrent reclamation under the present law. During 1975, the Department was able to reclaim approximately 3,000 acres of abandoned lands through this type of procedure. Mr. Guckert noted that:

{103} In addition the Department, through its Land and Water Conservation Reclamation Bond projects continues to restore many devastated areas in abating acid mine problems. Two news releases pertaining to recently completed projects of this nature are enclosed for your information.

103 Through the Land and Water Conservation Reclamation Bond monies, the Department continues to abate water and air pollution resulting from mining activities.Theses projects do involve the reclamation of many acres of orphaned strip mine lands.

103 In order to determine the effectiveness of current reclamation, the Department monitors individual mining activities and studies watershed projects throughout the State. This process involves the collection and analysis of both surface and underground water samples prior to, during, and after the completion of mining.The respondent observed that:

103 Some of the reclamation techniques or practices which must be addressed in the reviews are barriers in the backfilled pits, placement of particular spoils in pit, general backfilling, topsoil replacement and vegetative cover.

103 Employing the same principle as designating lands unsuitable for mining, the Department has compiled a list of watersheds within the State where mining has been restricted or prohibited altogether, and the agency is now in the process of adopting regulations to provide the necessary legal basis for limiting mining in environmentally sensitive areas.

103 Although the Department did not prepare a comprehensive comparison of the State's law with Section 515 of the Federal legislation, it did provide a list of the provisions within the Federal proposal which would be incompatible with the State's regulations.

103 Several exceptions to the compatibility of Section 515 are:

103 a. Pennsylvania law does not require restoration of the land to a higher use. In practice, however, the land is normally improved.

103 b. There is no standard for restoring premining recharge capacity. Restoring land to approximate original contours minimizes the effects of mining. Also, how could this be measured or such a requirement enforced?

103 c. The loss or diminution of water supply downstream is not required to be restored. However, in many cases coal companies have provided new water supplies (wells) where the mining operation has been responsible for loss or pollution of water.

103 d. Advance written notice of blasting is not required.

103 e. Variances to the original contour reclamation are permitted with much less complexity than indicated in 515.

103 f. Permanent impoundments are not provided for. If the landowner requests that impoundment remain for fire protection or other practical uses, we have approved them.

103 The Pennsylvania Department of Environmental Resources indicated in its letter that it considered the State's existing laws and regulations compatible with the proposed Federal legislation. Although the Pennsylvania law is considered by many as the model from which the Federal legislation was drafted, a brief examination of the two reveals that the State law is not nearly as specific or as strict as H.R. 13950. Many of the requirements for mining and reclamation are not included in the law or regulations but are left to the discretion of the regulatory agency on a case-by-case basis.

{104} RHODE ISLAND

104 The Chief of the Statewide Planning Program, Department of Administration for the State of Rhode Island reported that the State was not currently producing any coal and would therefore not be affected by Federal surface mining legislation. In addition, the State has no law regulating the surface mining industry, although there are some operations for sand and gravel. According to the planning program, any regulation of the surface mining industry would take place at the local level. The complete reply of the State is herewith included in the text.

104 DEPARTMENT OF ADMINISTRATION, STATEWIDE PLANNING PROGRAM, Providence,
R.I., November 5, 1976.

104 Mr. D. MICHAEL HARVEY, Deputy Chief Counsel, Senate Interior Committee, Dirksen Senate Office Building, Washington, D.C.

104 DEAR MR. HARVEY: This is in response to the October 25 letter of Mr. Lee Metcalf, Chairman of the Senate Subcommittee on Minerals, regarding state surface mining legislation.

104 Rhode Island is not a coal-producing state as this time, although current explorations do indicate some potential for commercial-grade coal in the Narragansett basin. Currently, mining activity is limited to sand and gravel and crushed stone. There is no state legislation on surface mining. Related laws which may be of interest are:

104 (1) the state Coastal Resources Management Council Act (General Laws of Rhode Island, Chapter 46-23), which requires a permit for mineral extraction which might affect the coastal environment (regulations currently prohibit such activity, until further research is done on environmental effects);

104 (2) the state Antiquities Act (General Laws, Chapter 42-45.1), which concerns investigations and stafe-funded or licensed activities on stateowned archaeological sites or on state Archaeological Landmarks (none have yet been designated); and

104 (3) eleven special enabling acts for individual cities and towns to regulate earth removal activities (the local ordinances typically regulate fencing, drainage, and hours of operation at sites near residential zones). Are you aware of the numerous surveys on this subject which have been circulating? You may wish to contact a few that have contacted us for information on this subject recently:

104 Mr. Edgar A. Imhoff, Mined Area Reclamation Project, U.S. Geological Survey, National Center MS750, Reston, Virginia 22092

104 Mr. William O. Roller, Commissioner, Department of Conservation and Economic Development, Division of Mined Land Reclamation, Drawer U, Big Stone Gap, Virginia 24219

104 Mr. Allen B. Agnew, Department of Geological Engineering, 125 Mining, UMR, Rolla, Missouri 65401

104 Please let me know if you have questions about the laws listed above or if I can be of any further assitance.

104 Yours very truly,

104 DANIEL W. VARIN, Chief, Statewide Planning.

{105} SOUTH CAROLINA

105 The Director of the Department of Mining and Reclamation for the South Carolina Land Resources Conservation Commission indicated in his response that, although the State does not produce any coal, it has enacted a law which regulates the development of other minerals by means of surface mining methods.

Basically, the law prohibits surface mining without a permit. The permit, which is issued by the regulatory agency, is good for 10 years and can be renewed. Furthermore, the permit can be modified in order to include lands adjacent to the existing operation.All applications for a mining permit (each separate operation requires a permit) require the filing of a mining and reclamation plan by the operator. If the Department determines that, from previous experience, adequate reclamation cannot be accomplished, or if the Department concludes that the mining activity would have an adverse effect on the environment, the Department is empowered by the law to deny the mining permit.

105 Regarding the reclamation plan, the mine operator must provide for reclamation to the extent feasible, and wherever erosion is a threat, the operator is required to conduct reclamation activities concurrently with mining. The law further requires that the slopes resulting from the mining operation be reduced in order to avoid the possibility of landslides and that overburden and spoil be left in a configuration compatible with post-mining land-use plans. Vegetative cover is required and must comply with standards established by the South Carolina Agricultural Experimental Station.

105 The mine operator is also required to post a performance bond in the following amounts:

*2*For each mining permit

Area distributed:	Amount of bond
Less than 5 acres	$2,500
5 to 10 acres	5,000
10 to 25 acres	12,500
Over 25 acres	25,000

105 The release of the performance bond is dependent upon approved reclamation by the Department. In lieu of the bond, the operator may file with the Department cash deposits, negotiable securities, or an appropriate mortgage. The Department further requires that the mine operator file an annual report in order for the regulatory agency to determine the status of the operation along with its compliance with the State law and the approved mining and reclamation plan.

105 SOUTH DAKOTA

105 South Dakota is another State that does not currently produce any coal. However, the Division of Conservation in the South Dakota Department of Agriculture replied that the State did have the potential for coal production in its northwestern corner and that it had already passed surface mining laws that would apply to any such mining activities.The Department reported that the State did not have a bonafide program for the reclamation of abandoned lands, but

does have a small reclamation fund which is occasionally used for individual reclamation projects. In order to determine the long-range effectiveness of reclamation in the State, the Department does inspect mine sites after the reclamation has been completed.

{106} By using the reclamation fund, the Department does share the cost of reclaiming lands disturbed prior to the passage of the State sufacemining law with mine operators. Furthermore, the Department is currently in the process of accepting contract bids on another reclamation job in the State. Estimates of reclamation of mined lands in the State run anywhere between $200 per acre and $1 ,500 per acre and in one or two isolated cases, the reclamation costs have exceeded the $1,500 figure.

106 The Department has rejected no applications for mining permits and modified a small number of applications that have been submitted. According to the office, the Department assists the mine operators in constructing the mining and reclamation plan prior to its formal submission, thereby reducing the likelihood of hearings and litigation on rejected or modified permits.

106 The South Dakota surface mining law is not as detailed as H.R. 13950, but in principal, does contain many of the provisions of the Federal proposal. The law contains provisions for the designation of lands unsuitable for surface mining. Such a designation may be made in cases where reclamation of the land would either be physically or economically unfeasible. If the recharge capacity would be damaged by surface mining, the land can also be designated as unsuitable. This particular provision would enable the regulatory agency to restrict or prohibit the development of surface mines on alluvial valley floors if it felt that the area was unique and could not be completely restored.

106 As a permitting condition, the Division of Agriculture requires the approval of a mining and reclamation plan prepared by the operator, with the reclamation taking place as soon as possible after the completion of the mining. Included in the reclamation plan must be a map of the affected area. This map must be filed annually with the Division and must show the areas which were mined during the preceding year, along with the reclamation which was accomplished during the same period. A similar map is required to be filed at the completion of the mining operation.

106 Applicants for mining permits are also required to post a performance bond with the regulatory agency in an amount sufficient to cover the cost of reclamation in the event of forfeiture.

106 The regulations in South Dakota generally require that the operator perform the following tasks in order to comply with the law:

106 1. Remove, segregate and preserve the topsoil removed from the affected

area;

106 2. Bury all toxic materials in order to prevent the release of toxic substances into ground water, surface water or non-toxic materials;

106 3. Grade and backfill the affected area in order to achieve a contour that is most beneficial to the proposed land use (NOTE: This particular provision differs greatly from the requirement of restoring the approximately original contour which is in the Federal bill, and would provide the regulating agency with considerably more latitude in dealing with specific mine sites.);

{107} 4. Reduce all highwalls to a slope not greater than 25 percent upon abandonment of the mining operation unless such a reduction would create conditions more detrimental than preserving the highwalls; and

107 5. Control the growth of noxious weeds during all phases of the mining and reclamation operations (NOTE: This requirement seems to be unique to the South Dakota law and it is not included in the Federal proposal.).

107 In addition, the Division of Conservation requires that vegetation be re-established on the mined area in accordance with the pre-deter-mined plan which had been approved earlier.

107 The State law has established a mechanism whereby any resident can file a complaint by affidavit with the Division, thereby causing an inspection to be performed to determine the validity of the complaint. If the complaint is valid, the Division can require the operator to remedy the situation within a specified period unless the operator exercises his rights to a hearing.In cases where a hearing is held, the decision of the State Conservation Commission is final.

RESULTS OF THE SURVEY

107 TENNESSEE

107 In its response to the survey, the Tennessee Department of Conservation indicated its opposition to some of the provisions contained in the Federal bill, H.R. 13950. According to the Department:

107 None of the bill's provisions are impossible for the Tennessee Surface Coal Mining Industry assuming that there are enough private citizens committed to paying the higher prices for coal that will become necessary in order to implement certain provisions of the bill.

107 Included in the provisions which the Department found objectionable were the following:

107 1.The provisions within the legislation that require the operators to backfill in contour mining operations. According to the Department, "Increased grading costs will have to be passed on to all consumers of electricity if surface mining operators are required to eliminate existing highwalls in conjunction with subsequent mining of such sites." "Increased use of diesel fuel for stacking spoil against existing highwalls will further aggravate the U.S. Petroleum energy crisis." "Increased erosion on longer graded mine spoil slopes result where complete highwall elimination is required in contour mining situations thereby increasing water particulate load."

107 2. Provisions that require operators to plug auger holes to a minimum of six feet in depth with an impervious and noncombustible material. According to the Department, the coal in the area is overlain with shales and impervious materials such as clay are difficult to obtain. Such a requirement would impose an undue hardship on smaller operators. The Tennessee law requires that auger holes be plugged (without specifying a depth) with the spoil material.

{108} 3. Provisions that prohibit the mining or augering of coal within 500 feet of abandoned underground mines. This requirement, according to the Department, would be unduly restrictive on auger mine operators. The current State law requires that mine operators maintain a 25-foot barrier between the auger mining operations and abandoned underground mines.

108 4. The Department is of the opinion that the provision requiring impoundments to be approved by the Army Corps of Engineers would create additional delays in process of getting reclamation approved. The Department feels that the final approval of any such impoundments should be left to the State enforcement agency.

108 5. The provision in the Federal proposal requiring the operator to assume the liability for vegetation for a period of five years following seeding should be amended to allow the judgment of a qualified forester or agronomist to determine when the liability of the mine operator has been fulfilled.

108 Based on the information provided by the Department, Tennessee apparently feels that the determination of when the operator has reclaimed the affected area satisfactorily should be made by the States, presumably the professional staff of the State enforcement agency. According to the statistics provided by the Department, however, the average college training of the field inspection officers is less than one semester of college. The most college training that any of its officers have had is two years, and the Department admits that none of its officers have had any professional training. The Department is suggesting, however, that the staff be responsible for the approval of impoundments that could constitute a public hazard or for the determination of full and successful compliance by the operator with the

reclamation requirements of the law.

108 Other information in the State's response to the questionnaire would indicate a flaw in the State surface mining regulations. The Department indicated that one of the provisions allowed an operator to leave as much of a highwall as had been left by operators who had previously mined the adjacent area. The Department indicated, however, that about 80% of the mining by Tennessee operators is in areas that have been mined previously and are abandoned and that 80% of the surface coal mining is conducted on slopes greater than 24 degrees or what could be presumed to be contour mining. Furthermore, approximately 37,535 acres of land were disturbed prior to the enactment of the 1967 law and 30,000 acres or about 80% of the total has not been reclaimed. In essence, the law and regulations permit operators to continue mining mountainsides adjacent to abandoned mines, which were not reclaimed at all, without eliminating any of the new highwalls that otherwise be prohibited by the Tennessee law. This type of accommodation to the industry would not be permitted by the implementation of the proposed Federal standards for surface mining.

108 It was further noted that the average amount of forfeited bond per acre ($600) was $400 less than the estimated reclamation cost which was $1 000 per acre.

{109} TEXAS

109 In comparison to other State laws on surface mining and reclamation, the law enacted by Texas would undoubtedly have to be considered to be one of the most comprehensive and most stringent. Many of the provisions relating to the reclamation standards established for the industry are either identical to or very similar to those contained in the proposed Federal legislation. Furthermore, in many of the sections where differences between the State law and the Federal proposal do occur, the State Railroad Commission has included language encouraging the modification of the State law in the event that more stringent Federal legislation is subsequently enacted.

109 According to the State's analysis, the following provisions in the Federal bill are different than those in the State's act:

109 1. Section 515(b)(2) requires the operation as a minimum to "restore the land affected to a condition at least fully capable of supporting the uses it was capable of supporting prior to any mining, or higher or better uses. . . . " Section 11 of the Act requires the operator as a minimum to "restore the land affected to the same or a substantially beneficial condition considering the present and past uses of the land. . . . "

109 2. Section 515(b)(3) requires backfilling, etc. to " . . . restore the

approximate original contour of the land. . . . " The Act in Section 11(B)(3) requires these activities "to a degree to control erosion effectively and sufficiently to sustain vegetation. . . . " Only where mandated by Federal law is "approximate original contour" required.

109 3. Section 515(b)(5) and Section 11(B)(5) are very similar except that Section 11 additionally allows mixing of strata if this can be shown to be equally suitable for revegetation requirements.

109 4. Although Section 11(B)(8)(B) of the Act requires that surface mining operations be conducted so as "to prevent unreasonable additional contributions of suspended solids to stream flow or runoff . . . ", the requirements is very similar to Section 515(b)(10)(B) which states it in terms of " . . . to prevent . . . to the extent possible . . . additional contributions."

109 5. Regarding the construction, maintenance, and post-mining conditions of access roads, Section 515(b)(17) talks in terms of "control or prevent erosion and siltation", while Section 11(B)(15) requires the operator to "minimize erosion or siltation."

109 6. Section 515(b)(17) requires the operator to assume responsibility for successful vegetation for 5 full years after the last year of augmented seeding, fertilizing, etc. Section 11(B)(18) requires a period of four years beyond the first year in which the vegetation has been successfully established. However, the 4-year period "can commence no later that 2 complete growing seasons after the vegetation has been successfully established as determined by the Commission."

109 7. In addition, the Act does not specifically address the standards numbered in Section 515 of H.R. 13950 as (b)(7), (b)(10)(D), (b)(10)(E), (b)(10)(F), nor (b)(13).

{110} Section 515(c) of H.R. 13950 deals with procedures for variances to the requirement of restoring to "approximate original contour." The Act does not need such a provision. In determining the degree to which highwalls, spoil piles, and banks are to be reduced, the Surface Mining and Reclamation Division considers two elements - whether erosion can be controlled effectively and sufficiently to sustain vegetation and the anticipated subsequent use of the affected land. Likewise, the Act does not have seqarate (different) standards for steep-slope mining such as set out in Section 515(d). The same standards listed in Section 11 of the Act are applied to steep-slope mining.

110 There has been no underground coal mining in Texas for the past 50 years. The Texas Legislature, therefore, did not address the surface effects of underground mining in drafting the Act as set out in Section 516 of H.R. 13950.

110 8. An analysis indicating which of the standards in Section 515 and 516 (if any) could not be complied with, because of peculiar geologic, hydrologic, or other physical conditions and why compliance is impossible indicates that for the most part, each of the points addressed in H.R. 13950 are covered in similar language in the Texas Surface Mining and Reclamation Act and those which are not covered specifically can be implied.

110 The only requirement which would be difficult for the mining operations to comply with in Texas would be the Section 515(b)(10)(D) which would be to restore the recharge capacity of the mined area to approximate premining conditions. Due to the unconsolidated nature of the overburden, this requirement might not be a problem, however, since mixing of the strata has appeared to be an acceptable method of surface mining within certain counties of Texas, it may be difficult to restore this recharge capacity.

110 There have not been any areas designated as being unsuitable for coal surface mining to date. The procedure for designating lands as unsuitable is described in Section 13 of the Act.

110 The regulatory agency for the coal surface mining industry in the State of Texas has had a tremendous advantage in that the surface mining in the State is relatively new and is not as well established as the industries in States such as Kentucky and West Virginia. Therefore, the Texas Railroad Commission has not had to "react" to the industry as much and has had an opportunity to lay the groundwork in an unhampered fashion.

110 The law contains comprehensive permitting and licensing procedures with adequate opportunities for public participation at hearings for permit issuance and renewal. In fact, the law extends this opportunity to present testimony at the proceedings to "any person", not just those who may be directly affected by the mining operations.

110 The complete procedure for issuing a permit under the Texas law is outlined in the fold-out table herewith.

{111} [See Illustration in Original]

111 The Texas law does not require the mandatory restoration of the original contour of mined land, but the Commission can require such action if it is deemed necessary. The definition of "approximate original contour" as contained in the law requires the elimination of all high-walls, spoil piles, and depressions with an appropriate drainage pattern but allows the finished contour to be higher or lower to accommodate any volumetric expansion of spoil materials from mining.

111 The reclamation plan which is required with the permit application must

include a description of the capability of the land prior to any mining to support a variety of uses giving consideration to spoil and foundation characteristics, topography, and vegetative cover along with an assessment of the land after mining to support its anticipated uses and a description of how the post-mining use is to be achieved through reclamation. Furthermore, a general timetable must be included in the plan which outlines the time estimated by the operator to be necessary to achieve the intended reclamation.

111 Another provision of the Texas law which is essentially identical to the Federal proposal is one requiring the mine operator to conduct his activities in a manner which maximizes the utilization and conservation of the resource being recovered so that reaffecting the land in the future through surface mining can be minimized. Topsoil from mining operations must be removed, segregated, and preserved so that it may be replaced after the completion of the mining activity. In the event that the mining covers a significant period of time, the topsoil must be protected from water and wind erosion by rapidly establishing a vegetative cover.

111 Texas law is more stringent on auger mining controls than H.R. 13950. The former requires operators to "fill" auger holes with impervious material, whereas the Federal legislation would require only that the auger holes to be plugged to a depth of six feet with the same type of material. Other requirements in the law which compare with the Federal legislation include the following:

111 1. Insure that all debris, acid-forming materials, toxic materials, or materials constituting a fire hazard are treated or disposed of in a manner designed to prevent contamination of ground or surface waters or combustion;

111 2.Insure that any explosives are used only in accordance with existing state and federal law and regulations promulgated by the Commission;

111 3. Insure that all reclamation efforts proceed as contemporaneously as practicable with the surface mining operations;

111 4. Assume responsibility for successful revegetation for a period of four years beyond the first year in which the vegetation has been successfully established as evidenced by the land being used as anticipated in the reclamation plan, provided that the four-year period of responsibility shall commence no later than two complete growing seasons after the vegetation has been successfully established as determined by the Commission;

111 5. The amount of the bond shall be determined by the Commission and shall be sufficient to assure the completion of the reclamation plan if the work had to be performed by a third party in the event of forfeiture; provided, however, that in no event shall it exceed the highest independent estimate;

{112} 6. The inspections by the Commission shall occur on an irregular basis at a frequency necessary to insure compliance with the intent and purpose of this Act and the Commission's rules and regulations for the surface mining and reclamation operations covered by each permit; occur only during normal operating hours if practicable; occur without prior notice to the permittee or his agents or employees; and include the filing of inspection reports adequate to enforce the requirements of and to carry out the terms and purposes of this Act, and the Commission shall make such reports part of the record and furnish one copy of the report to the operator.

112 UTAH

112 The Utah surface-mining law contains relatively detailed procedural rules for the filing of a mining and reclamation plan, which must be approved prior to mining, but the law contains very few, if any, minimum standards relating to the actual mining operation. The Department of Natural Resources for the State requires that mining be conducted in an environmentally sound manner and that the mine operator perform actions necessary to insure that the area will remain safe, stable, and compatible with local environmental conditions. Most of the mining standards, however, are established by the Department on a case-by-case basis. The Division of Oil, Gas, and Mining of the Department of Natural Resources reported that, generally, the State could comply with the provisions of the proposed Federal legislation.Such modification, however, would require the Department to develop more stringent mining and reclamation plans. The Department did indicate, however, that the provision within the Federal legislation requiring the restoration of the approximate original contour may pose a problem. According to the agency:

112 Coal which is surface mined from a mesa or butte would require building the landform back, following mining. Coal cannot be mined economically in this manner.

112 No lands within the State have been designated as unsuitable for surface mining of coal. Also, the Department, because of the relative youth of the reclamation program, was unable to supply figures on the amounts of lands which have been mined and later reclaimed or abandoned.

112 VERMONT

112 Although Vermont is not a coal-producing state, it does have somewhat limited provisions within its land use law which pertain to mineral development. In the absence of coal production, the Agency of Environmental Conservation for the State indicated that most of the questions contained in the survey were not relevant to the State. The section in the Land Use law which regulates mineral development is herewith included in its entirety.

112 (D) Earth Resources . A permit will be granted whenever it is demonstrated by the applicant, in addition to all other applicable criteria, that the development or subdivision of lands with high potential for extraction of mineral or earth resources, will not prevent or significantly interfere with the subsequent extraction or processing of the mineral or earth resources.

{113} (E) Extraction of Earth Resources. A permit will be granted for the extraction or processing of mineral and earth resources:

113 (i) when it is demonstrated by the applicant that, in addition to all other applicable criteria, the extraction or processing operation and the disposal of waste will not have an unduly harmful impact upon the environment or surrounding land uses and development; and

113 (ii) upon approval by the district commission or the board of a site rehabilitation plan which insures that upon completion of the extracting or processing operation the site will be left by the applicant in a condition suited for an approved alternative use or development. A permit will not be granted for the recovery or extraction of mineral or earth resources from beneath natural water bodies or impoundments within the state, except that gravel, silt and sediment may be removed pursuant to the regulations of the water resources board.

113 VIRGINIA

113 Virginia has in the past expressed concern over the enactment of a Federal surface mining law especially because many of the operators in the southwestern part of the State are small operators who may lack the financial resources necessary to prepare the detailed mining and reclamation plans that was require by the Federal proposal. Representatives of the mining industry in Virginia have testified that the provisions of the legislation requiring the restoration of the approximate original contour could have devastating economic effects on smaller operators. The first objection, however has been met in the Federal legislation with provisions that permit smaller operators to receive financial assistance in order to comply with portions of the mining and reclamation plan requirements of the Act. According to Section 507(c) -

113 (c) If the regulatory authority finds that the probable annual production of any coal surface mining operators will not exceed 250,000 tons, the determination of hydrologic consequences required by subsection (b)(11) and the statement of the result of test borings or core samplings required by subsection (b)(15) of this section shall be performed by the regulatory authority, or such qualified public or private laboratory designated by the regulatory authority and the cost of the preparation of such determination and

statement shall be assumed by the regulatory authority.

113 A modification of this provision was retained in the House bill (H.R. 2) which was introduced early in the first session of the 95th Congress.

113 At the request of the Committee, the Virginia Department of Conservation and Economic Development prepared a comparison of the provisions of the State law that related to Sections 515 and 516 of H.R. 13950.

113 ANALYSIS OF VIRGINIA'S LAW IN COMPARISON WITH SECTIONS 515 AND 516 (H.R.
13950-94TH CONGRESS)

113 Question 3. 515(b)(1) Conservation of the solid fuel being recovered: (No provisions in Virginia's Law or Rules pertaining to the above.)

113 515(b)(2) Restore the land affected for supporting equal or better use prior to mining: Section 45.1-199(e), Code of Virginia, defines reclamation as "the restoration or conversion of disturbed land to a stable condition which minimizes or prevents adverse disruption and the injurious effects thereof and presents a reasonable opportunity for further productive use."

{114} 515(b)(3) Grade in order to restore to approximate original contour: Section 45.1-203(c), Code of Virginia, states in part . . . "spoils shall be retained on the bench to the extent feasible . . . and used for backfilling to further reduce the ultimate highwall to maximum extent practicable."

114 515(b)(4) Stabilize and protect all surface areas affected to effectively control erosion, air and water pollution: Section 45.1-203(a)(b)(c)(d), Code of Virginia and Section 45.1-204 provide for operations, drainage, reclamation and spoil retention plan.

114 Sections 3-10 of Coal Surface Mining rules specify action for stabilizing and protecting land and streams from pollution and erosion.

114 515(b)(5) Remove topsoil and separate: There is no provision for top soil separation in Virginia's law; however, Section 8.05 of the Coal Surface Mining Regulations requires that all acid-producing and/or toxic material be separated and localized in the pit to be spread and covered during regrading. In most instances the amount and quality of top soil is such that separation would be of little value.

114 515(b)(6) Restore top soil or the best subsoil which has been separated and preserved: Sections 8.06 of the Coal Surface Mining Regulations provides for: "Insofar as practicable to be determined by the Division, a minimum of four (4) feet of material suitable for vegetation growth will be placed over the pit

area and over any toxic or acid-producing material previously placed in the pit.In the event there is sufficient material available, additional material suitable for vegetation growth will be placed over the pit area and above the minimum four (4) feet required."

114 515(b)(7) Protect off site areas from slides and accumulated waste: Section 8.11 of the Coal Surface Mining regulations states: "No operator shall cause or allow the accumulation of overburden, spoil, or other material outside of the permit area or place any such material in a manner that erosion or slides might cause such material to encroach upon land or waterways not covered by the permit".

114 515(b)(8) Create, only under certain conditions if authorized in Reclamation Plan, permanent impoundments: Section 9.01 in the Coal Surface Mining regulations provides: "Sediment dams or excavated sediment ponds will be installed and maintained to remove sediment from streams and drainage areas leading from the disturbed area as determined by the Division. Where feasible, such dams or ponds shall be installed prior to disturbance within the immediate watershed".

114 Section 9.08 in the Coal Surface Mining regulations states: "Plans for water impoundments shall be submitted to the Division for approval".

114 515(b)(9) Plug all auger holes to a minimum of six (6) feet with an im- See Sections 9.01, 9.02, 9.04, 9.05, 9.06, 9.07, 9.09, 9.12 in the Coal Surface Mining regulations provides for the covering of the coal seam only. Would be very difficult to find enough clay for plugging each to a minimum of 6 feet.

114 515(b)(10) Minimize disturbance to prevailing hydrologic balance at minesite: See Section 9.01, 9.02, 9.04, 9.05, 9.06, 9.07, 9.09, 9.12 in the Coal Surface Mining regulations.

114 515(b)(11) With respect to surface disposal of mine wastes. tailings, process waste: (No provisions in Virginia's Law or Rules pertaining to the above.)

114 515(b)(12) Refrain from surface mining within 500 feet from active and abandoned underground mines: (No provisions in Virginia's Law or Rules pertaining to the above.)

114 515(b)(13) Design, locate, construct, operate, maintain, enlarge, modify and remove, or abandon existing and new coal mine waste pile: (See Chapter 18, Page 209 of Mining Laws of Virginia.)

114 515(b)(14) Insure the disposal of debris, acid forming materials to prevent contamination of ground, surface water or sustained combustion: Section

8.07 in the Coal Surface Mining regulations provide: "All metal, lumber and debris shall be removed or buried".

114 515(b)(15) Insure explosives are used in accordance with state and federal law: (See Rules and Regulations issued by Virginia Department of Labor and Industry).

114 515(b)(16) Insure reclamation efforts as contemporaneously as practicable with operation: Section 8.01 of Coal Surface Mining regulations states: "Grading, backfilling and water management practices as approved in the plan shall be kept current as follows:

114 (a) Should the surface mining operation include only the strip method (not augering) the grading and backfilling will be started within sixty (60) days following removal of the mineral and under no circumstances will the grading and backfilling be more than seven hundred (700) feet from the active removal point.

115 (b) Should the surface mining operation include the strip method and augering, the augering will follow the stripping by a period not to exceed ninety (90) days from the initiation of the actual removal of the coal from any given point by stripping unless the stripping operations have created conditions in conflict with applicable State and Federal laws and regulations relating to mine safety. The grading and backfilling will be started within thirty (30) days following removal of the mineral by the augering method and under no circumstance will the grading and backfilling be more than three hundred fifty (350) feet from the active removal point.

115 515(b)(17) Insure that the construction, maintenance and post mining condition of access roads will prevent erosion, pollution of water: (See Section 7.01 through 7.08 on Page 14 and 15 of Virginia Coal Surface Mining Regulations.)

115 515(b)(18) Refrain from the construction of roads to interfere with normal flow of water: Section 7.04 of the Coal Surface Mining regulations states: "Bridges will be used for crossing streams which are too large for culverts. Crossing sites should be constructed at right angle to stream flow. Roads should climb away from stream crossings in both directions so as to prevent stream flow from coming in contact with road. Open-type culvert or ditches on both sides of the crossing sites shall divert road run-off into filter strips".

115 515(b)(19) Establish on regraded areas, permanent vegetative cover native to the area of and to be affected: (See Section 10.01 through 10.13 of the Coal Surface Mining regulations.)

115 515(b)(20) Assume the responsibility for successful re-vegetation, for a period of 5 years: Section 45.1-206(b), Code of Virginia states: "Upon completion of the coal surface mining and reclamation for which the permit was issued, the operator shall submit a completed coal surface mining and reclamation in compliance with the approved operations, drainage, and reclamation plans and requesting release of bond. Upon receipt of such report, the Director shall cause an inspection to be made of the permit site. If the Director is satisfied that the requirements of the operations, drainage and reclamation plans have been fully complied with, and all fees have been paid, he shall approve the final operation, drainage and reclamation plans report and shall order the return of the bond; provided, however, that the Director shall approve or disapprove the final report within a period not to exceed one year from the date upon which he received the final report from the operator. If the Director disapproves the final report, he shall notify the operator immediately in writing and advise him of what additional steps are deemed necessary to comply with the operations and reclamation plans.

115 515(b)(21) Meet other criteria to achieve reclamation and insure maximum recovery of mineral: (No provisions in Virginia's Law or Rules pertaining to the above.)

115 515(c)(1)(2)(3)(4)(5)(6) Each state program may permit variances for Industrial, Commercial, residential postmining use: (Virginia's law does not prohibit variances but not specific language in Virginia's parallels the provisions contained in Section 515(c).)

115 515(d)(1) through (4) Steep slope mining performance standards: (No such restrictive provisions in Virginia's Law pertaining to the above.)

115 515(e) Standards from Chief of Engineers on waste piles: (See Chapter 18, Page 209 of Mining Laws of Virginia.)

115 516 Surface effects of Underground Coal Mining: (No provisions in Virginia's laws on the reclamation of surface disturbances resulting from underground mining.)

115 Question 4:

115 Section 515(b)(3) Restore the approximate original contour: A standard requirement for return to original contour is impractical if not impossible in Virginia because of the step slopes and related operating cost considerations. In 1975 the mining operations were carried on where the average slope is 24.4 degrees.Another factor affecting the economics of strip mining in Virginia is the great extent to which deep mining has invaded the more profitable seams.

115 Section 515(c) Variances: Section 515(c) provides for variances from the

approximate original contour provision in which mountain top removal is allowed if the entire coal seam is removed and no highwalls remain. The variances, as proposed, will allow for some coal seams to be surface mined by mountain top removal. However, because many seams of coal have been mined previously by the truck mine method, these seams can only be mined economically by the contour method of mining due to the lack of a solid continuance coal resource.

{116} Section 515(b)(5) and (9) Top soil separated; Auger holes plugged: There is very little top soil that can be separated and restored in the steeper areas where contour mining is being carried out. The subsoil which consists of the A, B and C horizen (soil profile) have been suitable for growing almost any type of vegetation which is applicable to this area.

116 Concerning the auger holes, it would be very difficult to plug each auger hole to a depth of 6' with impervious clay materials as this material is not available. n1

116 The handling of the two items above under Virginia's rules have caused no problem in the past and the Division of Mined Land Reclamation feels this would be imposing unnecessary requirements.

116 n1 The Department may be confused on this point. The Federal legislation does not mandate the use of impervious clay material. It states that the operator must "plus all auger holes to a minimum of six feet in depth with an impervious and noncombustible material (such as clay) to prevent the flow of water in or out of such holes." [H.R. 13950, Sec. 515(b)(9).]

116 "It has been estimated that there are 24,000 acres of orphaned land in Virginia. Nine thousand acres have been repermitted or have reclaimed themselves leaving 15,000 acres in need of some type of reclamation. The 1972 General Assembly passed a law that funds collected from coal surface mining permits and renewals was to be used for the reclamation of the orphaned lands in Virginia. The permit fees were $12 per acre and renewal fees $6 per acre. After a year of accumulating funds, the reclamation of the orphaned lands was started and 210 acres were reclaimed at a cost of $73,630.45.

116 Then again in 1974, the General Assembly authorized the permit renewal fees to be used for the administration of the regular coal program; therefore, all the reclamation of orphaned lands was ceased and no more acres were reclaimed.

116 In 1976, the Division of Mined Land Reclamation received funds through the Tennessee Valley Authority for the reclamation of approximately 7,000 acres of orphaned lands in the next two years.

Total orphaned land acres 24,000

Repermitted or reclaimed themselves	-9,000
Acres in need of reclamation	15,000
Funded for reclamation in the next 2 years	-7,000
Acres or 33% of the orphaned land still unfunded	8,000

116 Based on the above figures provided by the Department, the average cost of reclaiming an acre of land was$3 50 per acre. If this figure is applied to the 8,000 acres still in need of reclamation, and keeping in mind the intent of the Department to use funds generated by permit fees ($1 2/acre) in order to accomplish this reclamation, Virginia would have to issue mining permits for 233,760 acres of land, an area almost ten times as great as that which was originally abandoned.The State therefore, is charging only one-tenth the amount allowed by its own estimate, to adequately reclaim the land.

116 The Department indicated that it had no programs regarding the monitoring of reclaimed areas at the present time.

116 WASHINGTON

116 Washington can not be classified as a major coal-producing State because it has only two mines. Based on the information provided and the fact that the State has two field inspection officers, the enforcement of either the State's surface mining laws or Federal legislation, if enacted, is not expected to present any significant problems.

116 The following is a comparison prepared by the regulatory agency of the State's existing surface mining law with Sections 515 and 516 of H.R. 13950.

{117} H.R. 13950

117 ENVIRONMENTAL PROTECTION PERFORMANCE STANDARDS

117 SEC. 515. (a) Any permit issued under any approved State or Federal program pursuant to this Act to conduct surface coal mining operations shall require that such surface coal mining operations will meet all applicable performance standards of this Act, and such other requirements as the regulatory authority shall promulgate.

117 (b) General performance standards shall be applicable to all surface coal mining and reclamation operations and shall require the operation as a minimum to -

117 (1) conduct surface coal mining operations so as to maximize the utilization and conservation of the solid fuel resource being recovered so that

reaffecting the land in the future through surface coal mining can be minimized;

117 (2) restore the land affected to a condition at least fully capable of supporting the uses which it was capable of supporting prior to any mining, or higher or better uses of which there is a reasonable likelihood, so long as such use or uses do not present any actual or probable hazard to public health or safety or pose any actual or probable threat of water diminution or pollution, and the permit applicants declared proposed land use following reclamation is not deemed to be impractical or unreasonable, inconsistent with applicable land use policies and plans, involves unreasonable delay in implementation, or is violative of Federal, State, or local law;

117 (3) with respect to all surface coal mining operations backfill, compact (where advisable to insure stability or to prevent leaching of toxic materials), and grade in order to restore the approximate original contour or the land with all highwalls, spoil piles, and depressions eliminated (unless small depressions are needed in order to retain moisture to assist revegetation or as otherwise authorized pursuant to this Act): Provided, however, That in surface coal mining which is carried out at the same location over a substantial period of time where the operation transacts the coal deposit, and the thickness of the coal deposits relative to the volume of the overburden is large and where the operator demonstrates that the overburden and other spoil and waste materials at a particular point in the permit area or otherwise available from the entire permit area is insufficient, giving due consideration to volumetric expansion, to restore the approximate original contour, the operator, at a minimum, shall backfill, grade, and compact (where advisable) using all available overburden and other spoil and waste materials to attain the lowest practicable grade but not more than the angle of repose, to provide adequate drainage and to cover all acid-forming and other toxic materials, in order to achieve an ecologically sound land use compatible with the surrounding region: And provided further, That in surface coal mining where the volume of overburden is large relative to the thickness of the coal deposit and where the operator demonstrates that due to volumetric expansion the amount of overburden and other spoil and waste materials removed in the course of the mining operation is more than sufficient to restore the approximate original contour, the operator shall after restoring the approximate contour, backfill, grade, and compact where advisable) the excess overburden and other spoil and waste materials to attain the lowest grade but not more than the angle of repose, and to cover all acid-forming and other toxic materials, in order to achieve an ecologically sound land use compatible with the surrounding region that such overburden or spoil shall be shaped and graded in such a way as to prevent slides, erosion, and water pollution and is revegetated in accordance with the requirements of this Act;

{118} (4) stabilize and protect all surface areas including spoil piles affected by the surface coal mining and reclamation operation to effectively control erosion and attendant air and water pollution:

118 (5) remove the topsoil from the land in a separate layer, replace it on the backfill area, or, if not utilized immediately, segregate it in a separate pile from other spoil and, when the topsoil is not replaced on a backfill area within a time short enough to avoid deterioration of the topsoil, maintain a successful cover by quick growing plant or other means thereafter so that the topsoil is preserved from wind and water erosion, remains free of any contamination by other acid or toxic material, and is in a usable condition for sustaining vegetation when restored during reclamation, except if topsoil is of insufficient quantity or of poor quality for sustaining vegetation, or if other strata can be shown to be more suitable for vegetation requirements, then the operator shall remove, segregate, and preserve in a like manner such other strata which is best able to support vegetation;

{119} (6) restore the topsoil or the best available subsoil which has been segregated and preserved;

119 (7) protect offsite areas from slides or damage occurring during the surface coal mining and reclamation operations, and not deposit material or locate any part of the operations or waste accumulations outside the permit area;

119 (8) create, if authorized in the approved mining and reclamation plan and permit, permanent impoundments of water on mining sites as part of reclamation activities only when it is adequately demonstrated that -

119 (A) the size of the impoundment is adequate for its intended purposes;

119 (B) the impoundment dam construction will be so designed as to achieve necessary stability with an adequate margin of safety compatible with that of structures constructed under Public Law 83-566 (16 U.S.C. 1006);

119 (C) the quality of impounded water will be suitable on a permanent basis for its intended use and that discharges from the impoundment will not degrade the water quality in the receiving stream;

119 (D) the level of water will be reasonably stable;

119 (E) final grading will provide adequate safety and access for proposed water users; and

119 (F) such water impoundments will not result in the diminution of the quality or quantity of water utilized by adjacent or surrounding landowners for agricultural, industrial, recreational, or domestic uses;

{120} (9) plug all auger holes to a minimum of six feet in depth with an

impervious and noncombustible material (such as clay) to prevent the flow of water in or out of such holes.

120 (10) minimize the disturbances to the prevailing hydrologic balance at the minesite and in associated offsite areas and to the quality and quantity of water in surface and ground water systems both during and after surface coal mining operations and during reclamation by -

120 (A) avoiding acid or other toxic mine drainage by such measures as, but not limited to -

120 (i) preventing or removing water from contact with toxic producing deposits;

120 (ii) treating drainage to reduce toxic content which adversely affects downstream water upon being released to water courses;

120 (iii) casing, sealing, or otherwise managing boreholes, shafts, and wells and keep acid or other toxic drainage from entering ground and surface waters;

120 (B) conducting surface coal mining operations so as to prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow or runoff outside the permit area above natural levels under seasonal flow conditions as measured prior to any mining, and avoiding channel deepening or enlargement in operations requiring the discharge of water from mines;

120 (C) removing temporary or large siltation structures from drainways after disturbed areas are revegetated and stabilized;

120 (D) restoring recharge capacity of the mined area to approximate premining conditions;

120 (E) replacing the water supply of an owner of interest in real property who obtains all or part of his supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source where such supply has been affected by contamination, diminution, or interruption proximately resulting from mining.

{121} (F) preserving throughout the mining and reclamation process the essential hydrologic functions of alluvial valley floors in the arid and semiarid areas of the country; and

121 (G) such other actions as the regulatory authority may prescribe;

121 (11) with respect to surface disposal of mine wastes, tailings, coal processing wastes, and other wastes in areas other than the mine working or excavations, stabilize all waste piles in designated areas through construction in compacted layers including the use of incombustible and impervious materials, if necessary, and assure the final contour of the waste pile will be compatible with natural surroundings and that the site can and will be stabilized and revegetated according to the provisions of this Act;

121 (12) refrain from surface coal mining within five hundred feet from active and abandoned underground mines in order to prevent breakthroughs and to protect health or safety of miners: Provided, That the regulatory authority shall permit an operator to mine closer to an abandoned underground mine: Provided , That this does not create hazards to the health and safety of miners; or shall permit an operator to mine near, through, or partially through an abandoned underground mine working where such mining through will achieve improved resource recovery, abatement of water pollution or elimination of public hazards and such mining shall be consistent with the provisions of the Act;

121 (13) design, locate, construct, operate, maintain, enlarge, modify, and remove, or abandon, in accordance with the standards and criteria developed pursuant to subsection (e) of this section, all existing and new coal mine piles consisting of mine wastes, tailings, coal processing wastes, or other liquid and solid wastes and used either temporarily or permanently as dams or embankments;

{122} (14) insure that all debris, acid forming mateials, toxic materials, or materials constituting a fire hazard are treated or disposed of in a manner designed to prevent contamination of ground or surface waters or sustained combustion;

122 (15) insure the explosives are used only in accordance with existing State and Federal law and the regulations promulgated by the regulatory authority, which shall include provisions to -

122 (A) provide adequate advance written notice by publication and/or posting of the planned blasting schedule to local governments and to residents who might be affected by the use of such explosives and maintain for a period of at least two years a log of the magnitudes and times of blasts; and

122 (B) limit the type of explosives and detonating equipment, the size, the timing and frequency of blasts based upon the physical conditions of the site so as to prevent (i) injury to persons, (ii) damage to public and private property outside the permit area, (iii) adverse impacts on any underground mine, and (iv) change in the course, channel, or availability of ground or surface water outside the permit area;

122 (16) insure that all reclamation efforts proceed in an environmentally sound manner and as contemporaneously as practicable with the surface coal mining operations;

122 (17) insure that the construction, maintenance, and postmining conditions of access roads into and across the site of operations will control or prevent erosion and siltation, pollution of water, damage to fish or wildlife or their habitat, or public or private property: Provided, That the regulatory authority may permit the retention after mining of certain access roads where consistent with State and local land use plans and programs and where necessary may permit a limited exception to the restoration of approximately original contour for that purpose;

{123} (18) refrain from the construction of roads or other access ways up a stream bed or drainage channel or in such proximity to each channel so as to seriously alter the normal flow of water;

123 (19) establish on the regraded areas, and all other lands affected, a diverse, effective, and permanent vegetative cover native to the area of land to be affected and capable of self-regeneration and plant succession at least equal in extent of cover to the natural vegetation of the area; except, that introduced species may be used in the revegetation process where desirable and necessary to achieve the approved postmining land use plan;

123 (20) assume the responsibility for successful revegetation, as required by paragraph (19) above, for a period of five full years after the last year of augmented seeding, fertilizing, irrigation, or other work in order to assure compliance with paragraph (19) above, except in those areas or regions of the country where the annual average precipitation is twenty-six inches or less, then the operator's assumption of responsibility and liability will extend for a period of ten full years after the last year of augmented seeding, fertilizing, irrigation, or other work: Provided, That when the regulatory authority approves a long-term intensive argricultural postmining land use, the applicable five- or tenyear period of responsibility for revegetation shall commence at the date of initial planting for such long-term intensive agricultural postmining land use: Provided further, That when the regulatory authority issues a written finding approving a long-term, intensive, agricultural postmining land use as part of the mining and reclamation plan, the authority may grant exception to the provisions of paragraph (19) above; and

123 (21) meet such other criteria as are necessary to achieve reclamation in accordance with the purposes of this Act, taking into consideration the physical, climatological, and other characteristics of the site, and to insure the maximum practicable recovery of the mineral resources.

{124} (c)(1) Each State program may and each Federal program shall include

procedures pursuant to which the regulatory authority may permit variances for the purposes set forth in paragraph (3) of this subsection.

124 (2) Where an applicant meets the requirements of paragraphs (3) and (4) of this subsection a variance from the requirement to restore to approximate original contour set forth in subsection 515(b)(3) or 515(d) of this section may be granted for the surface mining of coal where the mining operation will remove an entire coal seam or seams running through the upper fraction of a mountain, ridge, or hill (except as provided in subsection (c)(4)(A) hereof) by removing all of the overburden and creating a level plateau of a gently rolling contour with no highwalls remaining, and capable of supporting postmining uses in accord with the requirements of this subsection.

124 (3) In cases where an industrial, commercial (including commercial agricultural), residential or public facility (including recreation facilities) development is proposed for the postmining use of the affected land, the regulatory authority may grant a variance for a surface mining operation of the nature described in subsection (c)(2) where -

124 (A) after consultation with the appropriate land use planning agencies, if any, the proposed development is deemed to constitute an equal or better economic or public use of the affected land, as compared with the premining use;

124 (B) the equal or better economic or public use can be obtained only if one or more exceptions to the requirements of section 515(b)(3) granted;

124 (C) the applicant presents specific plans for the proposed postmining land use and appropriate assurances that such use will be -

124 (i) compatible with adjacent land uses;

124 (ii) obtainable according to data regarding expected need and market;

{125} (iii) assured of investment in necessary public facilities;

125 (iv) supported by commitments from public agencies where appropriate;

125 (v) practicable with respect to private financial capability for completion of the proposed development;

125 (vi) planned pursuant to a schedule attached to the reclamation plan so as to integrate the mining operation and reclamation with the postmining land use; and

125 (vii) designed by a registered engineer in conformance with professional standards established to assure the stability, drainage, and configuration

necessary for the intended use of the site;

125 (D) the proposed use would be consistent with adjacent land uses, and existing State and local land use plans and programs;

125 (E) the regulatory authority provides the governing body of the unit of general-purpose government in which the land is located and any State or Federal agency which the regulatory agency, in its discretion, determines to have an interest in the proposed use, an opportunity of not more than sixty days to review and comment on the proposed use;

125 (F) a public hearing is held in the locality of the proposed surface coal mining operation prior to the grant of any permit including a variance; and

125 (G) all other requirements of this Act will be met.

125 (4) In granting any variance pursuant to this subsection the regulatory authority shall require that -

125 (A) the toe of the lowest coal seam and the overburden associated with it are retained in place as a barrier to slides and erosion;

125 (B) the reclaimed area is stable;

125 (C) the resulting plateau or rolling contour drains inward from the outslopes except at specified points;

125 (D) no damage will be done to natural watercourses;

125 (E) all other requirements of this Act will be met.

125 (5) The regulatory authority shall promulgate specific regulations to govern the granting of variances in accord with the provisions of this subsection, and may impose such additional requirements as he deems to be necessary.

{126} (6) All exceptions granted under the provisions of this subsection shall be reviewed not more than three years from the date of issuance of the permit, unless the applicant affirmatively demonstrates that the proposed development is proceeding in accordance with the terms of the approved schedule and reclamation plan.

126 (d) The following performance standards shall be applicable to steep-slope surface coal mining and shall be in those general performance standards required by this section: Provided, however, That the provisions of this subsection (d) shall not apply to those situations in which an operator is

mining on flat or gently rolling terrain, on which an occasional steep slope is encountered through which the mining operation is to proceed, leaving a plain or predominantly flat area:

126 (1) Insure that when performing surface coal mining on steep slopes, no debris, abandoned or disabled equipment, spoil material, or waste mineral matter be placed on the downslope below the bench or mining cut, except that where necessary soil or spoil material from the initial block or short linear cut of earth necessary to obtain initial access to the coal seam in a new surface coal mining operation can be placed on a limited and specified area of the downslope below the initial cut if the permittee demonstrates that such soil or spoil material will not slide and that the other requirements of this subsection can still be met: Provided, That spoil material in excess of that required for the reconstruction of the approximate original contour under the provisions of paragraph 515(b)(3) or 515(d)(2) or excess spoil from a surface coal mining operation granted a variance under subsection 515(c) may be permanently stored at such offsite spoil storage areas as the regulatory authority shall designate and for the purposes of this Act such areas shall be deemed in all respects to be part of the lands affected by surface coal mining operations. Such offsite spoil storage areas shall be designed by a registered engineer in conformance with professional standards established to assure the stability, drainage, and configuration necessary for the intended use of the site.

{127} (2) Complete backfilling with spoil material shall be required to cover completely the highway and return the site to the approximate original contour, which material will maintain stability

127 (3) The operator may not disturb land above the top of th highall unless the regulatory authority finds that such disturbance will facilitate compliance with the environmental protection standards of this section: Provided, however, That the land disturbed above the highwall shall be limited to the amount necessary to facilitate said compliance.

127 (4) For the purposes of this section, the term "steep slope" is any slope above twenty degrees or such lesser slope as may be defined by the regulatory authority after consideration of soil, climate, and other characteristics of a region or State.

127 (e) The Secretary, with the written concurrence of the Chief of Engineers, shall establish within one hundred and thirty-five days from the date of enactment, standards and criteria regulating the design, location, construction, operation, maintenance, enlargement, modification, removal, and abandonment of new and existing coal mine waste piles referred to in section 515(b)(13) and section 516((b)(5). Such standards and criteria shall conform to the standards and criteria used by the Chief of Engineers to insure that flood control structures are safe and effectively perform their intended function. In

addition to engineering and other technical specifications the standards and criteria developed pursuant to this subsection must include provisions for review and approval of plans and specifications prior to construction, enlargement, modification, removal, or abandonment; performance of periodic inspections during construction; issuance of certificates of approval upon completion of construction; performance of periodic safety inspections; and issuance of notices for required remedial or maintenance work.

{117} Washington Law

117 No provision in state law.

117 Proposed subsequent use must be compatible with the proposed subsequent use of the land while complying with law standards and permit provisions. This is covered in general by state law and specifically on a site-by-site basis.

{118} Covered by state law.

{119} The saving, stockpiling and re-use of top soil, although not specifically required by state law, is being done and can be required on a site-specific basis. Vegetative stabilization of stockpiles is being done. Testing has revealed that in some cases the substrata is more suitable for revegetation than original top soil.

119 See 515(b)(5).

119 State law provides for protection of adjacent resources. Spoil material to date is being placed within the permit areas.

119 Permanent impoundments are subject to the state Surface-Mined Land Reclamation Law and other state laws. Water quality is subject to NPDES standards administered by the state. Entry of slopes into impounded waters cannot exceed 3:1 by policy.

{120} Auger mining is not being utilized in the state. It is doubtful if auger mining would be used in the state due to local geology (steep-pitching beds).

120 State law requires controls of contaminates and the covering of acid-forming materials with a minimum of two feet of clean fill.

120 Not specifically covered by state Surface-Mined Land Reclamation Law. However, water pollution laws and NPDES standards apply.

120 Not specifically covered by state law.

120 Do.

120 Not specifically covered by state law, except as provided for by protection of adjacent resources.

{121} Do.

121 Additional specifications can be set by the state in the permit.

121 Not specifically covered by state law.

121 Do.

121 Not specifically covered by state law, however the capability exists for conditions being established on a site-specific basis.

{122} Covered by other state laws.

122 Do.

122 Do.

122 Not specifically covered by state law, except as provided on a sitespecific basis.

{123} Covered by a number of state laws.

123 Revegetation required - must be compatible with proposed subsequent use of the property.

123 State law requires completion of reclamation within two years of abandonment or cessation of mining. The release of the bond is contingent on satisfactory revegetation.

123 Reclamation must comply with state law. No provision for maximum recovery of mineral resources.

{124} Variances permitted. Modification of reclamation plans may be approved subject to specified conditions.

124 Final land configuration must be compatible with proposed subsequent use.

124 Proposed subsequent use after reclamation must be legal with local zoning requirements.

124 Exceptions not specifically provided for by state law.

124 Reclamation must be compatible with proposed subsequent use. No provisions for attainability or commitment of funds - private or public. Reclamation schedule is required where practical. The state does not currently require design by registered engineer. Stability, drainage, etc. are subject to review by several state agencies.

{125} State law and regulations cover this tiem.

125 Local regulatory authorities must indicate approval of proposed operation prior to issuance of permit by the state.

125 Requirement for public hearing based on scope of operation, location with respect to sensitive areas, and an indication of public concern.

125 Covered by state laws as indicated above.

125 Not specifically provided for by state law, Site-specific conditions can be required.

125 See A above.

125 Not specifically covered by state laws.

125 Covered by other state laws.

125 See above.

125 Covered by state law.

{126} Conditions of permit subject to annual review.

126 Not specifically covered by state law. Site-specific conditions can be assessed.

{127} Flood control structures are subject to review by other agencies.

{128} According to the Department, the State does not presently have regulations covering the surface effects of underground mining, although some aspects of potential problems are covered by other State laws administered by other State agencies. Washington also experiences no geologic, hydrologic, or climatic conditions which would make it impossible to comply with the provisions of Section 515 and 516 of the Federal surface mining legislation.

RESULTS OF THE SURVEY

128 examination of the West Virginia surface-mining law along with the information provided by the Department of Natural Resources for the State produced the following observations. First, the proposed Federal legislation differs from the State law in at least two respects: The State law allows spoil materials to be placed on the downslope in contour mining operations and it does not require operators to eliminate the high-wall during reclamation. According to the law, the operator is prohibited from placing materials outside of the bench only after the first cut is made. Only on slopes greater than 33 degrees is the operator required to retain all of the fill material on the bench. Regarding the highwalls, the operator is required to backfill the bench with enough materials to cover the coal seam with at least four feet of material and/or backfill sufficiently to eliminate a remaining highwall greater than 30 feet in vertical rise from the surface of the regraded bench. The proposed Federal law, in requiring restoration of the approximate original contour, would require the elimination of the highwall. Furthermore, the law would prohibit the placing of any soil materials on the downslope of the contour-mining operation on slopes greater than 20 degrees, with the exception of the first cut.

128 Instead of preparing a detailed comparison of the existing State law with the Federal legislation, the Department of Natural Resources in the State listed the provisions of the H.R. 13950 with which it would be most difficult to comply.

128 Pointing out these differences does not necessarily imply that the conditions cannot be instituted under our existing program or a revised program. It does, however, illustrate that there are more similarities than differences. This explanation should not, however, be interpreted as an agreement with the proposed Federal Legislation.

128 Section 515:

128 (3) Does not provide for a highwall in the event of a recut operation

128 (12) 500' from underground mine: this is difficult to interpret (horizontalvertical?). There are no provisions for such limitation under the existing Act. Why prohibit and then provide for?

128 (13 and 14) the regulation of mine refuse pile development is not a current responsibility of the Division of Reclamation since it is not included in Chapter 20, Article 6 of the Code of West Virginia. It seems this responsibility would be better addressed by a separate agency with a separate statute, regulations, and program.

128 (20) The West Virginia Act requires the vegetation to be maintained or at least two (2) full growing seasons. However, with concurrent revegetation practices, as illustrated by mining techniques in our state, the actual time span may be five years or more.

{129} (21) Variance for mountaintop removal: West Virginia pioneered and found this mining method to be a beneficial alternative to conventional methods of contour and area surface mining. Its employment should not be penalized through such complicated procedures as set forth in these sub-sections. Also, the comment period for governmental units is much too long when one considers the timely urgency of coal operations.

129 The Department also reported that the State Surface Mining Act did not specifically contain provisions for the regulation of the surface effects of underground mining, but that standards for this type of operation were set forth in the West Virginia Deep Mining Act and amendments which were effective July 1, 1976. The respondents also indicated that -

129 Generally, the Division of Reclamation feels that West Virginia could comply with all provisions of the proposed Federal Legislation. This confidence should not in any manner be construed as an unqualified agreement with the proposed legislation, since we do not feel that many of the provisions are practical or necessary.

129 Although the West Virginia legislature, through the surface mining law, indicated that it had found that certain lands in the State were unsuitable for surface coal mining, the Department stated in its response that no such list of areas had yet been compiled. According to the agency, each proposed mining operation was judged on its own merits.

129 The greatest concern about surface mining in West Virginia does not concern the structure of the law (with the two exceptions listed above) as much as the adequacy of its enforcement. Included in the materials from the Department of Natural Resources was a copy of the latest status report covering the period from July 1, 1967 to December 10, 1976. The report contains a list of the violations of the surface mining law which totals 229 violations during the period. Of the total violations, 62 were classified as placing materials outside the permitted area. According to the West Virginia law,

129 No operator shall throw, dump or pile, or permit the throwing, dumping, piling or otherwise placing of any (1) overburden, (2) stones, (3) rocks, (4) coal, (5) particles of coal, (6) earth, (7) soil, (8) dirt, (9) debris, (10) trees, (11) wood, (12) logs or (13) other materials or substances of any kind or nature beyond or outside the area of land which is under permit and for which bond has been posted; nor shall any operator place any of the foregoing listed

materials in such a way that normal erosion or slides brought about by natural physical causes will permit the same to go beyond or outsid the area of land which is under permit and for which bond has been posted. (1967, c. 145; 1971, c. 112.)

129 This type of violation must be classified as willful rather than innocent. The list also included 18 counts of either prospecting or surface mining without a permit. Some of the companies cited for violating the surface mining law had as many as seven citations and in several cases, the same company was cited for more than one count of the same infraction such as mining without a permit or placing materials outside the permitted area. Because of the inspection pressures that result from a heavy workload and too few field inspectors (each inspector is responsible for an average of 17.5 mines and by statute, must inspect each mine at least once every two weeks) and with some of the inspections being conducted from helicopters, it is likely that the violations which are detected are only the most obvious ones.

{130} West Virginia, along with some of the other Appalachian states, has emphasized to the Congress on several occasions that level land in these areas is at a premium and that which results from contourmining and mountaintop removal activities can be used more beneficially as a level bench than it could if the original contour were restored. In a report entitled Productive Aspects of Reclaimed Surface Mined Lands, which presented to the 3rd Conference on Mine Productivity, Pennsylvania State University, April 6, 1976, Mr. Benjamin C. Greene listed some of the land-use activities that had taken place in West Virginia. Included in the list were residential development, schools, industrial parks, and mobile home courts. Of the 87 projects listed, 13 were sanitary landfills and two were planned as disposal of powerplant flyash.

130 Water pollution problems which have developed in the Midwest because of the leaching effects of precipitation on some sanitary landfill areas could likewise become a problem with these projects.

130 Pollutants in the waste or flyash could be leached and carried laterally along the pre-existing mine bench where the leachate would later enter the surface drainage system or an aquifer outside the affected area.

130 WISCONSIN

130 In response to the Committee's questionnaire, the Wisconsin Department of Natural Resources provided the following response:

130 STATE OF WISCONSIN, DEPARTMENT OF NATURAL RESOURCES, Madison, Wis.,
November 15, 1976.

130 Mr. D. MICHAEL HARVEY, Deputy Chief Counsel, Senate Interior Committee, Dirksen Office Building, Washington, D.C.

130 DEAR Mr. HARVEY: As per our telephone conversation of November 12, 1976, I am submitting this brief letter in response to Senator Metcalf's questionnaire on surface coal mine reclamation.

130 Wisconsin has no coal deposits and therefore no coal mine reclamation laws.Our state's reclamation laws relate to metallic mining only.

130 I wish you well on your efforts to provide this nation with a comprehensive coal surface mine reclamation program.

130 Sincerly,

130 DAVID W. SAUTEBIN, Environmental Specialist, Mine Reclamation Section.Mine Reclamation Section.

ATTACHMENTS

151 ATTACHMENT E -STATUS REPORT OF MINING AND RECLAMATION IN WEST VIRGINIA

STATE OF WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES, DIVISION OF RECLAMATION, STATUS REPORT - JULY 1, 1967-DECEMBER 10, 1976

Prospecting permits:

January 1, 1975-December 31, 1975, permits	209
Acres bonded	2,755.49
Calculated total - performance bond	$1,377,745.00
January 1, 1976-December 10, 1976 - permits	154
Acres bonded	2,150.39
Calculated total - performance bond	$1,075,195.00
Total permits to date	1,269
Total acres bonded	17,390.43
Performance bond	$6,946,274.50

Surface mining permits:

January 1, 1975-December 31, 1975 - permits	272
Acres	16,965.50
Calculated total - special reclamation tax	$1,017,930.00
Calculated total - performance bond	$14,478,142.50
January 1, 1976-December 10, 1976 - permits	269
Acres	21,553.25

Calculated total	$1,293,195.00
Calculated total - performance bond	$27,055,700.00
Total permits to date	3,072
Total acres bonded	197,631.58
Special reclamation tax	$9,237,621.10
Performance bond	$122,118,479.50
Quarry Permits:1971 Act (January 1,1971-December 10,1976):	
Permits	80
Acres (included in surface mining permit acreage)	5,754.13
Converted permits - 1971 Act:	
Permits	38
Acres	5,545.73
Bond forfeitures:	
July 1, 1961 - December 10, 1976 -	
Permits revoked	559
Bonds forfeited	$1,578,746.30

*2*Blasting assessments

United Pocahontas Coal Co	$500
Jr. Pocahontas Coal Co	$500
Pocahontas Fuel Co	$500
Peaker Run Coal Co	$500
Perry & Hylton, Inc	$500
McDowell Pocahontas Coal Co	$500
Imperial Smokeless Coal Co	$500
Meadows Stone and Paving Co	$500
Jr. Pocahontas Coal Co	$500
Jr. Pocahontas Coal Co	$1,000
Mynu Coals, Inc	$5 00
Laxare, Inc	$500
Valley Quarries	$500
Indian Coal Land Co	$500
Aurora Stone Co	$500
West Virginia Coals, Inc	$500
KWD Construction Co	$500
High Spur Coal Co	$500
H. C. Gregoire, Inc	$500
Pratt Mining Co	$500
Southeastern Construction Corp	$500
Sycamore Coal Co	$5 00
Dallas Coal Co	$500
Cannon Coal Co	$500
Energy Producers	$500
Eagle Coal & Dock	$500
Lang Brothers, Inc	$500

Galloway Company, Inc	$500
West Virginia Fuels, Inc	$500
Dallas Coal Co	$500
Cedar Coal Co	$500
W.D. Development Co	$500
Sterling Smokeless Coal Co	$500
Carbon Fuel Co	$500
Garbart Coal Company	$1,000
Hawley Coal Mining Corp	$500

Special reclamation by year

1964	25.30
1965	786.60
1966	2,753,57
1967	2,552.68
1968	1,140.98
1969	3,874.15
1970	1,015.57
1971	2,659,76
1972	3,421,54
1973	4,044.54
1974	1,941.60
1975	928.10
1976	882.40

ALL RECLAMATION BY YEAR

	SCD	Operator	Special reclamation and bond forfeiture	Total
1961	878.00			878.00
1962	2,471.08	600.00		3,071.08
1963	2,574.05	460.00		3,034.05
1964	2,373.70	605.00	25.30	3,004.00
1965	3,668.10	901.00	786.60	5,335.70
1966	3,213.20	690.50	2,753.57	6,657.20
1967	4,100.36	740.00	2,552.68	7,303.04
1968	8,956.37	9,054.86	1,199.87	19,918.00
1969	8,253.11	4,463.41	4,400.88	17,117.40
1970	5,355 .88	5,985.72	1,903.87	13,245.47
1971	5,352.92	12,321.01	2,695.76	20,369.69
1972	3,665.15	20,052.50	3,604.87	27,332.52

19 73	1,239.76	19,982.47	4,110.28	25,332.51
1974	1,116.33	17,387.33	2,114.13	20,617.79
1975	664.05	13,895.16	981.00	15,540.21
1976	1,129.80	15,919.50	894.40	17,943.70

152 Prosecutions. - 1967, 5; 1968, 7; 1969, 6; 1970, 24; 1971, 125; 1972, 318; 1973, 245; 1974, 242; and 1975, 327.

152 January 1, 1976 to March 31, 1976

152 1. Eagle Coal & Dock Co., Discharged water over spoil slope without adequate structure.

152 2. Sims Mountain Coal Co., Placed materials beyond land which is under permit.

152 3. Carbon Fuel Co., Discharged water over spoil slope without adequate structure.

152 4. Carbon Fuel Co., Placed materials beyond land which is under permit.

152 5. Scholl & Wilcer, Failed to install a drainage system.

152 6. CRP Excavating, Failed to submit final maps within 60 days after compleltion of mining.

152 7. High Spur Coal Co., Failed to localize all acid producing materials.

152 8. Triple J Coal Company, Surface mining without a permit.

152 9. Pratt Mining, Placed materials beyond land which is under permit.

152 10. Masteller Coal Co., Failed to properly maintain approved drainage system

152 11. Sangamore Coal Co., Removed all backfilling equipment before completion of mining.

152 12. Douglas Coal Co., Failed to properly maintain approved drainage system.

152 13. Phillips Run Coal Co., Failed to construct drainage system in accordance with approved pre-plan.

152 14. Capellari, Inc., Failed to remove all trees and brush from upper one-half of fill section prior to excavation.

152 15. Eagle Ridge Coal Co., Failed to properly construct approved drainage system.

152 16. Princess Cindy Coal Co., Discharged water over spoil slope without adequate structure.

152 17. Sims Mountain Coal Co., Began surface mining before completion of drainage system.

152 18. Indian Coal Land Co., Failed to impound, drain or treat runoff water.

152 19. Richard A. Stutler, Placed materials beyond land which is under permit.

152 20. Allegheny Mining, Discharged water over spoil slope without adequate structure.

153 21. Cannon Coal Co., Placed materials beyond land which is under permit.

153 22. Ranger Fuel Corp., Placed materials beyond land which is under permit.

153 23. Ranger Fuel Corp., Placed materials beyond land which is under permit.

153 24. Leckie Smokeless Coal Co., Discharged water with pH below 5.5.

153 25. Energy Development Corp., Failed to properly construct or maintain haulageway.

153 26. Energy Development Corp., Failed to properly construct or maintain haulageway.

153 27. Peter White Coal Mining Corp., Failed to keep operation current.

153 28. Peter White Coal Mining Corp., Failed to keep operation current.

153 29. Peter White Coal Mining Corp., Failed to keep operation current.

153 30. McNamee Resources, Inc., Removed equipment before completion of backfilling and grading.

153 31. Allegheny Mining, Discharged water below pH of 5.5 from permit

area.

153 32. Princess Susan Coal Co., Removed equipment before completion of backfilling and grading.

153 33. Rockville Mining, Detonated an explosive charge after sunset.

153 34.W-P Coal Co., Placed materials beyond land which is under permit.

153 35. W-P Coal Co., Failed to properly construct drainage system.

153 36. Peter White Coal Mining Corp., Allowed on-going surface mining operations to cause hazards to life and property.

153 37. Peter White Coal Mining Corp., Failed to keep operation current.

153 38. Peter White Coal Mining Corp., Failed to localize or separate all acid-producing or toxic materials.

153 39.C. Dale Amburgey, Surface mining without a permit.

153 40. Cheyenne Sales Co., Removed in excess of authorized tonnage during prospecting operations.

153 41. Majestic Mining, Failed to impound all runoff water so as to reduce stream pollution.

153 Prosecution . - 1967, 5; 1968, 7; 1969, 6; 1970, 24; 1971, 125; 1972, 318; 1973, 245; 1974, 242; and 1975, 327.

153 April 1, 1976 to June 30, 1976

153 42. Solomon & Teslovich, allowed ongoing surface mining operations to cause hazards to life & property.

153 43. Cherry River Coal & Coke, failed to follow approved pre-plan.

153 44. Cherry River Coal & Coke, failed to remove trees and brush before using excavating equipment.

153 45. Cherry River Coal & Coke, failed to properly maintain approved drainage system.

153 46. Sims Mountain Coal Co., placed materials beyond land which is under permit. 47. Eagle Ridge Coal Company, placed materials beyond land which is under permit.

153 48. Carbon Fuel Company, failed to immediately seal or report to Director any breakthrough.

153 49. Carbon Fuel Company, surface mining without a permit.

153 50. Carbon Fuel Company, placed materials beyond land which is under permit.

153 51. Hawley Coal Mining Corporation, placed materials beyond land which is under permit.

153 52. Hawley Coal Mining Corporation, placed materials beyond land which is under permit.

153 53. Peter White Coal Mining Corp., placed materials beyond land which is under permit.

153 54. McNamee Resources, placed materials beyond land which is under permit.

153 55. Grafton Coal Company, engaged in surface mining within 100' of public road.

153 56. Petitto Brothers, failure to maintain approved drainage system.

153 57. Island Creek Coal Company, placed materials beyond land which is under permit.

153 58. Raleigh Commercial Development, surface mining without a permit.

153 59. Pratt Mining, placed materials beyond land which is under permit.

153 60. Energy Mining Company, failed to properly construct drainage system.

153 61. Energy Mining Company, removed equipment before completion of backfilling and grading.

153 62. Lynn Land Company, placed materials beyond land which is under permit.

154 63. Princess Susan Coal Company, discharged water over spoil slope.

154 64. Imperial Colliery Company, failed to install drainage system.

154 65. Oswald Coal Company, used excavating equipment in are not covered by surface mining permit.

154 66. Interstate Lumber Company, failure to treat and impound surface mine water.

154 67. Clear Creek Fuel Corp., failure to submit final maps.

154 68. Grafton Coal Company, failed to maintain a drainage system.

154 69. Cedar Coal Company, discharged water over spoil slope.

154 70. Hansford Coal Company, failed to maintain a drainage system.

154 71. Big Mountain Coals, Inc., operating outside bonded area.

154 72.Peaker Run Coal Company, placed materials beyond land which is under permit.

154 73. Dry Hill Coal Company, placed materials beyond land which is under permit.

154 74. Energy Development Co., placed materials beyond land which is under permit.

154 75. Peaker Run Coal Company, placed materials beyond land which is under permit.

154 76. Mountaineer Fuel, removed in excess of authorize tonnage during prospecting operation.

154 77. Sugar Camp Developers, Inc., failed to reclaim within three months any excavation carried out under prospecting permit.

154 78. Sugar Camp Developers, Inc., failure to submit final maps.

154 79. Princess Susan Coal Co., failed to locate permanent monument in approved location.

154 80. Southern Appalachian Coal Co., discharged water over spoil slope without adequate structures.

154 81. Ashland Mining Company, placed materials beyond land which is under permit.

154 82. Jenkins Industries, failed to seed and plant all fill and cut

slopes in proper season.

154 83. Jenkins Industries, failed to seed and plant all fill and cut slopes in proper season.

154 84. Jenkins Industries, failed to seed and plant all fill and cut slopes in proper season.

154 85. Hawley Coal Mining Corp., placed materials beyond land which is under permit.

154 86. C & T Construction Co., surface mining without a permit.

154 87. Saul Construction, failed to prevent loss of haulageway surface material in form of dust.

154 88. C & E Coal, Inc., permitted the discharging of water over spoil slope without adequate structure.

154 89. C & E Coal, Inc., placed materials beyond land which is under permit.

154 90. C & E Coal, Inc., failed to seed and plant all fill and cut slopes.

154 91. Forest Bowers, surface mining without a permit.

154 92. Garbart Construction, placed materials beyond land which is under permit.

154 93. Eagle Coal & Dock Co., placed materials beyond land which is under permit.

154 94. Southern Appalachian Coal Co., failed to follow proposed method of operation.

154 95. P & S Coal Co., placed materials beyond land which is under permit.

154 96. Central Appalachian Coal Co., placed materials beyond land which is under permit.

154 97. K.W.D. Construction Co., placed materials beyond land which is under permit.

154 98. Grafton Coal Co., placed materials beyond land which is under permit.

154 99. M & B Enterprises, prospecting without a permit.

154 Status report. - September 30, 1976.

154 100. Ace Equipment Rentals Co., surface mining without a permit.

154 101. Land Use Corp., failed to properly construct drainage system with approved pre-plan.

154 102. Cedar Coal Co., failed to maintain drainage system.

154 103. Cherry River Coal & Coke, allowed surface mining operations to cause hazards to life and property.

154 104. Cherry River Coal & Coke, failed to construct drainage system in accordance with pre-plan.

154 105. Cherry River Coal & Coke, placed materials beyond land which is under permit.

155 106. Cherry River Coal & Coke, placed materials beyond land which is under permit.

155 107. Extractors, Inc., placed materials beyond land which is under permit.

155 108. Clear Fork Coal Co., failed to prevent loss of haulageway in form of dust.

155 109. Cappellari, Inc., removed equipment before completion of backfilling and grading.

155 110. Jetco Mining, Inc., failed to remove brush and trees from upper 1/2 of fill section prior to excavation.

155 111. Jetco Mining, Inc., began surface mining operation before completion of approved drainage system.

155 112. White Ridge Coal Co., failure to properly construct drainage system.

155 113. Black Rock Contracting, Inc., surface mining without a permit.

155 114. Roytim Corp., placed materials beyond land which is under permit.

155 115. Mynu Coals, Inc., placed materials beyond land which is under

permit.

155 116. Garbart Coal & Construction, allowed ongoing surface mining operations to cause stream pollution.

155 117. McKnight Mining, Inc., placed materials beyond land which is under permit.

155 118. Xcello Corp., failed to properly construct drainage system in accordance with pre-plan.

155 119. Pratt Mining, discharged water over spoil slope without adequate structure.

155 120. Phillips Run Coal Co., discharged water over spoil slope without adequate structure.

155 121. Lewis Coal & Coke, prospecting without a permit.

155 122. ISC, Inc., prospecting without a permit.

155 123. Kingwood Mining, surface mining without a permit.

155 124. Hawley Coal Mining Corp., failed to prevent loss of haulageway in form of dust.

155 125. Majestic Mining, failed to follow pre-plan.

155 126. Ace Equipment, failed to construct drainage system in accordance with pre-plan.

155 127. S.W. Swope, surface mining without a permit.

155 128. Four-way Coal Co., failed to construct drainage system in accordance with pre-plan.

155 129. High Spur Coal Co., prospecting without a permit.

155 130. Elkay Mining, surface mining without a permit.

155 131. Belva Coal Co., failed to file a planting plan report.

155 132. Northwest Coal Co., stream pollution.

155 133. ISC, Inc., placed materials beyond land which is under permit.

155 134. Garbart Coal Co., placed materials beyond land which is under permit.

155 135. Glade Run Mining Co., failed to properly treat runoff water.

155 136. Roaring Creek Coal Co., failed to properly treat runoff water.

155 137. ISC, Inc., created hazards dangerous to life and property by blasting.

155 Status report. - December 10, 1976.

155 138.R.N. White Contracting, placed materials beyond land which is under permit.

155 139. Arlec, Inc., placed materials beyond land which is under permit.

155 140. R.N. White Contracting, placed materials beyond land which is under permit.

155 141. Webster County Coal Co., placed materials beyond land which is under permit.

155 142. Westmoreland Coal Co., placed materials beyond land which is under permit.

155 143. Cannon Coal Co., failed to impound, drain, or treat runoff water.

155 144. Cannon Coal Co., failed to properly construct drainage system.

155 145. Cannon Coal Co., failed to properly maintain drainage system.

155 146. Cannon Coal Co., failed to submit progress maps.

155 147. Princess Cindy Mining, began surface mining before completion of drainage system.

155 148. Westmoreland Coal Co., allowed surface operation to cause hazards to life and property.

155 149. White Ridge Coal Co., failed to impound drain or treat runoff water.

155 150. Carbon Fuel Company, failed to properly construct drainage system.

155 151. The Pioneer Company, failed to complete drainage system prior to

beginning surface mining operation.

155 152. Carbon Fuel Company, failed to maintain drainage system.

155 153. Melvin Cox, surface mining without a permit.

156 154. Shingleton Brothers Coal Co., removed equipment before completion of all backfilling and grading.

156 155. Cedar Coal Company, failed to properly maintain haulageway.

156 156. Central Appalachian Coal Co., placed materials beyond land which is under permit.

156 157. Webster County Coal Co., failed to impound, drain or treat runoff water.

156 158. Jewell Ridge Coal Corp., placed materials beyond land which is under permit.

156 159. Sterling Smokeless Coal Co., prospecting without a permit.

156 160. Laxare, Inc., failed to follow pre-plan on valleyfill.

156 161. Kelleys Creek Fuel, failed to submit final maps.

156 162. Kelleys Creek Fuel, surface mining without a permit.

156 163. Kelleys Creek Fuel, surface mining without a permit.

156 164. Hawley Coal Mining, failed to properly construct or maintain haulageway.

156 165. Indian Coal Land, failed to properly maintain drainage system.

156 166. Indian Coal Land failed to impound runoff water so as to reduce soil erosion.

156 167. Indian Coal Land, failed to intercept water before reaching switchback and release below fill.

156 168. Ridge Land Co., failed to properly maintain drainage system.

156 169. Hawley Coal Mining, failed to properly construct or maintain haulageway.

156 170. Preservati Construction, placed materials beyond land which is under permit.

156 171. Pratt Mining Company, placed materials beyond land which is under permit.

156 172. Pratt Mining Company, placed materials beyond land which is under permit.

156 173. Robinson Phillips Coal Co., placed materials beyond land which is under permit.

156 174. Triple A, Inc., placed materials beyond land which is under permit.

156 175. John Brown Harris, placed materials beyond land which is under permit.

156 176. Robinson Phillips Coal Co., failed to properly maintain approved drainage system.

156 177.Triple A, Inc., failed to properly construct approved drainage system.

156 178. Pine Rock Coals, failed to properly construct approved drainage system.

156 179. White Ridge Coal Co., failed to properly maintain approved drainage system.

156 180.Mt. State Construction, failed to properly maintain approved drainage system.

156 181. Triple A. Inc., failed to properly construct approved drainage system.

156 182. White Ridge Coal Co., failed to properly construct haulroad.

156 183. W & S, Inc., failed to have proper regard for all revegetation.

156 184. D & L Coal Company, failed to properly treat all runoff water.

156 185.Pratt Mining, permitted on-going surface mining to cause landslide.

156 186. Pine Rock Coals, failed to keep operation current.

156 187. Energy Development, failed to keep operation current.

156 188. Energy Development, failed to seed and plant all fill and cut slopes in proper season.

156 189. Robinson Phillips Coal Co., failed to seed and plant all fill and cut slopes in proper season.

156 190. John Brown Harris, discharged water over spoil slope without adequate structures.

156 191. Robinson Phillips, failed to follow proposed pre-plan as approved.

156 192.Campbell Mining, placed materials beyond land which is under permit.

156 193. Capitol Coal, Inc., placed materials beyond land which is under permit.

156 194. Roaring Creek Coal Co., surface mining without a permit.

156 195.S.S. "Joe" Burford, placed materials beyond land which is under permit.

156 196. 3 Jacks Coal Company, placed materials beyond land which is under permit.

156 197. Capitol Fuels, failed to seed in proper season.

156 198. Southern Appalachian Coal, Inc., failed to seed in proper season.

156 199. Southern Appalachian Coal, Inc., failed to properly maintain approved drainage system.

156 200. Southern Appalachian Coal, Inc., discharging water over outslopes without adequate structures.

156 201. Big Mountain Coals, Inc., failed to properly maintain drainage system.

156 202. Big Mountain Coals, Inc., failed to properly maintain drainage system.

156 203. Cappellari, Inc., placed materals beyond land which is under permit.

156 204. Sims Mountain Coal Company, placed materials beyond land which is

under permit.

156 205. Sims Mountain Coal Company, placed materials beyond land which is under permit.

156 206. Viking Pocahontas, Inc., failed to impound, drain, or treat all runoff water.

156 207. Eagle Ridge Coal Company, failed to properly construct drainage system.

157 208. Hansford Coal Company, failed to properly construct a drainage system.

157 209. Imperial Colliery Company, failed to properly install drainage system.

157 210. Hansford Coal Company, failed to provide a ditch on the inside shoulder of a cut-fill section of haulroad.

157 211. Imperial Colliery Company, failed to maintain culvert openings.

157 212. McNamee Resources, failed to keep operation current.

157 213. McNamee Resources, placed materials beyond land which is under permit.

157 214. Clear Fork Coal Company, failed to keep operation current.

157 215. Clear Fork Coal Company, failed to properly construct or maintain haulageway.

157 216. Kitchen an Fuel Corp., filed to plant and seed in proper season.

157 217. Clear Fork Coal Co., failed to maintain a monument.

157 218. Clear Fork Coal Co., failed to properly construct drainage system.

157 219.Clear Fork Coal Co., failed to have proper regard for all revegatation rewuirements.

157 220. Roytim Corporation, failed to submit final maps within sixty days of notification by certified mail.

157 221. Clear Fork Coal Co., failed to reclaim within 3 months excavation carried out under prospecting permit.

157 222. Roytim Corporation, discharged or permitted the discharging of water over a spoil slope without adequate structures.

157 223. High Spur Coal Company, discharged water over spoil slope without adequate structures.

157 224. Roytim Corporation, prospecting without a permit.

157 225. Roytim Corporation, failed to seed and plant all fill and cut slopes in proper season.

157 226. High Spur Coal Company, failed to properly maintain approved drainage system.

157 227.Allegheny Mining Corp., placed material beyond land which is under permit.

157 228. Allegheny Mining Corp., placed material beyond land which is under permit.

157 229. G. & M. Coal Company, failed to construct haulageway in approved location.

STATUS - REPORT - SUMMARY

		Prospecting permits issued		Surface mining permits issued	
	Prosecutions	Permits	Acres	Permits	Acres
July 1 to Dec. 31, 1967	5	7	55.62	94	4,150.31
Jan. 1 to Dec. 31, 1968	7	39	454.03	336	13,434.85
Jan. 1 to Dec. 31, 1969	6	65	659.28	400	15,710.55
Jan. 1 to Dec. 31, 1970	24	184	2,242.30	616	31,802.39
Jan. 1 to Dec. 31, 1971	125	95	1,553.00	343	30,000.34
Jan. 1 to					

Dec. 31, 1972	318	112	2,285.00	246	24,508.13
Jan. 1 to Dec. 31, 1973	245	125	2,002.18	241	20,586.77
Jan. 1 to Dec. 31, 1974	242	279	3,233.14	255	18,919.49
Jan. 1 to Dec. 31, 1975	327	209	2,755.49	272	16,965.50
Total	1,299	1,115	15,240.04	2,803	176,078.33

SURFACE MINING PERMITS ISSUED BY MONTH

Month	1973		1974		1975		1976	
	Number	Acres	Number	Acres	Numb er	Acres	Number	Acres
		1,204.0		1,338.0		1,153.1		1,867.3
January	14	0	19	0	20	3	26	1
		1,208.5				1,961		2,552.1
Februar y	16	0	5	492.00	33	.81	26	3
		1,971.0		1,701.8		2,270.6		3,406.2
March	24	2	29	1	28	3	35	5
		2,152.9		1,286.9		1,396.0		2,063
April	27	5	19	2	18	2	28	.13
				1,433.0		1,664.0		
May	8	802.00	26	6	27	6	17	874.98
		2,065.5		1,466.4				1,200.5
June	28	0	28	8	18	964.09	18	0
		2,268.1		1,774.6		1,703.1		1,539.4
July	18	2	2 2	8	29	4	19	8
		1,889.5		2,029.6		1,149.0		1,072.5
August	26	9	16	4	20	4	20	2
Septemb		1,298.8		1,875		1,541.0		1,474.5
er	22	4	30	.68	27	1	19	0
		2,192.9		2,118.8		1,178.2		3,797.1
October	15	5	17	6	15	8	38	0
Novembe		1,606.8		2,392.2				1,578.1
r	20	0	27	4	14	854.29	18	0
Decembe		1,926.5		1,010.1		1,130.0		
r	23	0	17	2	23	0	5	127.50
		20,586.		18,919.		16,965.		21,553.
Total	241	77	255	49	272	50	269	25

157 Note: SMA numbers issued during 1973-282. SMA numbers issued during 1974-402. SMA numbers issued during 1975 - 372.