

HOUSE REPORT NO. 94-1445
Legislative History
House Report No. 94-1445

Following is the August 31, 1976, Report from the Committee on Interior and Insular Affairs on H.R.13950. The text below is compiled from the Office of Surface Mining's COALEX data base, not an original printed document, and the reader is advised that coding or typographical errors could be present.

CONGRESSIONAL REPORT
INTERIOR AND INSULAR AFFAIRS COMMITTEE, UNITED STATES HOUSE OF
REPRESENTATIVES
HOUSE OF REPRESENTATIVES REPORT No. 94-1445; 94TH CONGRESS 2nd Session; H.R.
13950

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PREAMBLE
CONTENTS

Page	
Committee amendments to H.R. 13950	
1	
Introduction	
5	
Purpose	
11	
Need	
11	
Issues	
37	
Elements of mine regulation program	
43	
Committee action	
88	
Section-by-section analysis of H.R. 13950	
103	
Appendix	
130	
Concurring, additional, separate, and dissenting views	
133	

MR. HALEY, from the Committee on Interior and Insular Affairs, submitted the following REPORT together with CONCURRING, ADDITIONAL, SEPARATE, AND DISSENTING VIEWS and Including the Congressional Budget Office Cost Estimate

[To accompany H.R. 13950]

The Committee on Interior and Insular Affairs, to whom was referred the bill (H.R. 13950) to provide for the cooperation between the Secretary of the Interior and the States with respect to the regulation of surface coal mining operations, and the acquisition and reclamation of abandoned mines, and for other purposes, having considered the same, reports favorably thereon with amendments and recommends that the bill as amended do pass.

INTRODUCTION

5 The "Surface Mining Control and Reclamation Act of 1976" reported by the Committee on Interior and Insular Affairs contains a number of important modifications which distinguish it from previously reported legislation designed to implement a national system of coal surface mining regulation. While the principal concepts of the earlier bills have been retained, the reported bill, H.R. 13950, has been adjusted with the primary goal in mind to help the small to medium sized coal surface mine operator comply with the act as the new system is phased in over a period of 3 years.

5 The Committee understands that in reporting this bill - similar to legislation that failed to become law - it may find itself charged with (at least) single minded tenacity or (at worst) irresponsible stubbornness on issues already decided.

5 In the first place, H.R. 13950 is not the same bill. It is, rather, legislation significantly different in terms of timing, allocation of responsibility, flexibility of procedure and certain reclamation criteria from any bill previously considered by the House.

5 But more importantly, the Committee has spent its time addressing this legislation because the Committee is painfully aware of the fact that the problems of strip mining, intended to be corrected by previous bills, have not gone away. Indeed, they are more pressing than ever. Nor has the strong bipartisan Congressional support for coal surface mining legislation dissipated.

5 The Committee has gone back to work, modified the legislation and now reports to the House a bill it believes the House can support with confidence that enactment of the measure will result in the correction of the abuses of strip mining without resulting in any significant interruption of coal supply.

5 EXTENDED TIMETABLE FOR COMPLIANCE

5 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.

5 Once the state program has been approved by the Secretary of the Interior, the operator is given up to 8 months to apply for and receive approval of a permit application demonstrating compliance with the act. After one year from enactment, operations existing during the period of transition to the new program will have to comply with certain interim reclamation standards to be enforced by the states. New operations starting up 6 months after enactment will be required to comply with the same standards.

6 Obviously, extending full compliance requirements up to over 3 years from enactment results in delaying implementation of sound and needed reclamation requirements. Where a new administrative system and substantive requirements are being imposed on an ongoing and important industry, however, the Committee believes that the need for continuity of production justifies this extended time frame.

6 The previously passed, but vetoed bill, H.R. 25, contained an implementation schedule more abbreviated than that of H.R. 13950. Under H.R. 25, an operator was required to apply for a new permit by the expiration of 20 months after enactment. Under H.R. 13950, permit application will be required at 26 months after enactment but this period could be extended up to 32 months depending upon the time necessary to put an approved program in place. Not only does the operator have time to prepare his application, but under H.R. 13950 it is clear that he does not have to act prior to final approval of the new program (as was the case under H.R. 25).

6 In addition to extending the application time frame, H.R. 13950 also delays implementation of the interim standards from the requirements of the vetoed bill. Under H.R. 25, existing operations would have to be in compliance with the interim standards 135 days after enactment instead of the full year afforded by H.R. 13950.

6 The Committee believes that the implementation schedule of the vetoed bill was realistic and justified. Nevertheless, in an effort to give coal operators ample time to comply with the act, it has included this extended implementation scheme in the reported bill.

6 Along with extending the implementation schedule, the Committee also approved several other provisions that will help the small to medium operator comply with the act. The following is a summary of the principal modifications:

6 (1) Regulatory Authority Assumption of Water and Core Sampling
Analysis
Responsibility

6 Both the vetoed bill and H.R. 13950 require that the operator submit analysis of the hydrologic consequence of mining (Sec. 507(b)(11)), as well as the results of test borings or core samples. Small to medium sized operators in States where such analyses are not now conducted indicated that the expense of such activities could be burdensome and that the expertise may not be immediately available. The Committee responded by altering provisions of two titles of the bill. Section 401(d) now reserves 20 percent of fees paid into the abandoned reclamation fund (fees paid on strip and deep mined coal into a fund for the purpose of reclaiming mined and abandoned lands). Section 507(c) now provides that the regulatory authorities shall perform the water and core analyses for operators mining less than 250,000 tons. The funds reserved from the abandoned mine reclamation program will be used to cover the cost of that activity. The Committee believes that not only will this mechanism help the operator comply with the act, but also will assure that the important water and core analysis are correctly performed.

7 (2) Elimination of Coal Exploration Permit Requirements

7 The previous bill would have required application for and approval of a permit prior to conducting exploration for coal. Exploration often results in environmental damage and the Committee believes that a full permitting program is justified to control exploration activities. Nevertheless, a simpler procedure could be imposed to achieve the needed degree of regulation. Thus the Committee has eliminated the permitting process for coal exploration on lands within the jurisdiction of the States. Section 512 now requires that prior to exploration, notice be given of intention to conduct exploration and that all exploration be conducted pursuant to regulations designed to require reclamation of disturbed lands. By imposing penalties for violations of the exploration regulations, the Committee believes that the bill will adequately protect the environment without imposing the extensive and time consuming permitting procedure.

7 (3) Modifications Designed to Lessen "Front-End" Costs of Compliance
With
the Act

7 Along with assuming the costs of water and core analysis for small to medium sized operators, the bill also includes the following important provisions designed to lower the initial cost of compliance with the act:

7 (a) Application Fee. - Section 507(a): Under the old bill the amount of the application fee was to be based as nearly as possible on the costs of

administering the permit application. Small operators were concerned that this might significantly increase the front end costs and put him at a disadvantage to the larger operator. In H.R. 13950 the language was changed to allow the regulatory authority to charge an applicant fee less than the costs of administering the application.

7 (b) Analysis of Stratum Below Coal Seam. - Section 507(b)(14): This modification reduces the burden on the operator to provide additional information with the application which may not, in every case, be necessary for the regulatory authority to have prior to making a determination on the application. Specifically, the modification deletes the previous bill's requirement that the nature of the stratum beneath the coal seam be analyzed and presented in the application. This gives the regulatory authority more flexibility without eliminating the legislative intent of the provision.

7 (c) Core Sampling. - Section 507(b)(15): This modification would allow the regulatory authority to determine when core sampling must be taken. Operators have argued that often the strata in an area are known and that analysis simply isn't necessary. Under this modification, the regulatory authority could waive the requirement.

7 (4) Procedural Requirements

7 Related to the concern about lowering initial costs, streamlining of regulatory procedures has the advantage of reducing costs and shortening the time necessary to apply for and receive approval of a permit.

8 Inadequate procedures and information requirements have plagued the history of surface mining regulation and the bill retains important functions to assure full review of permit applications and bond release. The following changes, however, have been made to help the operator to comply with the law without doing damage to the goals of the legislation:

8 (a) Adjacent Owners. - Section 507(b)(2): Under the previous bill the operator is required to provide the names and addresses of all owners of record within 500 feet of the permit area. H.R. 13950 requires only that adjacent property owners be listed in the permit application.

8 (b) Previous Permit Information. - Section 507(b)(3): This modification streamlines and reduces the amount of information required of the operator in the application without violating the intent of the paragraph which is to provide the regulatory authority with some background information on the coal operator. Under the previous bill all previous surface mining permits held by the operator had to be listed in the application. H.R. 13950 requires that permits for the preceding five years be included.

8 (c) Limiting Notice on Bond Release. - Section 519(a): This modification limits the scope of the notice requirement on bond release (a long list of specific agencies was deleted).

8 (d) Bond Release. - Section 519: The previous bill allows objectors to a bond release to invoke a hearing by the regulatory authority prior to such release. In order to avoid unnecessary administrative procedure, H.R. 13950 is modified to provide for an informal procedure without precluding or diminishing the rights of the objectors. Currently many bond release objections are handled in this manner in Pennsylvania.

8 H.R. 13950 contains other important modifications designed to ease the impact of the new regulatory scheme on the operator. Included are a new provision to allow the state to implement an alternative system to bonding procedures required by the Act, n1 a clarification of the burden of proof in the regulatory process n2 and a clarification of the approximate original contour definition. n3

8 n1 Section 509(f): This modification would allow the State to implement an alternative system to bonding (e.g. an insurance system) provided that it contains provisions to assure that the objectives and purposes of the bonding section are met.

8 n2 Section 510(a): It was the intention of H.R. 25 to place the burden on the applicant to demonstrate that the application is in compliance with the act. H.R. 25 used the language "affirmatively demonstrate" that an applicant is in compliance with the Act and other Federal and State laws and that these provisions might possibly be construed to impose a more stringent test than merely placing the burden on the operator. H.R. 13950, therefore, deletes that language and provides in section 510(a) that "the applicant for a permit . . . shall have the burden of establishing that his application is in compliance" with the program. The modification also clarifies that it is not the intention of this Act to shift the burden imposed by other State or Federal laws (the burden under other laws may not be on the applicant).

8 n3 Section 701(23): This modification adds clarifying language. H.R. 25 required the elimination of "depressions" and this language, which was a hold-over from a very early draft of the bill, causes some confusion. What is crucial is the elimination of (1) highwalls, and (2) spoil piles in all cases, with no exceptions. Obviously, however, there will be depressions left where

thick seams of coal have been removed or in some forms of contouring where the operator is required to complement the drainage pattern of surrounding terrain.

After the word "depressions" was put in the bill, the special provisions for "water impoundments" were added, thereby, making this reference to "depressions" unnecessary and possibly confusing.

8 During the course of the debate over the previous bill, H.R. 25, projections were advanced by the Bureau of Mines and other agencies that enactment of the legislation would result, in the first full year of implementation, in rather drastic production losses. While the Committee believes that these projections were the product of hasty and unscientific procedures, it also believes that whatever the merits of the Bureau's claims, they do not apply to H.R. 13950 as reported.

9 The projections ranged from 40 to 160 million tons of production loss.
n4
Obviously, this is a wide spectrum. The vast bulk of these losses (143 million tons) was attributed to three main factors: (a) the bill's protection of the highly productive alluvial valley floors in the West; (b) the impact of the bill on small mines; and (c) the bill's provisions regarding mining on steep slopes. The following is a discussion of these issues.

9 n4 Although the projections were characterized as loss of "production", the projections are more accurately termed precluded reserves. The Bureau assumed that if the bill would preclude the mining of a ton of coal in a certain location for certain reasons, the loss the availability of that ton of coal would result in a loss of production rather than assuming that other coal located in an adjacent area that could be mined would make up the deficit. The Committee questions this logic in light of the fact by the most conservative estimate there are 136 billion tons of strippable coal and almost 300 billion tons of deep mineable coal in this country. With the extended implementation schedule of H.R. 13950, even greater doubt can be cast on the Bureau of Mines assumption.

9 ALLUVIAL VALLEY FLOORS

9 Administration position. - According to projections of the Bureau of Mines, provisions of the bill relating to mining on the highly productive yet environmentally delicate alluvial valley floors of the West, was ambiguous and could have precluded production on a significant percentage of coal-bearing lands in the West and would have shut down existing mines.

9 Committee action. - The Committee approved a new alluvial valley floors section that grandfathers existing mines and tightens the definition to remove ambiguity. Since the demise of H.R. 25, the U.S. Geological Survey has conducted a review of proposed mining plans with Federal involvement, photo

interpretations, and field geological studies (see letter in Appendix 1 of this report). The results demonstrate that, in fact, only a small percentage of proposed operations are overlain by alluvial valley floors. According to the Director of the USGS:

9 The measurements indicate that none of the mines proposed have greater than 3.7 percent of their land surface covered by alluvial valley floors.

9 It is the Committee's judgment that under the reported bill, alluvial valley floors will be protected - which is vital to the continued agricultural productivity of western lands - without causing any meaningful disruption of proposed western mining.

9 SMALL MINES

9 Administration position. - The Bureau of Mines estimated that the small Eastern operations mining less than 50,000 tons are without the money or expertise to comply with the phase-in requirements and procedures.

9 Committee action. - This Introduction has previously detailed the lengths to which the Committee has modified the bill in order to assist the small operator to comply with the act. Responsibility for water and core analysis will be assumed by the regulatory authority, the time period for applications for permits has been significantly extended, and other steps have been taken to aid the small operator. The Committee believes that the small operator will be fully capable of mining under the provisions of this bill.

10 STEEP SLOPES

10 Administration position. - According to agency projection, virtually all production on the steep slopes of mountain mining could be wiped out under the bill.

10 Committee action. - The bill does not ban mining on steep slopes, but merely requires the use of available technology that can be economically conducted to reclaim the land. The steep slope provisions are intended to put an end to the most hazardous and environmentally degrading practices of mountain mining. As is discussed later in this report, there is ample evidence that steep slope operators can comply with the requirements of this bill. The problem here, if any, is really to give an operator sufficient time to change mining techniques to comply with the new requirements. Again, the interim requirements have been extended for a full year before enforcing the interim requirement on existing mines that prohibits dumping of spoil material down the side of the mountain (where such spoil erodes, chokes streams with silt, and results in land slides endangering public health and safety).

10 ELIMINATION OF MANDATORY FEDERAL INSPECTIONS

10 Another important modification in terms of keeping down the costs of administration of the act is an amendment adopted in Committee to eliminate regular Federal inspection during the interim period. While backup Federal inspection is included, the Committee agreed that in terms of practical administration of the act, requiring regular Federal inspection of operations under the jurisdiction of the State during the interim was unnecessary.

10 Reporting of H.R. 13950 reflects the Committee belief that the regulation of surface coal mining can no longer be ignored as a national concern. This is not strictly an "environmental bill" nor is it an "energy bill." It is really both, and more. Enactment of the bill will protect the land, prevent mining where it should not occur and preserve land for beneficial uses for generations to come. When H.R. 13950 becomes law, it will also finally put the question of minimum national standards to rest and thus encourage the development of new operations to meet the nation's increasing appetite for coal. In addition, H.R. 13950 represents the concern of the Congress that the real burdens - the real costs - of coal development be lifted from the shoulders of those who have carried them in the past and would have to assume them in the future without this legislation. Expanding coal development is important. But the Committee believes that also important are the elimination of the despoilation that has ravaged Appalachia and the prevention of a similar future for Western coal mining regions. Both goals were sought in the drafting of this bill. By its enactment, both can be achieved.

THE PURPOSE OF H.R. 13950

11 The purpose of H.R. 13950 is to assure the establishment of a nationwide program for the regulation of surface coal mining in order to reduce environmental impacts and to provide for the reclamation of previously mined and unreclaimed lands by -

11 (1) covering all coal surface mining (contour and area stripping and open-pit operations), the surface impacts of coal processing from surface and underground mines;

11 (2) establishing administrative, environmental, and enforcement standards for regulatory programs to be administered by the States on non-Federal lands;

11 (3) providing authority for a Federal regulatory program to augment State programs if necessary on non-Federal lands and establish a Federal regulatory program for Federal lands;

11 (4) applying Federal standards to operations on Indian lands and undertaking a study to develop a program under which Indian tribes may elect to

assume full regulatory authority of coal mining operations on Indian lands;

11 (5) establishing a program for the reclamation of previously mined and inadequately reclaimed lands;

11 (6) establishing a program for designating areas unsuitable for surface coal mining and a more limited program for minerals other than coal;

11 (7) establishing a new Office of Surface Mining Reclamation and Enforcement for implementing provisions on this Act;

11 (8) establishing a Federal grant-in-aid program to the States for State mining and mineral resource research institutes;

11 (9) establishing procedures for public review of the administrative and enforcement program through access to data, hearings, inspections and standing to sue for damages and for non-compliance with the Act; and

11 (10) recognizing the rights of surface owners and off-site water users.

11 Following the discussion of the need for legislation, the most significant elements of the bill are described in greater detail.

NEED

11 COAL AND OTHER ENERGY RESOURCES

11 Coal has always filled a major portion of the U.S. energy demand. The proportion of U.S. demand met by coal, however, has declined during the past decade. In 1973, coal contributed only 18 percent of the Nation's energy supply, while petroleum and natural gas combined to produce approximately 77 percent of demand. Hydropower supplied a further 4 percent and nuclear 1 percent.

11 The fact that coal represents over 90 percent of our total hydrocarbon energy reserves dictates that coal will supply a significant proportion of our energy needs in the years to come. In addition, two of the major factors contributing to the decrease in the use of coal - the low prices of natural gas and imported crude oil - have changed drastically since the oil embargo of 1973. Coal will become an increasingly important source of fuel for the Nation through the year 2000 (see Table No. 3(a), p. 13).

12 According to the latest Bureau of Mines figures, coal production in 1974 amounted to 601 million tons and coal production for the first ten months of 1975 was over 533 million tons. Total U.S. consumption was over 552 million tons, while exports amounted to 60 million tons. The overwhelming majority of

domestic consumption was in electrical power generation (approximately 69 percent). Other uses included: bunker fuels, beehive coke plants, oven coke plants, and other manufacturing and retail deliveries (see Table No. 4, p. 15).

Of the total 1973 U.S. production of coal, about 52 percent was produced by surface mining methods, representing a sharp increase in the past few years.

12 The Federal Energy Administration estimates U.S. coal consumption will increase to 692.5 million tons by 1980. Of this amount, 612.9 million tons (88.5 percent) is committed to the electric utility demand. Non-utility coal demand is forecast to increase slightly, however, the demand for metallurgical

coals is expected to remain relatively constant during the period 1975 through

1980. The coal production estimated by the Bureau of Mines (Table No. 3(b), p.

14) is the coal that could be produced for the years 1977 and 1980 by ranges of

sulfur content and by state and general geographic areas in the U.S. Of the national coal production having a sulfur content of one percent, or less, the Appalachian region is projected to contribute almost 71 percent. The value of

the vast reserves of Appalachian low sulfur coal is enhanced by its contribution

to air quality. This factor becomes increasingly important as a growing proportion of utility fuel needs are met by coal.

12 DISTURBED LANDS

12 Surface mining of coal in the United States involves the temporary or permanent degradation of vast tracts of land. With some outstanding exceptions,

there has been little effort on the part of coal operators to restore disturbed

areas to their previous levels of productive capacity. The passage of laws regulating coal surface mining in some 34 States has proven to be generally ineffective in bringing about necessary reclamation of the disturbed land areas.

12 A number of experts in government and industry think the continuation of

the majority of the rapid growth in the coal surface mining industry will most

likely occur in the West. The imminent disturbance of these lands is due to the

large quantities of strippable reserves located primarily in the Northern Great

Plains region. A National Petroleum Council report indicates that there are some 32 billion tons of bituminous, sub-bituminous coal and lignite in the West

which are recoverable through surface mining techniques. (See Tables Nos. 6 and

7, pp. 16-17). The fact that many of these deposits are extremely thick, as compared with those of the eastern and mid-western United States makes them economically attractive. Federal regulation of this development is made mandatory by the fact that 80 percent of Western coal is owned by the Federal

Government. The total coal reserves located on Indian lands is estimated by the U.S. Geological Survey to be in the vicinity of 25 billion tons.

13 A report issued by the Soil Conservation Service of the Department of Agriculture concerning the status of land disturbed as of January 1, 1974, indicates the scope of the problem state by state. Quoting a previous estimate by the Department of Interior to the effect that "153,000 acres of land were disturbed in 1964 by strip and surface mining", the report notes that in past years that rate has been exceeded by 35 percent.

13 "The present concerns about energy, combined with the knowledge about out huge coal reserves make it quite likely that the annual rate of land disturbance will be even greater," the report concludes. (See Table N. 9, p. 18.)

2

TABLE
1. -
Annual
consumption of bituminous coal, 1963-75

2 [In thousands of tons]

1963	409,225
1964	431,116
1965	459,164
1966	486,266
1967	480,416
1968	498,930
1969	507,275
1970	517,158
1971	494,862
1972	516,776
1973	556,022
1974	552,709
1975	n1 554,749

13 n1 Preliminary figures.

13 Source: Bureau of Mines.
\$2. - TOTAL U.S.
HYDROCARBON
RECOVERABLE

RESERVES

	Number	Times 10 ¹³ Btu	Percent
Coal (billion tons)	182.0	4,136	88.4
Oil (billion barrels)	48.3	270	5.8
Natural gas (trillion cubic feet)	266.0	274	5.8

13 Source: Bureau of Mines.

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TABLE

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A). -

COAL

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Year	Total energy demand Trillion Btu	*2*Energy demand for coal Percent increase	Trillion Btu	Percent
1974	73		13	
1980	87	19	17	31
1985	103	41	21	62
2000	163	123	35	169

13[Thousands of short tons]

Regions and States	1977 sulfur levels of supply (percent by weight)	1980 sulfur levels of supply (percent by weight)	Total
	0.6 and under	0.7 to 0.8	0.9 to 1
1.1 to 1.5	1.6 and over		0.6 and under
0.7 to 0.8	0.9 to 1	1.1 to 1.5	1.6 and over
Total			

Appalachian:

Alabama	200	2,335	10,565
7,660	7,715	28,475	235
2,730	12,355	8,955	9,025
33,300			
East Kentucky	24,880	19,150	23,030
17,390	8,050	92,500	29,590
22,770	27,390	20,680	9,570
110,000			
Maryland		100	125
155	1,500	1,880	
115	140	170	1,675
2,100			

Ohio			
4,530	53,570	58,100	
		4,900	58,000
62,900			
Pennsylvania	935	3,570	8,500
25,585	46,410	85,000	1,025
3,920	9,340	28,115	51,000
93,400			
Tennessee	125	2,770	775
1,315	5,395	10,270	150
3,350	805	1,585	6,510
12,400			
Virginia	13,470	15,830	7,120
5,105	1,375	42,900	15,700
18,450	8,300	5,950	1,600
50,000			
West Virginia	19,750	47,280	17,000
12,970	47,150	144,150	22,195
53,135	19,115	14,580	52,975
162,000			
Total	59,360	91,035	67,005
74,710	171,165	463,275	68,895
104,470	77,445	84,935	190,355
526,100			
Midwestern:			
Arkansas			
	600	600	
			800
800			
Illinois	2,415		2,710
5,490	62,585	73,200	2,605
	2,925	5,925	67,545
79,000			
Indiana		10	5
1,285	29,900	31,200	
15	10	1,440	33,635
35,100			
Io wa			
	1,100	1,100	
			1,300
1,300			
Kansas			
	1,400	1,400	
			1,600
1,600			
Missouri			
	5,300	5,300	
			5,800
5,800			
Oklahoma	90	270	455
	1,985	2,800	100
300	500		2,200
3,100			
West Kentucky			
25	62,275	62,300	
		30	69,370
69,400			

Total	2,505	280	3,170
6,800	165,145	177,900	27,05
315	3,435	7,395	182,250
196,100			
Gulf: Texas			1,180
10,070		11,250	
	2,770	23,630	
26,400			
Northern Great Plains:			
Montana	1,510	1,870	240
16,480		20,100	2,355
2,920	375	25,750	
31,400			
North Dakota	5,945		3,665
3,005	335	12,950	9,270
	5,715	4,685	530
20,200			
Wyoming		29,200	3,500
		32,700	
44,650	5,360		
50,000			
Total	7,455	31,070	7,405
19,485	335	65,750	11,625
47,570	11,440	30,435	530
101,600			
Rocky Mountain:			
Arizona	3,875		
		3,875	4,600
4,600			
Colorado	4,475	2,200	110
15		6,800	5,130
2,525	125	20	
7,800			
New Mexico	1,955	8,875	20
		10,850	2,160
9,815	25		

PAGE

15

Cong. Report HOUSE OF REPRESENTATIVES REPORT No. 94-1445; 94th CONGRESS

12,000			
Utah	3,685	895	1,900
20		6,500	3,970
960	2,050	20	
7,000			
Total	13,990	11,970	2,030
35		28,025	15,860
13,300	2,200	40	
31,400			
Pacific:			
Alaska	800		
		800	1,000
1,000			
Washington	8,000		
		8,000	12,400
12,400			
Total	8,800		

		8,800	13,400
13,400			
Total, United States			
92,110	134,355	80,790	
111,100	336,645	755,000	112,485
165,655	97,290	146,435	373,135
895,000			

13 Source: U.S. Bureau of Mines.
\$4. - 1975

U.S. Domestic Coal
Consumption n1
2[In thousands of
tons]

Electrical power utilities	403,249
Bunker fuels	24
Beehive coke plants	1,092
Oven coke plants	82,228
Steel and rolling mills	2,715
Other manufacturing	59,759
Retail dealer deliveries	5,682

13 n1 Estimated figures.

13 Source: Bureau of Mines.
\$5. - AMOUNT OF
TOTAL U.S. COAL
PRODUCTION PROVIDED
BY SURFACE MINING

Year	Total tonnage coal produced (in million short tons)	Percentage produced by surface mining
1975	640	n1 54.7
1974	603	54.0
1973	591	49.0
1972	595	48.9
1971	552	50.0
1970	603	43.8
1969	561	38.1
1968	545	36.9
1967	553	36.9
1966	5 34	36.5
1965	512	35.0
1964	487	33.9
1963	459	33.2
1962	422	33.4
1961	403	32.3
1960	416	31.5
1959	412	31.3
1958	410	30.0
1957	493	26.8
1956	501	27.0
1955	465	26.2

1954	392	26.3
1953	457	23.4

13 n1 Estimated figures.

13 Source: Bureau of Mines.

*6*TABLE 6. -

SUMMARY OF
ESTIMATED
RESERVES OF
STRIPPABLE
BITUMINOUS
COAL IN THE
UNITED STATES

n1

6[Million
short tons]

Region and State	Remaining strippable reserves	Available strippable reserves	Minimum coal bed thickness (inches)	Maximum overburden thickness (feet)	Economic stripping ratio
(feet:feet)					
Appalachia:					
Alabama	607	134	14	120	24:1
Kentucky -					
East	4,609	781	28	120	14:1
Maryland	150	21	28	120	15:1
Ohio	5,566	1,033	28	120	15:1
Pennsylvania	2,272	752	28	120	15:1
Tennessee	483	74	28	120	19:1
Virginia	2,741	258	28	120	15:1
West Virginia	11,230	2,118	28	120	15:1
Subtotal	27,658	5,171			
Midwest:					
Arkansas	200	149	14	60	30 :1
Illinois	18,845	3,247	18	150	18:1
Indiana	2,741	1,096	14	90	20:1
Iowa	1,000	180	28	120	18:1
Kansas	1,388	375	12	120	15:1
Kentucky -					
West	4,746	977	24	150	18:1
Michigan	6	1	28	100	20:1
Missouri	3,425	1,160	12	120	15:1
Oklahoma	434	111	12	120	15:1
Subtotal	32,785	7,296			
Rocky Mountain and Pacific Coast:					
Alaska n2	1,201	480	14	120	10:1
Colorado	870	500	60	50-120	4:1-10:1
Utah	252	150	60	39-150	3:1-8:1
Subtotal	2,323	1,130			
Total n3	62,766	13,597			

13 n1 The Bureau of Mines released an updated estimate of U.S. coal reserves

by region and recovery method in July 1974. These figures show a loss of some 30,000,000,000 tons in reserve estimates for West Virginia alone; from previous estimates other Eastern States lost smaller amounts (1,000,000,000 to 2,000,000,000 tons range). Moreover, the new figures show a growing ratio of strip to deep mineable reserves. Until such time as the Bureau of Mines can demonstrate the basis for these new figures, it was determined to use the older reserve figures for this report. It should be pointed out that, according to the Institute of Ecology, 72 percent of the Nation's coal reserves lie in the east, if one calculated on a Btu, rather than a tonnage basis.

13 n2 Includes 478,000,000 tons of reserves in Northern Alaska fields (North Slope) that may not be economically strippable at this time.

13 n3 Strippable bituminous coal reserves for Idaho, Montana, New Mexico, Texas, and Washington were not estimated.

13 Source: "U.S. Energy Outlook, Coal Availability," National Petroleum Council, 1973.

*6*TABLE 7. -

SUMMARY OF
ESTIMATED
RESERVES OF
STRIPPABLE
SUBBITUMINOUS
AND LIGNITE
COAL IN THE
UNITED STATES

n1

6[Million
short tons]

Region and State (feet:feet)	Remaining strippable reserves	Available strippable reserves	Minimum coalbed thickness (inches)	Maximum overburden thickness (feet)	Economic stripping ratio
Subbituminous n2					
Rocky Mountain and Pacific Coast:					
Alaska	6,190	n3 3,926	60	120	12:1
Arizona	400	387	60	130	8:1
California	100	25	60	100	1:1
Montana	7,813	3,400	60	60-125	2:1-18:1
New Mexico	3,307	2,474	60	60-90	8:1-12:1
Washington	500	135	60	100	10:1
Wyoming	2 2,028	13,971	60	60-200	1.5:1-10:1
Total	40,338	24,318			
Lignite					
Southwest:					
Arkansas	32	25	60	100	15:1
Texas	3,272	1,309	60	90	15:1
Subtotal	3,304	1,334			

Rocky Mountain and Pacific Coast:					
Alaska	8	5	0	0	0
Montana	7,058	3,497	60	60-125	2:1-18:1
North Dakota	5,239	2,075	60	50-125	3:1-12:1
South Dakota	399	160	60	100	12:1
Subtotal	12,704	5,737			
Total	16,008	7,071			
Total, all ranks	119,112	44,986			

13 n1 The Bureau of Mines released an updated estimate of U.S. coal reserves by region and recovery method in July 1974. These figures show a loss of some 30,000,000,000 tons in reserve estimates for West Virginia alone, from previous estimates; other Eastern States lost smaller amounts (1 to 2,000,000,000 tons range). Moreover, the new figures show a growing ratio of strip to deep mineable reserves. Until such time as the Bureau of Mines can demonstrate the basis for these new figures, it was determined to use the older reserve figures for this report. It should be pointed out that, according to the institute of Ecology, 72 percent of the Nation's coal reserves lie in the East, if one calculates on a Btu, rather than a tonnage basis.

13 n2 Subbituminous coal reserves not estimated for Colorado and Oregon; lignite reserves not estimated for Alabama, Kansas, Louisiana, and Mississippi.

13 n3 Includes 179,000,000 tons of undifferentiated subbituminous-lignite and 3,387,000,000 tons of subbituminous coal reserves in the Northern Alaska Fields (North Slope) that may not be economically strippable at this time.

13 Source: U.S. Energy Outlook, Coal Availability, National Petroleum Council, 1973.

*3*TABLE 9. - STATUS OF LAND DISTURBED BY COAL SURFACE MINING IN THE UNITED STATES AND NEEDING RECLAMATION AS OF JAN. 1, 1974, BY STATES
3[Acres]

by	State	Reclamation not required by law	Reclamation required law
\$			
	Alabama	57,878	118
	Alaska	2,400	
	Arizona	150	
	Arkansas	9,451	494
	California		
	Caribbean area		

Colorado	4,687	641
Connecticut		
Delaware		
Florida		
Georgia		
Hawaii		
Idaho		175
Illinois	49,748	20,891
Indiana	2,500	6,000
Iowa	25,650	
Kansas	43,700	2,500
Kentucky	69,000	117,000
Louisiana		
Maine		
Maryland	2,250	3,851
Massachusetts		
Michigan	500	
Minnesota		
Mississippi		
Missouri	75,506	1,250
Montana	300	300
Nebraska		
Nevada		
New Jersey		
New Mexico		25,798
New York		
North Carolina		
North Dakota	10,000	200
Ohio	23,926	45,825
Oklahoma	13,858	6,350
Oregon		
Pennsylvania	159,000	33,000
Rhode Island		
South Carolina		
South Dakota	790	
Tennessee	20,500	5,200
Texas	5,470	
Utah	120	
Vermont		
Virginia	18,000	5,014
Washington	471	1,010
West Virginia	25,720	51,560
Wisconsin	234	76
Wyoming	3,078	2,828
Total	621,887	337,081

13 Source: U.S. Soil Conservation Service.

19 SOCIAL AND ENVIRONMENTAL IMPACTS

19 The social and environmental impacts of surface and underground coal mining have been enormous. The most serious effects are to be seen in the Appalachian region, where the entire socio-economic infrastructure of parts of Pennsylvania, West Virginia, Ohio, Kentucky, Virginia and Tennessee and Alabama has been profoundly affected by decades of extracting coal from the rich

bituminous deposits. As a consequence of the hazardous environment associated with both underground and surface mining of coal, the health and safety of people living and working near the coal mines of the region are in more or less constant peril. One example of exposure of the general public to dangerous conditions is the disastrous collapse of the general public impoundment on Buffalo Creek, West Virginia, in which 124 people were killed and 4,000 rendered homeless in 1972.

19 The side-effects of coal mining in the humid areas of the East and mid-West, acid drainage which has ruined an estimated 11,000 miles of streams; the loss of prime hardwood forests and the destruction of wildlife habitat by strip mining; the degrading of productive farm land; recurrent landslides; siltation and sedimentation of the river systems; the destructive movement of boulders; and perpetually burning mine waste dumps - these constitute a pervasive and far-reaching ambience. Tragically, coal mining in America has left its crippling mark upon the very communities which labored most to produce the energy which once impelled the Nation's industrial plant and now generates much of its electrical power.

19 In the Western States and the Northern Great Plains region the discovery of vast reserves of lignite and sub-bituminous coal has inspired plans for the expansion of coal surface mining on a very large scale, thus major adverse impacts to the region's land and people lie ahead. Since the climate is arid and water therefore in short supply, the removal of thick coal seams and the consequent disruption of stream and river channels forming part of the hydrologic regime of the area will pose difficult and in some cases insurmountable reclamation problems. A 1973 study by the National Academy of Sciences entitled, Rehabilitation Potential of Western Coal Lands has this to say about reestablishing vegetation in these circumstances:

19 The potential for rehabilitation of any surface mined area in the West is critically site specific. Nevertheless, some broad principles apply to all sites. The rehabilitation of a specific site will depend on the detailed ecological and physical conditions at that site, the projected land use for the site after mining, the available technology that is applied to the site, and the skill in applying that technology.

19 We believe that those areas receiving 10 inches (250 mm) or more of annual rainfall can usually be rehabilitated provided that evaporation is not excessive, if the landscapes are properly shaped, and if techniques that have been demonstrated successful in rehabilitating disturbed rangeland are applied.

(p. 3)

20 The drier areas, those receiving less than 10 inches (250 mm) of annual

rainfall or with high evapotranspiration rates, pose a more difficult problem. Revegetation of these areas can probably be accomplished only with major, sustained inputs of water, fertilizer, and management. Range seeding experiments have had only limited success in the drier areas. Rehabilitation of the drier sites may occur naturally on a time scale that is unacceptable to society, because it may take decades, or even centuries, for natural succession to reach stable conditions. (p. 3-4)

20 Since much of the Nation's prime grazing and farming land is located in the band of western states where these immense coal deposits are located - North Dakota, South Dakota, Montana, Wyoming, Colorado, Utah - the possibility for permanently despoiling thousands of acres of productive agricultural lands is very real indeed, as the Committee is well aware. Other land uses associated with surface coal mining and concomitant power and fuel development, are also expected to impact the region as population inflow creates residential, commercial and industrial growth in sparsely settled areas. Over-all water demands, socioeconomic stresses and pollution loads of various kinds brought by expected westward migration provide cause for genuine concern.

20 Officials, coal operators and other interested citizens testifying before the Subcommittee on Environment and the Subcommittee on Mines and Mining in 1973 touched on many of these environmental issues. The following sampling indicates a breadth of concern behind the strong dissatisfaction with existing state regulation of surface mining, evident throughout the hearings.

20 Joe Begley (Blackey, Letcher County, Kentucky):

20 Strip mining is completely destroying the land, its hills and its people. For 130 years people here have lived hard lives, no money, no medicine, no education. They live in fear of the only industry they have known, the coal industry - and what that industry has done to the people here in the past. Now our valuable minerals and fossil fuels are being taken at even a faster rate and yet our people starve to death living on the top of a gold mine . . . Strip mining means just what it says. It strips the people of everything they have . . .

20 Russell Train (then Chairman, President's Council on Environmental Quality):

20 Additional damage can occur from strip mining - devastated wildlife habitat, landslides, slit and acid choked streams, and a blighted landscape. In particularly rich farmland, area strip mining can adversely affect future fertility, as it can the opportunities for revegetation in the arid West.

20 Dr. Moid Ahmad (Professor of Hydrology and Geophysics, Ohio University):
Satellite pictures indicate that the scars due to strip mining are deep and permanent and show that the soil and hydrological characteristics are different than the surrounding land. Strip mines are producing acid water, salty water in the West, and toxic elements. They will continue to produce these for a long time.

21 Liane B. Russell (Tennessee Citizens for Wilderness Planning):

21 We supported passage of the Tennessee Strip Mine Law of 1967; and when this law and its enforcement proved to be quite inadequate to control the ravages of ever-increasing strip-mining in our State, we drafted and supported strong, yet still moderate, State legislation . . . We have also been in frequent contact with the Division of Surface Mining and Reclamation of the Tennessee Department of Conservation in an attempt to promote strong administration. These State efforts have been only partially successful, both at the legislative and administrative level.

21 E. A. Nephew (Oak Ridge Laboratory, Oak Ridge, Tennessee):

21 There is much that can be learned from the German experience in restoring surface mine lands. Their program has been in effect for some twenty years and has helped greatly to minimize social dislocations and environmental damage from brown coal mining.

21 Ernest Preate (Attorney, Scranton, Pennsylvania):

21 To often in the past the purpose has been to shut (citizens) out of participating in these extremely important matters with a result that abuse and non-enforcement of State surface mining laws has created the very groundswell of public opinion which has necessitated this committee and this Congress focusing their attention on this problem . . . with respect to the drafting of a strong Federal surface mining law.

21 James L. Coen (Blacksburg, Virginia):

21 It is my belief that the State government itself is either unwilling or unable to deal with the problems strip mining presents. The failure of the Virginia Legislature to pass the minimal regulatory bill is quite indicative of the situation. When our State officials fail to provide for the needs of its constituency, we must turn to our Federal Government for relief.

21 Robert Handley (President, Coal River Improvement Association, West Virginia):

21 (Answering a question as to whether it is his impression that, whatever the wording of the law in West Virginia or the way it is administered, the primary criterion is to enable the operator to maximize his profit) "I think that is unquestionable."

22 James W. McGlothlin (President, Tri-County Independent Coal Operators Association, Grundy, Virginia):

22 The majority of my membership and myself included favor a very strong reclamation program. It will no doubt be expensive, however, I think that the cost of that is going to be borne by every citizen in the Nation if they decide to use electricity from coal. I really favor a Federal program to cause each State to pass a reclamation law and cause each State to enforce it.

22 Walter Heine (Associate Deputy Secretary for Mines and Land Protection, Pennsylvania Department of Environmental Resources):

22 We would welcome wise Federal legislation in the area of surface mine control so that the unfair competitive advantage now enjoyed by States which are allowing poorly regulated strip mining to devastate the countryside, will not continue. Some of these State programs have been quite ineffective because of weak laws, inadequate funding, and frankly, political interference.

22 Henry Clandillon Phibbs II, Sierra Club, Wilson, Wyoming):

22 In Wyoming, there is another factor which makes Federal action imperative. This is the simple fact that the Federal government owns roughly 50 percent of Wyoming's land surface and roughly 70 percent of its minerals. It is a fundamental Federal responsibility to protect and utilize these land and mineral resources for the immediate and long range benefit of the entire country. This is not a question that can be left to the individual states.

22 Bruce Hagen (Commissioner, North Dakota Public Service Commission):

22 Governor Link says he wants to emphasize that our State law only covers privately owned and State lands, and he believes that Federal legislation is urgently needed to cover all lands that are surface mined in the United States.

22 As this sampling of testimony shows, the social and environmental side-effects of coal surface mining and the related failure of State regulation to provide an adequate degree of protection, are matters of widespread concern.

At the present time when world food shortages are placing increasing pressures on America's once-overabundant food and fiber production, the Nation cannot afford to lose any productive range and farmland. Neither can the Nation afford to waste prime timberland, nor jeopardize the shrinking water resources of its river systems, whether in the Rockies or in the Appalachians. The likelihood of a materials scarcity and the possibility of public health problems resulting from contaminated or depleted water supplies, should serve to emphasize the foolhardiness of continuing on the present course in coal surface mining regulation.

23 A NATIONAL ISSUE

23 Across the Nation, church organizations, environmental and public interest groups and others have reacted against the excesses of coal surface mining by pressing for enactment of Federal legislation outlawing this method of coal mining. These groups claim that reclamation has been shown to be neither feasible nor enforceable. Some industrial groups are equally opposed to strong Federal enforcement of environmental standards for coal surface mining.

23 The Committee has taken the position that coal surface mining is essential to fulfilling the Nation's energy requirements. The Committee is equally convinced that equity requires that environmental and social costs which have heretofore been relegated to off-site property owners and to the community at large, must be borne by the producers and users of coal. The means of accomplishing such restitution is through a system of minimum Federal enforcement standards established in the Act to protect environmental values and property rights.

23 STATE REGULATION OF COAL SURFACE MINING

23 Although strip mining legislation has been enacted by many States a recent survey of selected State laws reveals that such legislation has failed to cure the environmental abuse associated with strip mining - the laws are, in many cases, simply inadequate.

23 The survey, compiled by John C. Doyle of the Environmental Policy Center (a Washington-based organization that favors enactment of national strip mining legislation) demonstrates that even recently enacted or modified strip mining laws fail to measure up to industry's claim that the States now provide adequate protections.

23 For example, in one State not only can revegetation be deferred until the

"soil has become suitable" for planting (a sort of self-fulfilling prophecy as it is improper mining techniques that can make the soil unsuitable in the first place), but revegetation of current mining sites can be waived completely if the operator agrees to revegetate some other previously mined area. Of the other States examined in this report, many still fail to prohibit highwalls (leaving an inherently unstable and hazardous condition), allow the irresponsible placement of spoil on steep mountain slopes, fail to require sufficient information about the mining and reclamation proposal, fail to give interested citizens notice or access to the decisionmaking process, tie the hands of the regulatory authority with unreasonable burdens, and are otherwise inadequate.

23 Of course, there are strengths in many of these laws and some States have implemented tough mining reclamation standards. But, on the whole, it is still true that States are disinclined to impose tough standards on their own industry because this puts local business at a competitive disadvantage. State officials are not unconcerned about environmental preservation or the protection of human health and safety, but as State regulation tends to seek the lowest common denominator, the answer to this dilemma lies in the enactment of Federal standards applicable to all operations.

23 The reasons for the failure of State regulation vary from State to State. One factor in the disappointing record of State regulation is that the State regulatory machinery has been unable to keep pace with the rapidly growing industry. Even where State law is strong and unambiguous enforcement agencies have often been under-staffed, under-equipped and under-financed. Political influence is another factor in the failure of State regulation. Subtle or otherwise, it is often used to moderate enforcement of State laws. In States where the coal industry dominates the economy as a major source of jobs and taxes, powerful leverage is available.

24 Some studies have examined the effectiveness of coal surface mining regulation in two States, Kentucky and West Virginia. In 1972, the Stanford Research Institute completed a study for the West Virginia legislature, which was then considering legislation to outlaw surface mining of coal. This study indicates that although West Virginia coal surface mining had been under continuous State surveillance since 1941, the results of reclamation requirements were not impressive. The amount of vegetative cover was selected as the prime indicator of overall effectiveness of reclamation required by the State, and on that basis, a 75 percent vegetative cover was considered acceptable. The results were as follows:

24 A total of 6,565 linear miles (248,078 acres) were disturbed by contour strip mining in West Virginia as of October 1971. However, mining affects lands beyond the limits of the mines themselves. These affected areas could be from 3 to 5 times the area disturbed in mining or from 744,234 acres to 1,240,390 acres.

24 A total of 2,868 linear miles (109,613 acres) had less than 50 percent cover and were classified as not reclaimed. An additional 2,001 miles (76,463 acres) had more than 50 percent cover from natural sources. However, if the standard measurement for natural revegetation were raised to 75 percent cover, most lands would be considered not reclaimed since they have less than this value. If added to the acres with less than 50 percent cover, more than 71 percent of all surface mined land would be considered not reclaimed . . .

24 In reviewing the policy decisions which led up to this result, the Stanford Report comments "the Executive Branch has taken the position that there is no specific proof or evidence that surface mining causes certain types or degrees of environmental damage, although environmental consequences are acknowledged. In the absence of being able to provide such proof, the Executive Branch has interpreted the statute to apply the operational letter of the law, regardless of the environmental consequences . . ."

24 A second study, sponsored by the Appalachian Regional Commission and the Commonwealth of Kentucky, Department for Natural Resources and Environmental Protection, was completed by Ford, Bacon & Davis of New York for Mathematica, Inc., of Princeton, New Jersey. The focus of this study is on surface mining and reclamation technologies and the economics thereof. However, some observations of State regulatory efficiency and recommendations for improvements were offered in the course of the study. In referring to a marked disparity between the record of violations per inspection (taken as an indicator of the alertness of State inspectors (as shown for different inspection areas, the study noted that the disparity was eventually acknowledged to be the result of "widespread corruption and inefficiency" in the inspection area in question. "Division personnel claim knowledge of this prior to disclosure, but noted their inability to deal effectively with the situation because of political constraints," the study comments.

25 Apart from the deficiencies of State regulatory systems (although some, to be sure, function with marked efficiency) perhaps the greatest handicap faced by conscientious State regulators consists of the very real possibility of job and tax loss to the State if its laws are strictly enforced so as to drive surface mine operators into more lenient neighboring States. The ease with

which small surface mining equipment can be transported long distances, and the relative simplicity of gaining access to coal for surface mining operations, allows many Eastern operators a high degree of flexibility as to where and when they will mine coal. Only Federal regulation establishing uniform requirements can deal with this situation.

25 The obvious inability of the States to develop any coherent, comprehensive national or regional policy covering the surface mining of Federally-owned coal or coal under Indian lands is a further limiting factor related to the broader aspects of regulation already mentioned. Federal grants to the States and Federal enforcement standards uniformly applied to provide the necessary minimum protection of environmental values and off-site properties will ensure continuance of coal surface mining to meet the energy needs of the Nation, and will also eliminate many if not all of the regulatory problems which have plagued the States and frustrated citizens of the coal-producing regions.

25 SURFACE MINING METHODS AND TECHNIQUES

25 In contrast to underground coal mining (which requires removing coal from the earth), surface mining consists of removing earth from the coal. If the size of the coal deposit justifies the cost of large equipment, surface mining operators may penetrate the surface to a depth of 500 feet or more. Equipment depends upon the terrain, the ratio of coal to overburden, and the value of the coal deposit per acre. In general, there are three broad categories of surface mining operations: contour, area and open pit.

25 Contour mining occurs on steep terrain, the steepness being defined differently state by-state. In the mountains of Appalachia where contour mining is prevalent, the operator excavates a portion of the hillside (the "first cut") on the coal seam where it intersects with the surface. He then proceeds to strip off the overburden, following the seam along the contour and excavating as far into the mountain as may be profitable. Component parts of a contour mine are: The "bench," or flat area from which the coal is removed; the "outslope" or spoil bank, consisting of overburden material which has been cast over the downhill side of the bench; the "highwall," a more or less vertical bank marking the inner limit of the bench; and the "haulroad" which permits access to the mine site. "Augering," or drilling into the coal seam under the highwall to recover more of the coal, frequently accompanies contour mining.

26 A variant of contour mining is called "mountain-top removal". This method of mining proceeds entirely through the elevation, following the coal seam. It permits nearly complete recovery of the coal seam, or of multiple coal seams if done sequentially. The overburden is placed downslope in the so-called "head-of-the-hollow fill." The end result is not a serpentine bench and highwall but rather a flat area comprising the "solid bench" from which the coal has been removed, and the contiguous "fill bench" where the overburden has been deposited.

26 Area mining occurs on flat or rolling country-side, which may include relatively steep areas, depending on the size of the equipment being used. Overburden is piled to one side in a ridge on the area from which coal has been removed. This continuous backfilling results in a furrowed mine site terminating in a ditch and a highwall which marks the final "cut", usually at the limit of the disturbed area. Area mining is practiced in the western Appalachians and in the Midwest and West.

26 Open pit mining is similar to area surface mining in some respects. Except for one or two special cases in the West, this type of mining does not resemble deep open pit copper mines. The term "pit" is appropriate mainly because the ratio of overburden to coal is small as compared to the ratio found in area surface mining (i.e., the thickness of coal removed is greater than the thickness of the overburden removed). As a result, the amount of overburden is insufficient to fill the pit and a depression or hollow configuration is the end product.

26 Surface mining equipment includes bulldozers used to provide access to the site and to prepare coal for loading, as well as drill rigs used to bore holes in which explosives are detonated, shattering the overburden. The most costly part of the operation is removal of the overburden, which is accomplished in contour mining with front-end loaders or small power shovels. On bigger operations requiring massive movements of rock and soil, giant drag-lines, wheel excavators and power shovels are preferred (Big Muskie, the world's largest drag-line, based near Cumberland, Ohio, weighs 27 million pounds and is capable of moving 325 tons of rock at a time). Smaller shovels and front-end loaders generally load the exposed coal into trucks which may carry as much as 200 tons per trip. Some mechanical augers are able to drill horizontally 250 feet into the coal seam, in the process removing coal from under the highwall. Transportation of the coal to final destination is usually by train or barge.

26 Following removal of the coal, reclamation of the mining site takes place, in two phases. First comes the back-filling, drainage and regrading

required to achieve the desired configuration of the surface and proper drainage of water on or under it. Next comes revegetation: the preparation of topsoil, fertilization, cultivation, and seeding or planting desired species. Special equipment designed to spray a mixture of fertilizer, seed and mulch is widely utilized either with trucks or with helicopters for revegetation on rough terrain.

27 Both regrading and revegetation must be integrated into the total mining plan of the operator. The most serious off-site environmental impacts result from exposure of overburden to the weather with consequent erosion, sedimentation, siltation, acid drainage, landslides, and leaching of toxic chemicals. The essence of good reclamation therefore consists of reducing as much as possible the time from initial disturbance of the land surface to the successful re-establishment of a vegetative cover, to achieve which, performance standards relating to environmental protection must be carried on concurrently with the mining operations, except under special circumstances.

27 New surface mining methods, such as mountain-top removal, are generally modifications of existing methodology, made possible by the increased versatility of different types of self-propelled machinery now available. Combinations of rubber-tired and tracked vehicles together with semi-stationary equipment such as augers, are often used to great effect. Most of this equipment has been adapted from the construction industry and in fact is sometimes used interchangeably.

27 Aside from the development of safe, powerful explosives replacing nitroglycerine, perhaps the most significant development in coal surface mining during the past decade has been its enhanced earth-moving capability. The range of existing technology needs to be brought fully to bear upon accomplishing rapid and effective reclamation of disturbed areas, as regards both current operations and, in addition, those areas which have been improperly reclaimed in the past and abandoned.

27 In the humid East, retention of overburden material on the bench, avoiding all unnecessary placement of unconsolidated material on steep slopes, would contribute most significantly to the elimination of slides, sedimentation, siltation and other off-site effects which threaten downstream areas. The basic concept embodying this principle is returning the mining site to its approximately original contour.

27 Approximate original contour is equally valid when applied to midwestern and western coal surface mining, inasmuch as the concept includes the idea of

blending the site into the surrounding terrain to the greatest degree possible.

It also embodies conformity to the prevailing hydrologic pattern. Because low

rainfall and erodability of soil severely handicap reclamation efforts in the West, minimizing the impacts to the hydrologic balance of the mine site and surrounding area takes on special significance in assuring that the reclamation objectives of the Act are met.

27 The emphasis on return to the approximate original contour, should not obscure the fact that the appropriate methodology will vary from site to site.

Responsibility for devising methods for reaching any necessary reclamation goals

should be left up to the operator. Within the limits of economic constraints,

the available equipment and his own ingenuity, the surface mining operator will

develop whatever approach best suits his needs and the peculiarities of his

mining site. Considering the remarkable increase in productivity which economics of scale and adaptation of suitable equipment have achieved in coal surface mining, and considering the novel means for handling overburden being practiced in some States, new reclamation techniques will certainly be forthcoming to meet higher reclamation requirements.

28 TIMELINESS OF FEDERAL REGULATION

28 A primary constrain upon the coal industry in discharging its reclamation

responsibilities has been the poor competitive position of coal relative to oil

and natural gas. In the 1940's and 1950's the industry experienced the trauma

of losing its steamship market to oil. Subsequently, the switch of railroads to

diesel engines and the relinquishment of the home heating market to oil and gas

further stunted the growth of the coal industry. Economic depression haunted the coal fields for years, held at bay only by expansion of the electric utility

market for high sulfur-low Btu steam coal, and by rising demand of Canadian, Japanese, and other foreign steel mills for high Btu-low sulfur metallurgical coal.

28 This picture has altered radically since the onset of the national energy

crisis precipitated by the Arab oil embargo. The Nation's dangerous overreliance on imported oil and the parallel inadequacy of its domestic oil and

natural gas supplies have brought about a general awareness that increased development of our coal reserves is necessary to provide for economic and national security needs. The Federal Government has responded to the crisis with a series of proposals designed to insure a long-range, continuous demand for coal.

28 The Federal Energy Administration has instituted a program calling for the conversion, where possible, of electric power generating plants to coal consumption. And the Energy Conservation and Oil Policy Act of 1975 extends the FEA's mandate. In the 93d Congress, the Energy Research and Development Appropriations Act was approved. The ERDA budget for fiscal year 1977 includes \$4 05 million for coal research and development while the Department of Interior requested \$1 01 million for the coal programs in the Bureau of Mines and the U.S. Geological Survey (see table No. 11). A large portion of these funds are earmarked for coal gasification and liquefaction projects. Other funds are to be expended on stack gas emission removal technology to enable the burning of medium- and high-sulfur coal by electric utilities which are currently finding the availability of adequate sources of low-sulfur coal conforming to the requirements of Federal air quality standards limited.

28 These Federal programs signal a widespread commitment to the development and utilization of coal in the Nation's energy future. The coal industry has responded to this renewed interest with major increases in prices (see table No. 12). The f.o.b. price of coal for example, increase 85 percent from 1973 to 1974 while coal production increased 2 percent during that period. The import of these recent events is to belie the claim that fluctuations in demand for coal and concomitant price uncertainties make the cost of reclaiming surface mined land economically unacceptable. For although prices may fluctuate, the demand for coal will increase.

*2*TABLE No. 11. - Research and development funds for coal as authorized in the Presidents budget for fiscal year 1977

Energy Research and Development Agency:	
Liquefaction	\$73,900,000
High Btu gasification	42,200,000
Low Btu gasification	33,000,000
Advanced power system	22,500,000
Magnetohydrodynamics	37,400,000
Direct combustion	52,400,000
Advanced research and supporting technology	37,100,000
Demonstration plants	107,200,000
Total	405,700,000
Bureau of Mines:	
Coal mining health and safety R. & D	29,601,000
Advanced coal mining technology	59,960,000
Mined land investigation and demonstrations (anthracite)	3,831,000
Drainage of anthracite mines	200,000
Total	93,592,000
U.S. Geological Survey:	
Coal resource investigation	2,873,000
Federal coal hydrology program	3,174,000

Federal State cooperative coal	2,000,000
Hydrology program	8,047,000

29 Source: Department of the Interior and the Energy Research and Development Agency.

29 Because the industry can be confident that the Federal government is committed to a program of research and development which will vastly expand the market for coal, the future for the industry is assured. The coal industry can also be assured of a reasonable return on its investment. On a per-Btu basis, coal is now the cheapest of all of our energy resources. (See Table No. 13).

29 Thus the argument that reclamation is prohibitively expensive, if it was ever valid, is certainly no longer so. With respect to the most stringent performance standards, namely those associated with returning the mining site to the approximate original contour, recent studies have shown that even in the steepest Appalachian terrain, reclamation according to these requirements is economically feasible using currently available equipment. There is evidence, in fact, that compliance in some cases increases profitability to the operator.

29 A report by the President's Council on Environmental Quality entitled "Coal Surface Mining and Reclamation; An Environmental and Economic Assessment of alternatives" states that:

29 . . . the cost of advanced reclamation techniques are small compared to the market value of coal, e.g., only three to nine percent of the price of coal at the mine. In fact, since coal can be produced by surface mining in Appalachia for \$0.75 to \$2 .50 per ton less than by underground mining, the competitive position of surface mined coal would not deteriorate even at the highest range of reclamation costs.

30 (See Table No. 14).

30 The rise in the price of coal give this statement even greater emphasis. Responsible spokesmen within the industry have pointed out that reclamation costs are economically acceptable. For example, a report entitled "Coal and the Energy Shortage" presented by the Continental Oil Company, (of which Consolidation Coal Co., the Nation's second largest producer of coal is a wholly owned subsidiary) states that:

30 even taking the largest of these (reclamation) costs would add only two to three percent to the average residential electric bill.

30 A recent study done by Mathematica, Inc., of Princeton, New Jersey, entitled Design of Surface Mining Systems in the Eastern Kentucky Coal Fields, (January 29, 1974), states that the estimated average total reclamation costs for surface mined land in Eastern Kentucky is \$16 65 per disturbed acre. The report points out that this cost ". . . is equivalent to approximately \$0 .32 per ton based on the oft-used estimate of 0.5 disturbed acres per 1,000 tons of coal produced. Note that this estimate excludes charges for depletion and depreciation, since these are not true cash flows. If, however, these charges were included, estimated reclamation costs would be about \$0.38 per ton."

30 Recent coal price increases unrelated to reclamation costs have already added considerably more than this amount. Bituminous coal prices (f.o.b. mine) rose over 50 percent between 1969 and 1971, according to "Bituminous Coal Data" for 1972, issued by the National Coal Association and 112.1 percent between 1971 and 1974, according to the preliminary figures of the Bureau of Mines. Federal Power Commission figures show an almost 100% increase in coal prices paid by utilities between October, 1973 and October, 1974. (See Table 13, p. - and Table 15, p. -). Moreover, there is evidence that the price increases have yielded substantial profits. Drs. James R. Barth and James T. Bennett in a paper entitled "An Economic Analysis of Price Increases in the U.S. Coal Industry", summarize their findings as follows:

30 . . . Coal prices remained relatively stable during the period 1958-1968, but since that time enormous price increases have occurred. These price increases cannot be fully explained by increases in the cost of production, for unit labor cost increases are of much smaller magnitude than price increases. Nor do available data indicate that the coal operators were attempting to rapidly expand output, for the evidence indicates that in recent years the industry has operated substantially below normal capacity. These finds are summarized in Figure 1.

31 [See Original]

32 From Figure I, it is evident that employment and output since 1967 have remained relatively constant. Admittedly, average weekly earnings have increased, but prices have risen far more dramatically. On the basis of Figure 1, one finds that output in 1971, 1972, and 1973 was below the level of 1970. It, therefore, cannot be argued that these price increases can be explained entirely by shortages of coal or by excess demand. A review of the available data on profits of coal companies and coal operating companies reveal tremendous increases in profits. Thus, price increases have been translated into profits.

The fact that the price of coal is and is likely to remain unrelated to the cost of production is further supported in the Coal Supply Potential Task Group Report, prepared by the Federal Energy Administration. This report states that at least for the near term, (1975-1978) the " . . . equilibrium price of coal may be set by competitive forces of competing fuels and most particularly oil, rather than by the cost of production and normal competition within the coal industry."

32 It therefore appears that the industry can absorb any increased costs of reclamation consistent with the standards of the Act. (See Tables No. 16(a) and (b).) When analyzing the price of reclamation one must consider the opportunity costs of surface mining incurred when arable land is rendered unusable and water resources are lost.

32 RESEARCH AND TRAINED TECHNICIANS

32 The consequences of dependence on foreign powers for one of the basic mineral fuels - petroleum - has been brought home to Americans; but that dependence does not stop with petroleum. In 1974, minerals and mineral fuels accounted for an estimated \$2 3 billion deficit in the U.S. balance of trade. An increase of \$1 5 billion over 1973. The thrust of title III of the Act is not an immediate solution to the energy crisis as a whole or to the specific problems of extraction, reclamation, and processing of minerals and fuels, in particular. Its purpose is to assure that the U.S., in the future, will have the research base, the technological capability, and the qualified manpower to avoid repeated crises of mineral supply and technology. Only thus can it avoid disadvantageous dependence upon foreign sources for these items so critical to its domestic welfare.

32 The need to provide a more adequate national program of mining and minerals research through the establishment of mining and minerals research centers is documented in House Report No. 92-1028. The Report focused upon the expanding consumption of non-renewable resources in the United States; the failure of the U.S. to develop mineral and mineral fuel technology at a rate fast enough to cope with increased consumption; and, finally, the current inadequate and decreasing supply of trained manpower in the mineral engineering fields.

33

*5*TABLE 13. -
COST OF COAL
VERSUS OTHER
HYDROCARBON
ENERGY
RESOURCES AS

USED IN THE
GENERATION OF
ELECTRICITY,
OCTOBER
1973-OCTOBER
1975

prices percentage of	Quantity delivered	Percent of total Btu's	Average price (cents per million Btu's)	C Coal
				as a of the cost of other fuels
October 1973:				
Coal (thousand tons)	33,600	56.1	41.9	
Oil (thousand barrels)	44,800	20.6	88.9	47.0
Gas (million cubic feet)	302,600	23.3	35.5	118.0
October 1974:				
Coal (thousand tons)	38,900	60.1	80.9	
Oil (thousand barrels)	43,300	19.1	198.9	41.0
Gas (million cubic feet)	284,600	20.8	53.2	152.0
October 1975:				
Coal (thousand tons)	40,200	64.2	81.5	
Oil (thousand barrels)	35,900	16.2	198.1	41.0
Gas (million cubic feet)	260,300	19.6	85.5	95.0

33 Source: Federal Power Commission.

*6*TABLE 14.

- ESTIMATED
INCREMENTAL
PRODUCTION
COSTS FOR
VARIOUS
RECLAMATION
COSTS

*4*Costs of
reclamation,
cents/ton

per acre Appalachia region:	Calculated production per acre mined n1	\$1,000 per	\$2,000 per	\$3,000 per	\$4,000
		mined acre	mined acre	mined acre	mined
Alabama	4,030	24.8	49.6	74.4	99.2
Kentucky					

(eastern)	4,460	22.4	44.8	67.2	89.6
Ohio	5,330	18.8	17.6	56.4	35.2
Pennsylvania	4,610	21.8	43.6	65.4	87.2
Tennessee	4,180	24.0	48.0	72.0	96.0
Virginia	5,900	17.0	34.0	51.0	68.0
West Virginia	7,060	14.2	28.4	42.6	56.8
Average	5,080	20.4	40.8	61.2	81.6
Central region:					
Illinois	7,200	13.8	27.6	41.4	55.2
Indiana	6,620	15.0	30.9	45.0	60.0
Kentucky (western)	7,340	13.6	27.2	40.8	54.4
Average	7,050	14.2	28.4	42.6	56.8
Western region:					
Colorado	12,100	8.2	16.4	24.6	32.8
Montana n2	66,100	1.6	3.2	4.8	6.4
Wyoming	66,100	1.6	3.2	4.8	6.4
Average	48,000	3.8	7.6	11.4	15.2

33 n1 Based on density of 1,440 tons of bituminous coal per acre-foot at 80 percent recovery, based on 1960 data.

33 n2 Montana entry changed to reflect mining of subbituminous coal in Power River Basin.

33 Source: Advanced from Surface Mining and Our Environment, Department of Interior, 1967, p. 114. Coal Surface Mining and Reclamation An Environmental and Economic Assessment of Alternatives, Council on Environmental Quality.

5

TABLE
15. -
AVERAGE
VALUE
OF
BITUMINOUS
COAL
5 [
Per
ton
f.o.b.
mine]

Year	Strip mines n1	Auger mines	Underground mines	Total all mines
1940	\$1.56		\$1.94	\$1.91
1945	2.65		3.16	3.06
1950	3.87		5.15	4.84
1955	3.48	\$3.60	4.86	4.50
1956	3.74	4.17	5.20	4.82
1957	3.89	4.12	5.52	5.08

1958	3.80	3.60	5.33	4.86
1959	3.76	3.83	5.23	4.77
1960	3.74	3.37	5.14	4.69
1961	3.67	3.24	5.02	4.58
1962	3.64	3.33	4.91	4.48
1963	3.57	3.25	4.82	4.39
1964	3.55	3.35	4.92	4.45
1965	3.55	3.35	4.93	4.44
1966	3.64	3.58	5.05	4.54
1967	3.68	3.59	5.18	4.62
1968	3.75	3.53	5.22	4.67
1969	3.98	3.81	5.62	4.99
1970	4.69	6.08	7.40	6.26
1971	5.19	6.57	8.87	7.07
1972	5.48	6.54	9.70	7.66
1973	7.03	7.39	10.84	8.53
1974	11.11	16.99	19.86	15.75
1975				
n2	15.00	15.00	25.00	18.75

33 n1 Includes power strip pits proper and excludes horse stripping operations and mines combining stripping and underground in the same operation

1940. Includes data on all strip mines subsequent to 1940.

33 n2 Estimates for 1975 with strip and auger mines calculated together.

33 Source: National Coal Association "Bituminous Coal Data" 1972 edition, and U.S. Bureau of Mines.

*3*TABLE 16. - (A) INCREASED PROFITS OF SELECTED MAJOR INDEPENDENT COAL PRODUCERS 1969-70

*2*Profits as percentages of sale

	1969
1970	
Pittston	4.1
6.9	
Westmoreland Coal Co.	1.5
5.2	
North American Coal Co.	2.9
3.4	
Eastern Gas & Fuel	5.8
7.7	

33 Source: "Concentration by Competing Raw Fuel Industries in the Energy Market and its Impact on Small Business," hearings before the Subcommittee on Special Small Business Problems of the Select Committee on Small Business, House

of Representatives, 92d Cong., 1st sess., vol. 1, p. 41.

*4*TABLE 16. - (B) - COAL COMPANY SELECTED PROFITS, 3D QUARTER 1973 VERSUS 3D QUARTER 1974

	3d, 1973	3d, 1974	Percent change (sic)
Pittston	\$3,100,000	\$27,500,000	787
Westmoreland Coal Co.	1,030,000	12,800,000	1,242
Consolidation Coal Co.	200,000	15,900,000	7,850

Island Creek

929,000 35,200,000 3,690

33 Source: American Public Power Association.

33 The Minerals Resources Research Act, which was the forerunner of title III is supported by the final report of the National Commission on Materials Policy, June 1973; and again in "Mining and Minerals Policy, 1973," Second Annual Report of the Secretary of Interior under the Mining and Minerals Policy Act of 1970.

35 It is well-known that demand for all minerals is growing rapidly, both domestically and worldwide. Most of the known, rich, easily recoverable deposits of minerals have been developed. The United States must now turn to exploration for new deposits and development of known low grade ore deposits. Research will also be needed into substitution, alternative uses of minerals, improved mining and processing technology and deep seabed mining. This effort will require an increasing amount of trained talent in the mining and minerals engineering fields.

35 The urgency of sustaining grants (on a dollar-for-dollar matching basis) and other Federal financial assistance for mining and minerals research and training centers to ward off the progressive weakening of mineral engineering disciplines in U.S. colleges and universities is evident. Neither industry, the States, nor the Federal government provide sufficient support to halt and reverse present downward trends in research and research manpower at a time when both should be expanding to meet present deficiencies and growing needs.

35 DATA ON COAL RESERVES AND LEASES

35 Tables presenting following data have been included at the conclusion of this section of the Report: Total coal reserves (see Table No. 17, p.); Federal coal leases (see Table No. 18, p.). Indian coal leases (see Table No. 19, p.).

36
*8*TABLE
17. -
TOTAL
ESTIMATED
REMAINING
MEASURED
AND
INDICATED
COAL
RESERVES
OF THE
UNITED
STATES AS
OF JAN.
1, 1970

n1
 *8*In
 beds
 28-in and
 more
 thick,
 for
 bituminou
 s,
 anthracit
 e, and
 semianthr
 acite,
 and 5 ft
 or more
 thick for
 subbitumi
 nous and
 lignite
 beds -
 Million
 tons]
 5
 Remaining
 measured
 and
 indicated
 reserves

State	Measured				Total	Total - All ranks	
	Bituminou s	Subbitumi nous	Lignite	Anthracit e semianthr acite		more than 14 in and	and as
percent total	percent	percent	percent	percent	percent	percent	percent
Alabama	1,731	0	n(2)	0	1,731	13,444	12.9
Alaska	667	5,345	n(2)	n(4)	6,012	130,087	4.6
Arkansas	3 13	0	n(2)	67	380	2,420	15.7
Colorado	8,811	4,453	0	16	13,280	80,679	16.5
Georgia	18	0	0	0	18	18	100.0
Illinois	60,007	0	0	0	60,007	139,372	43.1
Indiana	11,177	0	0	0	11,177	34,661	32.2
Iowa	2,159	0	0	0	2,159	6,513	33.1
Kansas	328	0	0	0	328	18,678	1.8
Kentucky west	20,876	0	0	0	20,876	36,482	57.2
Kentucky east	11,049	0	0	0	11,049	28,850	38.3
Maryland	557	0	0	0	557	1,168	47.7
Michigan	125	0	0	0	125	220	56.8
Missouri	12,623	0	0	0	12,623	23,339	54.1
Montana	862	31,228	6,878	0	38,968	221,698	17.6

New Mexico	1,339	779	0	2	2,120	61,455	3.4
North Carolina	n(5)	0	0	0	n(2)	110	0
North Dakota	0	0	36,230	0	36,230	350,649	10.3
Ohio	17,242	0	0	0	17,242	41,568	41.5
Ok lahoma	1,583	0	0	0	1,583	3,195	49.5
Oregon	n(6)	n(6)	0	0	n(6)	332	0
Pennsylv nia	24,078	0	0	12,525	36,603	69,686	52.5
South Dakota	0	0	757	0	757	2,031	37.0
Tennessee	939	0	0	0	939	2,606	36.0
Texas	n(6)	0	6,870	0	6,870	12,918	53.2
Utah	9,155	150	0	0	9,305	32,070	29.0
Virginia	3,561	0	0	125	3,686	9,817	37.3
Washingto n	312	1,188	0	0	1,500	6,183	24.3
West Virginia	68,023	0	0	0	68,023	101,186	67.3
Wyoming	3,975	25,937	n(3)	0	29,912	120,684	24.8
Other States	n(6)	n(6)	46	0	46	4,721	1.0
Total	261,510	69,080	50,781	12,735	394,106	1,556,840	25.3

36 n1 Figures are reserves in ground, about half of which may be considered recoverable. Includes all beds under less than 1,000 ft of overburden and over 28-in bed thickness for bituminous and anthracite and 5 ft or more for subbituminous and lignite.

36 n2 Small reserves of lignite in beds less than 5 ft thick.

36 n3 Small reserves of lignite included with subbituminous reserved.

36 n4 Small reserves of anthracite in the Bering River field believed to be too badly crushed and folded to be economically recoverable.

36 n5 Negligible reserves with overburden less than 1,000 ft.

36 n6 Data not available to make estimate.

36 Source: "U.S. Energy Outlook, Coal Availability," National Petroleum Council, 1973.

*3*TABLE 18 - COAL LEASES

ON FEDERAL LANDS

State	Number of leases	total acreage
Alabama	1	200.00
Alaska	5	2,753.14
California	1	80.00
Colorado	111	120,905.56
Montana	17	36,232.27
New Mexico	29	41,038.12
North Dakota	19	16,275.75

Oklahoma	53	87,013.56
Oregon	3	5,403.18
Utah	194	266,632.49
Washington	2	521.09
Wyoming	89	199,701.04
Total	524	776,756.20

36 Source: U.S. Geological Survey.

37

TABLE 19. - Coal leases on Indian lands

Leases	Type of mining on producing leases
1. Peabody Coal Co.:	
Hopi-Navajo (Arizona):	Surface mining.
(a) Hopi-Navajo, 40,000 acres	Surface mining.
(b) Navajo, 24,858 acres	Surface mining.
Southern Ute (southern Colorado), 19,452 acres	Surface mining.
Northern Cheyenne (southeastern Montana), 6 leases, 16,035 acres	Surface mining. Surface mining.
2. Utah International, Inc.: Navajo (northwestern New Mexico), 31,416	Do.
3. Pittsburg & Midway Coal Mining Co.: Navajo (westtana), 13,237 acres	Do.
4. El Paso Natural Gas Co., and Consolidation Coal Co.: Navajo (northwestern New Mexico), 40,287 acres	
5. Westmoreland Resources: Crow (southeastern Montana), 2 leases, 30,876 acres	Do.
6. American Metals Climax: Crow (southeastern Montana), 14,237 acres	Do.
7. Shell Oil Co.: Crow (southeastern Montana), 30,248 acres	

Source: Bureau of Indian Affairs.

MINERAL COVERAGE

37 Like its predecessors S. 425 and H.R. 25, H.R. 13950 carries forth the decision of the 93rd Congress regarding mineral coverage.

37 Legislation introduced in the 93rd Congress and referred to the Interior and Insular Affairs Committee included bills covering (1) only surface mining for coal, (2) surface coal mining and the surface effects of underground coal mines, and (3) surface mining for all minerals including the surface effects of underground mines.

37 The case of controlling the environmental impacts from surface coal mining can be readily made from the experience of strip mining in the

Appalachian and Mid-West coal fields. The potential for irreparable environmental damage in the West clearly exists since it is not now known what the long-term effects of area mining will be and whether successful revegetation can be achieved.

37 Moreover, the necessity to include regulation of the surface effects of underground coal mining has been highlighted by the occurrence of such disasters as the Aberfam mine waste landslide in England in the Fall of 1966 and the collapse of a mining waste pile impoundment at Buffalo Creek, West Virginia, in 1972. Other hazards to the environment and human health and safety associated with underground mining include: surface subsidence and the spontaneous combustion of and long-term land and air pollution resulting from the disposition of mining wastes. In addition, the adequate control of surface mining environmental impacts in areas with an extensive mining history may require the concomitant regulation of the surface effects of underground mining because actual operations often combine surface and underground mines either on a contemporary or sequential basis.

37 Surface mining of minerals other than coal also presents environmental issues. The Committee found however, that the numerous distinctions between the mining technologies and associated environmental problems of coal surface mining as opposed to surface mining of such minerals as copper, iron and molybdenum militated against inclusion of all minerals in a single bill. The Committee however, did adopt a separate title which is applicable to such minerals. Title VI discussed elsewhere in this report, addresses the serious problem of the development of minerals owned by the Federal Government in residential or urban areas or other locations that are inappropriate from a rational land use planning viewpoint.

38 FLEXIBILITY

38 Flexibility is a necessary element in a rational program of surface mining regulation. While performance standards should be cast in terms of general applicability, the Committee recognizes that land use considerations may justify a variance from the general standard or that a variable standard should be implemented in recognition of the distinctions in climate, terrain, and other physical features. While the bill allows variances or exceptions to the general standards, care has been taken to ensure that such exceptions have not been so broadly drafted that the exception could become the rule.

38 The bill is built upon the Committee's finding that in the vast majority of cases, certain reclamation goals must be achieved if the term "reclamation" is to have any real meaning. Nevertheless, the Committee has approved exceptions to these requirements to achieve flexibility and avoid arbitrary constraints. For example, the elimination of high walls, return of the land to approximate original contour, establishment of viable vegetative cover and the prohibition of dumping spoil material on mountain slopes are among the standards critical to the elimination of the worst effects of coal surface mining and yet these standards are either subject to exception, framed in variable terms, or both. Rather than weakening the effectiveness of these standards, such treatment is viewed by the Committee as justified and desirable. Workable Federal requirements must be appropriate to the mining setting and such standards should not preclude practices which are beneficial from a planning viewpoint.

38 Another element of flexibility is the avoidance of excessive detail in the requirements of the Federal performance standards. The Committee is aware, however, of the history of the development of State laws on the subject of regulation of coal surface mining. This history presents a pattern of increasingly detailed legislation and such detail is often traceable to regulations which have failed to provide full implementation of the more general performance standards of the legislation itself. The Committee believes that it has struck a balance between legislation which merely frames performance standards in terms of general objectives and standards which are cast in terms more detailed than those generally found in regulatory legislation. In choosing a middle path, the Committee is mindful of the past failures on the State level and thus bases its approval of H.R. 25 on the expectation that Federal regulations promulgated under the Act will fully implement the environmental performance standards. Obviously, the mere reproduction of the statutory environmental performance standards in the regulations would be inadequate.

39 STATE AND FEDERAL LAND PROGRAMS

39 Every State which has, or contemplates having, coal surface mining operations is provided with the opportunity to prepare a State program for the regulation of surface mining within its borders. Within eighteen months after enactment of this Act, each such State may submit its State program to the Secretary of Interior for his approval, which must substantiate the existence of appropriate State laws, adequate funding, qualified personnel, and a permit system for surface mining and reclamation operations. Sec. 503(a). The Secretary shall not approve the State program until he has held at least one

public hearing within the State, and he has received the written concurrence of the Administrator of the Environmental Protection Agency (whose views he must publicly disclose along with those of the Secretary of Agriculture and of certain other Federal agencies) and unless he has found that the State has the necessary legal authority and qualified personnel to enforce the Federal environmental protection standards and has otherwise complied with the requirements of the Act. Sec. 503(b).

39 Within six months after submission of the State program, the Secretary of Interior must either approve or disapprove it. Sec. 503(b). In case of disapproval, the State may resubmit its program within sixty days. The Secretary has another sixty days to approve or disapprove the resubmitted State program. Sec. 503(c).

39 A Federal program is to be implemented within a State only where the State fails to submit, or the submittal or resubmittal has failed to be approved by the Secretary, or where an approved State program or any part thereof is not enforced or implemented by the State regulatory agency. Sec. 504(a). The Secretary is required to receive a proposed State program even after the Federal program has been established and when received must render his decision within six months. Sec. 504(e). There is no limit placed on the number of times a State may resubmit its State plan under these circumstances.

39 The bill permits the Secretary to extend the date for the submission of a State program for 6 months if an act of the State legislature is required to comply with the act. Sec. 504(a). Operators are required to obtain permits 8 months after approval of a State program of implementation of a Federal program. Sec. 506(a). Mines operating under existing permits may continue to mine without a new permit, however, if an administrative decision has not been rendered during that period. Id.

39 Prior to the issuance of such a permit, as discussed in another portion of this report, permits must be in compliance with the interim performance standards.

39 Subject to valid existing rights the bill prohibits all surface coal mining on lands in the National Park System, the National Wilderness Preservation System, the National Wildlife Refuge System, on Federal lands within the boundaries of the national forests (exclusive of National Grasslands), or the Wild and Scenic Rivers System. On all other Federal lands, the Secretary is to prepare and implement a Federal lands program bringing all Federal mineral leases, contracts and permits into conformity with all requirements of the Act. Within six months after enactment of this Act, all

requirements of the Act must be incorporated into the terms and conditions of every Federal coal lease, permit, or contract issued by the Secretary, rules and regulations covering the preparation and submission of State programs, development and implementation of Federal programs, and the permanent regulatory procedure based on the provisions of Title V must be promulgated by the Secretary within six months after enactment of this Act.

40 The Secretary may enter into joint Federal-State programs regarding Federal lands where unusual circumstances such as checkerboard ownership patterns exist, but in no case is a State law to be pre-empted by a less stringent Federal requirement.

40 The bill addresses itself to the needs of coal consumers, in particular electric utilities which may be hard-pressed (under the twin constraints of oil shortage and Federal air quality standards) to find adequate coal supplies.

To make sure that Federally-owned coal is available to all classes of people on an equitable basis, the Act authorizes the Secretary to establish a program to assure that no class of purchasers of the mined coal shall be unreasonably denied purchase thereof.

40 Assistance to the States for implementing interim programs is provided on a non-matching basis, (Sec. 502(f) and Sec. 714(a)). Additional assistance to the States in developing, administering and enforcing their State programs has been provided on a matching basis (80 percent the first year, 60 percent the second year and 40 percent for the third and fourth years), and a wide range of other forms of assistance relating to State programs on a cooperative basis will also be available from the Secretary and from other Federal agencies. Annual appropriations (under Sec. 714(b)) beginning at \$10 million for the first fiscal year and increasing to \$2 0 million for the next two years and \$3 0 million for each fiscal year thereafter are to be available to the Secretary for these and administrative purposes.

40 STATE MINING AND MINERAL RESEARCH INSTITUTES

40 In keeping with the decision that the Federal role should be one of support and encouragement for ongoing State programs, and in view of the advisability of building on already existing institutions in order to foster the required growth of research and training in minerals engineering fields, the Committee has provided for support to the States, on a matching basis to meet this great need.

40 The rationale for establishing mining and mineral research centers for the purpose of training manpower to meet mining industry's requirements for the 1970's and 1980's is illustrated by projected demand figures supplied in a paper prepared by the National Planning Association, entitled "The Demand for Scientific and Technical Manpower in Selected Energy-Related Industries - 1970-1985". The following table summarizes that report:

per	Manpower category	Number required	
		1980	year 1970
	1985		
	Metallurgical engineers	1,900	900
		2,700	
	Mining engineers	1,400	700
		2,200	
	Petroleum engineers	7,300	5,600
		9,600	

41 By contrast, preliminary figures supplied by the National Association of State Universities and Land Grant Colleges - indicate that the supply of trained individuals in these areas will be severely deficient:

per	Category	Number graduating		
		1974	1975	year 1976
	1971			
	Metallurgical engineers	327	269	314
				285
	Mining engineers	412	388	329
				351
	Petroleum engineers	547	395	381
				398

41 Grants are to be allotted by the Secretary on a matching basis to qualified public colleges or universities for generalized research and training through the establishment of mining and mineral resources and research institutes. Grants are also authorized to institutes for particular research and demonstration projects of industry-wide application, and to undertake research into any aspects of mining and mineral resources problems related to a mission of the Department of the Interior not otherwise being studied.

41 A basic grant of \$2 00,000 for the first fiscal year, would be limited to one qualified public college or university in a State conducting research and education in minerals engineering fields. The grant in the second year would be increased to \$300,000 and to \$4 00,000 for each fiscal year thereafter for five years. An Advisory Committee on Mining and Minerals Research consisting of the heads of various Federal agencies and four knowledgeable laymen, is to be organized by the Secretary for the purpose of determining the eligibility of applicant colleges and universities and to advise the Secretary on other aspects of the program.

41 A qualified public college or university is one which has a "school, division or department conducting a program of substantial instruction and research in mining or minerals extraction or beneficiation engineering", for a period of at least two years, employing at least four full-time faculty members for such length of time. In States where more than one college or university is eligible, the Governor is to make the designation. Where a State has no eligible public college or university, the Advisory Committee is authorized to allocate that State's allotment to one private college or university which it deems to be eligible.

41 Although the institutes will conduct research in mining and mineral resources, primary emphasis is expected to be placed on the training of mineral engineers and scientists. Research may include "exploration; extraction; processing; development; production of mineral resources; mining and mineral technology; supply and demand for minerals; the economic, legal and social engineering, recreational, biological, geographic, ecological, and other aspects of mining, mineral, resources and mineral reclamation."

42 Funds for specific mineral research and demonstration projects at the institutes are to be drawn from annual appropriations of \$15 million beginning in the first fiscal year increasing by \$2 million annually for six years. These monies are to be available by application to the Secretary.

42 CITIZEN PARTICIPATION

42 The success or failure of a national coal surface mining regulation program will depend, to a significant extent, on the role played by citizens in the regulatory process. The State or Department of Interior can employ only so many inspectors, only a limited number of inspections can be made on a regular basis and only a limited amount of information can be required in a permit or bond release application or elicited at a hearing. Moreover, a number of

decisions to be made by the regulatory authority in the designation and variance processes under the Act are contingent on the outcome of land use issues which require an analysis of various local and regional considerations. While citizen participation is not, and cannot be, a substitute for governmental authority, citizen involvement in all phases of the regulatory scheme will help insure that the decisions and actions of the regulatory authority are grounded upon complete and full information. In addition, providing citizen access to administrative appellate procedures and the courts is a practical and legitimate method of assuring the regulatory authority's compliance with the requirements of the Act. Thus in imposing several provisions which contemplate active citizen involvement, the Committee is carrying out its conviction that the participation of private citizens is a vital factor in the regulatory program as established by the Act.

42 H.R. 13950 major citizen participation provisions are as follows:

42 REGULATORY PROGRAMS

42 (a) Regulations - 180 days following enactment, the Secretary is to promulgate regulations for the Act's permanent program after holding at least one public hearing. (Sec. 501)

42 (b) Approval of State plan - Prior to the approval or disapproval of a State program, or approval or disapproval of a State's resubmitted program, the Secretary must hold at least one public hearing in the State. (Section 503)

42 PERMIT PROCESS

42 (a) Permit Approval or Denial - Prior to submitting an application for a mining permit, the applicant must give notice of intention to submit such application through newspaper advertisements and a hearing on the application shall be granted upon the filing of objections to the application. (Section 513)

42 (b) Exceptions from general environmental performance standards - H.R. 13950 provides for exceptions to specific environmental performance standings relating to spoil placement, backfiling, and other specific standards. Notice and a public hearing are required before such exceptions may be granted. (Section 515(c)).

42 (c) Bond Release - After notice through newspaper advertisement, an operator may apply for a full or partial release of his permit bond. Upon the filing of objections to such release by any person with a valid legal interest, the regulatory authority must hold a public hearing on the matter. (Section 519)

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43 ENFORCEMENT

43 (a) During the interim program, the Secretary is directed to implement a program of Federal inspections to enforce the Federal interim standards. Upon the receipt of any information which may be furnished by any person, and which gives rise to a reasonable belief that the interim standards are being violated, the Secretary is to order the immediate inspection of the alleged offending operation. The person who provides the Secretary with the information is to be notified as to the time of the inspection and may accompany the inspector during the inspection. (Section 502(f))

43 (b) A provision similar to that described immediately above is operative after the interim period. (Section 521)

ELEMENTS OF MINE REGULATION PROGRAM

43 The Committee is aware of the concern expressed by some that the citizen suit provision will encourage the commencement of frivolous suits brought by those who oppose all strip mining. Obviously, judges are quite capable of dismissing frivolous suits early in the proceedings and further protection is available as the judge may require the filing of a bond or equivalent security if a temporary restraining order or preliminary injunction is granted.

43 PERMIT SYSTEM

43 In any coal surface mining regulatory system, the determination that reclamation can or cannot be accomplished in an area proposed to be mined depends initially upon the judgment of the regulatory agency. Experience has shown that without a thorough and comprehensive data base presented with the permit application, and absent analysis and review both by the agency and by other affected parties based upon adequate data, this judgment is apt to reflect the economic interest in expanding a State's mining industry. Valid environmental factors tend to receive short shrift. To meet this problem the bill delineates in detail the type of information required in permit applications in section 507 and the criteria for assessing the merits of the application in section 510.

43 The physical parameters of the mining site and its environs must be clearly set forth in the application, so as to yield an accurate picture of the geological, hydrologic, surficial, development, ecological and general land use features of the landscape which will be affected directly or indirectly by the

operator. Due to the movement of water through the environment, the hydrologic aspects of the application requirements will have the most profound implications for off-site resident and the community as a whole. Both the quantity and the quality of water supplies available to downstream users have been destroyed by the abysmal reclamation practices of coal operators in areas where the State laws were insufficient or not enforced. Except for selected information derived from test borings relating to quantitative and qualitative analysis of the coal seam, all other such information shall be open to public scrutiny, especially that pertaining to toxicity.

44 The operator must show, through the vehicle of a mining and reclamation plan, just how he intends to protect surface and ground water, (both on- and off-site) and the rights of water users.

44 As part of a detailed description of measures to be taken in conformity with the Act to prevent hazards to public health and safety, a certificate of insurance covering on-site and off-site damage and personal injury is required.

44 Section 507 requires the submission of a reclamation plan along with the permit application. The reclamation plan, the requirements for which are detailed in section 508, is a blueprint for action, revealing the degree of practicality of the operator's commitment. Post-mining land uses are to be set forth in detail along with necessary public or private support activities, so that the transition from one mode of premining land use to a possibly different mode of postmining land use is shown to be in keeping with the act and also feasible. The plan must include a time schedule indicating how each step in the procedure is to be carried out.

44 Each application will be available for public review at an appropriate place. The applicant must supply proof of newspaper notice that acquaints local residents with the location of the operation and where the application may be examined. This requirement responds to the Committee's awareness of the severe difficulty which local people frequently experience in attempting to investigate the nature of impending surface mine operations.

44 Permit approval or denial must be based on a written finding by the regulatory authority that (1) all the requirements of the act and rules and regulations of the Secretary will be met; (2) reclamation that is required by the act and the State or Federal program can be accomplished under the reclamation plan contained in the permit application; and (3) the proposed

surface mining operation, if located west of the 100th meridian west longitude would not interrupt, discontinue, or prevent farming on alluvial valley floors nor adversely affect the quantity or quality of water in surface or underground water systems that serve the valley floor (unless the area is subject to one of the exceptions set forth in section 510(b)(5)).

44 In its review of the application, the regulatory authority must determine specifically that the affected land does not lie within an area either under study or under designation as unsuitable for mining pursuant to section 522. Moreover, the regulatory authority must find that the operation is designed to prevent irreparable off-site impacts to the hydrologic balance of the area affected as well as assuring the assessment of the probable cumulative impact of all anticipated mining in the area on the hydrologic balance, and that any operation under the applicant's ownership or control currently in violation of the Act or of other Federal air or water protection statutes is in the process of being corrected in a satisfactory manner to respective regulatory agency.

44 Any valid permit issued pursuant to this Act shall carry with it the right of successive renewal upon expiration with respect to areas within the boundaries of the existing permit and upon written finding by the regulatory authority that terms of the existing permit are being met; that the operation is in compliance with the environmental protection standards and with the approved State program; that renewal will not jeopardize the operator's continuing responsibility to satisfy any remaining reclamation responsibility; and that the performance bond will continue in full force and effect. However, any portion of a renewal application which concerns land areas beyond the boundaries authorized in the existing permit shall be treated as a new application, subject to all the provisions of the Act pertaining thereto.

45 A successor in interest to the permittee is granted the right to continue the coal surface mining operation while his application for a permit is under consideration by the regulatory authority, so long as the operation is in compliance with the permittee's mining and reclamation plan and so long as the permittee's performance bond continues in full force and effect.

45 Since the Act covers surface impacts of underground coal mining concurrently with those of surface mining, underground coal operators will be bound by permit requirements of the Act. They are required to apply for permits, the terms of which include standards relating to minimizing surface subsidence, sealing portals and openings, disposing of mine wastes, constructing

impoundments for mine wastes, revegetating disturbed areas, preventing off-site damages, and discharge of waterborne pollutants.

45 LAND USE CONSIDERATIONS

45 With few exceptions, surface coal mining operations should constitute a temporary use of the land. This concept is reflected in the permit approval process as well as the environmental protection standards established by H.R. 13950. Both are premised on the goals of the legislation that land affected by surface mining be returned to a form and productivity at least equal to that of its pre-mining condition, and that such condition will not contribute to environmental deterioration and is consistent with the surrounding landscape.

45 Obviously, the principal performance standards (regrading to approximate original contour, avoiding reckless spoil placements, revegetation and others) have the same goal - restoration. Moreover, the permit process requires the submission and approval of post-mining land use and thus is designed to elicit an evaluation of the operator's plan and ability to return the land to a useful condition. The environmental and social stresses engendered by surface mining, discussed elsewhere in this report, are well documented. It is this combination of performance criteria and procedural requirements (coupled with the designation process discussed below) to be established by H.R. 13950 that will assure the greatest possible minimization of the undesirable consequences of surface mining.

45 On the other hand, surface mining also presents possible land planning benefits as such mining involves the opportunity to reshape the land surface to a form and condition more suitable to man's uses. In such instances, the overburden and spoil become a resource to achieve desired configurations rather than a waste material to be disposed of or handled by the most economic means. The performance standards recognize that return to approximate pre-mining conditions may not always be the most desirable goal of reclamation and thus appropriate exceptions to the general requirements are provided. As the realization of such alternative post-mining land uses as industrial, commercial or residential development will often depend on the commitments or assurances that necessary services will be available, evidence of such availability prior to mining is a necessary part of the permit approval process.

46 The process for designation of land areas as unsuitable for surface coal mining is also premised on the notion that successful management of surface

mining depends, in large part, on the application of rational planning principles. While coal surface mining may be an important and productive use of land, it also involves certain hazards and is but one of many alternative uses. In some circumstances, therefore, coal surface mining should give way to competing uses of higher benefit. Section 522 establishes a program by which such decisions can be made. Under this section, to become eligible to assume regulatory responsibility a State must establish a process designed to provide the technical data needed to enable the regulatory authority to make objective decisions as to which, if any, land areas in a State are unsuitable for all or certain types of surface mining.

46 The Committee wishes to emphasize that this section does not require the designation of areas as unsuitable for surface mining other than where it is demonstrated that reclamation of an area is not physically or economically feasible under the standards of the Act. The other criteria for designation, which relate to general planning and environmental concerns, are discretionary and thus the State could determine that no lands should be designated thereunder, or, on the other hand, could prohibit all or some types of surface mining entirely. In addition to the discretionary designation criteria, the designation process includes other elements of flexibility. For example, the designation of unsuitability will not necessarily result in a prohibition of mining. The designation can merely limit specific types of mining and thus the coal resource may still be extracted by a mining technology which would protect the values upon which the designation is premised. In addition, after an area is designated, coal development is not totally precluded as exploration for coal may continue. Moreover, any interested person may petition for termination of a designation.

46 The designation process is not intended to be used as a process to close existing mine operations, although the area in which such operations are located may be designated with respect to future mines. The Committee recognized that an existing mine might not be one actually producing coal, because it was in a substantial stage of development prior to coal production. Thus the meaning of existing operations is extended to include operations for which there are "substantial legal and financial commitments".

46 The phrase "substantial legal and financial commitments" in the designation section and other provisions of the Act is intended to apply to

situations where, on the basis of a long-term coal contract, investments have been made in power plants, railroads, coal handling and storage facilities and other capital-intensive activities. The Committee does not intend that mere ownership or acquisition costs of the coal itself or the right to mine it should constitute "substantial legal and financial commitments."

46 It should be noted that the designation process is structured to be applied on an area basis, rather than a site by site determination which presents issues more appropriately addressed in the permit application process.

The Committee believes that the area by area approach of Section 522 thus serves the industry since such a process may, in advance of application, identify lands which are either not open to surface mining or where surface mining is subject to restrictions.

47 Although the designation process will serve to limit mining where such activity is inconsistent with rational planning in the opinion of the Committee,

the decision to bar surface mining in certain circumstances is better made by Congress itself. Thus Section 522(e) provides that, subject to valid existing

rights, no surface coal mining operation except those in existence on the date

of enactment, shall be permitted on lands within the boundaries of units of certain federal systems (such as the National Park system and National Wildlife

Refuge System), on Federal lands within the boundaries of any national forest or

in other special circumstances, e.g., within one hundred feet of public roads,

three hundred feet of public buildings or churches, or 100 feet of a cemetery.

47 As subsection 522(e) prohibits surface coal mining on lands within the boundaries of national forests, subject to valid existing rights, it is not the

intent, nor is it the effect of this provision to preclude surface coal mining

on private inholdings within the national forests. The language "subject to valid existing rights" in section 522(e) is intended, however, to make clear that the prohibition of strip mining on the national forests is subject to previous court interpretations of valid existing rights. For example, in West

Virginia's Monongahela National Forest, strip mining of privately owned coal underlying federally owned surface has been prohibited as a result of United States v. Polino , 133 F.Supp. 722, (1955). In this case the court held that "stripping was not authorized by mineral reservation in a deed executed before

the practice was adopted in the county where the land lies, unless the contract

expressly grants stripping rights by use of direct or clearly equivalent words.

The party claiming such rights must show usage or custom at the time and place where the contract is to be executed and must show that such rights were contemplated by the parties." The phrase "subject to existing rights" is thus in no way intended to open up national forest lands to strip mining where previous legal precedents have prohibited stripping.

47 ENVIRONMENTAL PROTECTION STANDARDS

47 Because of the evolution of the surface coal mining industry, reclamation and environmental protection actions are often viewed as necessary evils to be tacked on to the end of a process that has been developed for the purpose of producing coal at the least possible cost. Experience with sound reclamation practices, however, indicates that the best approach to mining and reclamation involves the combining of both of these activities in one process. Thus there is ample evidence to reject assertions that "the reclamation and mining processes cannot be combined." In fact, the opposite is true.

47 The authors of one recent engineering study concerned with the design of new and more environmentally acceptable mining systems observed in reviewing current practices that "preproduction mine planning and design is not a prerequisite to profitable mining" and thus for the surface mining industry in the Eastern coal fields, "the mining methods employed today remain essentially unchanged since their inception, even though equipment used has changed over the years (e.g., the front-end loader has replaced the power shovel for stripping and coal loading)". In addition, "because reclamation consists of a series of distinct post-mining activities - appended, as it were, to existing mining methods - the potential for significant further reduction in the environmental impacts of surface mining is severely limited." (Mathematica, page [*] -[*] .)

48 A basic tenet underlying this legislation is the principle that the environmental protection and reclamation, at a minimum meeting the standards in this Act, are a co-equal objective with that of producing coal. The continued selection of mining techniques by engineers whose primary objectives are the most efficient removal of the overburden and transport of the coal is not sufficient to be fully responsive to the purposes and intent of the Act. Moreover, if the mine design objectives include the environmental performance standards as elements to be thoroughly integrated in the overall mining process instead of treated as separate rituals to be performed merely because they are required, then it is quite probable that accomplishment of the environmental

practices will become cost-effective.

48 The following is a discussion of the key environmental performance standards of H.R. 13950.

48 RETURN TO APPROXIMATE ORIGINAL CONTOUR

48 H.R. 13950 requires that the mine site be regraded to the approximate original contour unless a variance, consistent with the terms of legislation, from the standard is necessary to achieve an alternative postmining land use. Moreover, the regrading standard of H.R. 13950 was formulated to cover all types of mining operations under all conditions. Thus it is, of necessity, a flexible standard which contemplates different mining circumstances. The bill's critics have alleged, to the contrary, that the term "approximate original contour" imposes an overly rigid and impractical requirement. It should be emphasized, therefore, that a reasonable interpretation of H.R. 13950 cannot justify the assertion that the bill requires either the impossible task of restoration of the original contour or the useless act of digging a new pit to obtain fill material to achieve full restoration of the original topography.

48 As defined in the bill, approximate original contour means a surface configuration which closely resembles the configuration of the land prior to mining and blends into the drainage pattern of the surrounding terrain. The term contour is defined by the dictionary as "the outline of a figure or body, with a line or lines representing such an outline." The contour of ground is similarly defined as the outline of the surface of the ground with respect to its undulations. These two definitions primarily refer to the shape or configuration of a surface. In addition, with respect to mapping, contour takes on an additional meaning; the imaginary line connecting the points on the land surface that have the same elevation and the line representing such line on a map or chart. In order to understand this concept it is necessary to distinguish between the dimensions of elevation and configuration.

49 [See original]

50 CONTOUR MINING

50 Contour mining operations operate on a portion of the local relief, a band on the mountainside or the top portion of a hill. A characteristic of this mining is that always some undisturbed land, either above or below, or both above and below the mining site remains. Operations do not cover the landscape on a contiguous tract basis.

50 In virtually all cases of contour mountain mining, sufficient spoil by volume is created to return the mine site to approximate original contour in terms of shape or configuration as well as elevation. The swell property of the materials removed (overburden) from the mine site during mining assures this

condition with present stripping ratios. The geometry of the contour mountain mine as schematically shown in figure 2 bears this out. Original points on the landscape, both above and below the mine, remain, becoming reference points for regrading.

50 A variation in contour mining which results in mountain top removal leaves no remaining highwall and thus no reference, regarding to original landscape above the operation. In this instance, regarding to approximate original contour takes on the principal property of shape or configuration, not elevation. The rebuilding of an escarpment removed by a mountain top operation is impossible, regardless of the amount of spoil produced. Regrading to approximate original contour, blending into surrounding land forms and uses, for such an operation in the Appalachian coal fields is schematically shown in figure 2. It should be noted that the provisions of the bill in this instance require shaping to provide for inward drainage and water control from the hilltop.

50 It has been argued that application of the approximate original contour standard to mountain mining is that it forces mine operators to use a particular mining technique widely used in Pennsylvania known as the modified block cut. This is not the case. The Committee is prescribing performance standards to achieve a certain degree of reclamation and has no intention of dictating how these standards are achieved. In fact operators of surface mines in West Virginia and Tennessee are reclaiming to approximate original contour, backfilling all highwalls by methods other than the modified block cut. Indeed, the industry is already practicing methods which can be used to meet the standards of the bill in a number of States and under different conditions.

50 AREA TYPE MINING

50 Area mining, the second basic type of mining addressed in the proposed legislation, is characterized by operations covering relatively large, contiguous tracts of land that are relatively flat or gently rolling. The topography of such an area has low local relief. Although slopes may be relatively steep or near vertical, as in a mesa formation, the local relief is sufficiently small so that the mining destroys or turns over all of the land which makes up the local relief on the tract mined.

50 In area mining, the ability to reclaim to approximate original contour depends primarily on the quantity of spoil available in relation to the amount of coal removed (the stripping ratio).

50 A profile of a typical area mining operation where the volume of spoil

equals or exceeds the volume of coal removed is shown schematically in figure 2.

The environmental standard proposed intends that the overburden from the first cut will be blended into the undisturbed landscape and mine site and the final cut is backfilled with spoil from several previous cuts as well as from the top of the highwall if desired. In such instances, the actual elevation of the reclaimed land might be higher than the premined lands due to the swell of spoil material.

51 Two other conditions arise in the area mining situation. The first occurs where the spoil is sufficient to return the mined area to approximate original contour but not to the approximate original elevation. The second condition arises when the stripping ratio is such that there is not sufficient spoil to achieve either element of approximate original contour (elevation or configuration).

51 The first condition is illustrated schematically in figure 2. The original topography is of low local relief (relatively flat). The average overburden is 50 feet thick and the average thickness of the coal seam is 100 feet. Conservatively assuming a 20% expansion of the overburden, the problem is to grade a pit averaging 150 feet deep by a length and breadth of the mining operation with 60 feet of fill material so that it blends into the surrounding environment. This can be accomplished by regrading the final mining site into a saucerlike depression which resembles the original landscape. Spoil material would be graded upward past the top of the coal seam on each of the highwalls while the overburden on top of the highwalls would be pushed down and blended into the slope between the original elevation and the depressed topography of the regraded spoil at the bottom of the mining site.

51 H.R. 13950 provides treatment for the second special condition, illustrated schematically in figure 2, presented in a few surface coal mines that are similar in nature to open pit hardrock mining. Such mines are described in the approximate original contour provision as thick seam operations carried out in the same location over a substantial period of time, where such an operation transects the coal deposit vertically (i.e., the operation moves down through the deposit as is the case in the area mining situation) and where the overburden removed is insufficient to return to either the approximate original configuration or elevation. In such cases the regrading standard requires that the overburden be used to cover the floor of the mining operation, to provide some drainage control and to establish a slope of at least the angle of repose against the highwalls completely covering the coal seam and extending

to the original contour. An angle of repose fill against the highwall provides a surface which may be more stable than the highwall with respect to weather. The covered coal seam is protected in part against accidental combustion, or other problems if the coal seam is an aquifer. In addition, the slope of natural repose has an added safety value, since it does not present a hazard to either wildlife or human life, as would a vertical face.

51 REVEGETATION

51 Revegetation of mined areas is an essential aspect of the reclamation process since it assures: (1) the surface stability and erosion control of the regraded areas, (2) appropriate water retention desirable on the mine site, (3) the long-range productivity of the land, (4) the diversity of species capable of sustaining pre-mining land uses, and (5) aesthetic value.

52 Elements critical to successful revegetation include climate, stability of regraded areas, appropriate drainage and moisture availability, the absence of toxic materials on the surface or in potential root zone levels, and appropriate surface soil manipulation and soil conditioning.

52 In recognition of such factors, H.R. 13950 sets forth the following criteria:

52 (1) the operator must establish an effective and permanent vegetative cover consisting of diverse species native to the area or introduced species where appropriate, all capable of self-regeneration;

52 (2) the operator will be responsible for the survival of the revegetation for a period which varies with the annual amount of precipitation on the area; and

52 (3) the reestablished vegetation must be capable of plant succession within the ecological context and time frame particular to the area. The use of the term "effective" describes both the productivity of the planted species concerning its utility to the intended post-mining land use (e.g., nutritional value for livestock) as well as its capability of stabilizing the soil surface with respect to reducing siltation to normal pre-mining background levels.

52 The history of revegetation in Eastern and Central United States mined areas indicates a good probability of meeting the bill's requirements providing that a minimum of care is taken during the mining and reclamation cycle. In these areas a wide range of revegetation plantings (including grasses, trees, legumes and others) have proven successful. Under many different conditions in

these areas, revegetation efforts have resulted in establishing diverse species and regeneration and plant succession has occurred. In some instances, however, revegetation has been attempted through the establishment of ground cover monocultures and it is not at all clear that such methods will result in plant succession within a suitable time frame. Moreover, although volunteer growth may appear on abandoned mine spoil piles in humid areas if the soil is not toxic, the time frame necessary to achieve the desired degree of density - 20 to 30 years - is too long to be considered acceptable.

52 While conditions in humid coal mine areas are such that successful revegetation is reasonably probable, success cannot be assumed. A recently completed study on revegetation by the U.S. Forest Service stresses the need for advance pre-mining planning as a prerequisite to success.

52 First of all, vegetating mine spoils must not be considered only as an after-the-fact activity. If this were so, some problems could never be corrected, or at best could be corrected only at great cost and effort. For example, extremely acid spoils generally are the most difficult ones to vegetate. Treating them is difficult and costly and the treatment may be only temporary. Thus, to continue to permit the unrestricted mining of coal seams that produce mostly toxic spoils is to perpetuate a virtually insoluble problem.

(Revegetation, Forest Service, USDA, 1974, A report of Research and Demonstration of Improved Surface Mining Techniques in Eastern Kentucky, page 8.)

53 Similarly the Forest Service found that some spoils supported no vegetation because they are infertile, thus emphasizing the need for chemical analysis of spoils in all active strip mines, and "an even better way for predicting spoil quality is to sample the overburden by core-drilling". Indeed, the report recommended that "chemical analysis of samples of rock strata should be made in a qualified laboratory. Samples of unweathered rock should be collected several months in advance of mining so that rocks can be artificially weathered before they are analyzed." (Id., 12)

53 The presence of zones of toxic material in the overburden should be of great concern to operators and the regulatory authorities. Spoil toxicity is not a self-correcting condition. As the Forest Service notes, the "once popular concept that spoils will become more suited for growing vegetation if they are left to leach for a couple of years before planting is an erroneous one." (Id.

at 17) According to the Forest Service, "Both laboratory leaching studies and field studies indicate that acid spoils do not necessarily become less acid or less toxic with prolonged leaching and weathering. In fact, these studies indicate that, when weathered, some acid spoils will become even more acid or

toxic and will remain acid for some, as yet undetermined, period of time."
(Id.,
17)

53 Physical aspects of spoil are equally as important as their chemical characteristics. Long steep slopes are subjected to severe erosion and are difficult to revegetate. The texture and color of spoil will substantially affect its water-holding and temperature characteristics.

53 It is essential that regulations specify that an adequate seed bed be prepared so that revegetation will achieve the required density of cover, productivity, and surface stabilization characteristics required by the Act. The use of mulch, fertilizer, and soil stabilizers will probably be common, if not universal, in revegetation activities.

53 In any event, revegetation of mine sites in arid and semi-arid areas of the country is considerably more problematical than that of the humid central and Eastern coal fields. In fact, the most recent scientific study concerning the revegetation potential of Western coal mine lands, Rehabilitation Potential of Western Coal Lands, a report of the National Academy of Sciences, emphasizes the relationship between the level of precipitation and the expected time for natural regeneration of plant cover.

53 We believe that those areas receiving 10 inches (250 mm) or more of annual rainfall can usually be rehabilitated provided that evapotranspiration is not excessive, if the lands are properly shaped, and if techniques that have been demonstrated successful in rehabilitating disturbed rangeland are applied. However, we must emphasize that this belief is not based on long-term, extensive, controlled experiments in shaping and revegetating western lands that have been surface mined. Few such studies have been made, and those in process have only a few years' data to report. Nevertheless, much research has been done on revegetating western ranges, disturbed roadways, and other denuded areas in arid lands. We believe that the techniques developed in these studies can and should be adapted to the higher rainfall areas of the West. The drier areas, those receiving less than 10 inches (250 mm) of annual rainfall or with high evapotranspiration rates, pose a more difficult problem. Revegetation of these areas can probably be accomplished only with major, sustained inputs of water, fertilizer, and management. Range seeding experiments have had only limited success in the drier areas. Rehabilitation of the drier sites may occur naturally on a time scale that is unacceptable to society, because it may take decades, or even centuries, for natural succession to reach stable conditions.

54 Rehabilitation of mined lands, however, requires more than achieving a stable growth of plants. If environmental degradation is to be avoided, the plants themselves should be a mixture of species capable of sustaining the former native animals.

54 With the introduction of irrigation techniques, the time period required for reclamation in arid and semi-arid areas decreases considerably but the basic correlation between time and amount of rainfall remains. This is due in large part to the special problem of establishing vegetation which will be able to survive at the natural level of precipitation, including the natural cycles of moisture availability, after the irrigation is removed and the reclamation effort is concluded.

54 The differential time limits for revegetation responsibility of H.R. 13950 is based on the average annual precipitation isopleth demarcating the coal fields in the arid and semi-arid West from those in the more humid areas of the East and Northwest. Thus the standard of 26 inches became the basic measure used in the bill to distinguish between coal mine regions in arid and semi-arid areas and such regions in humid areas.

54 The Committee recognizes, however, that within arid and semiarid regions the length of time necessary to reestablish vegetation on mining spoil varies considerably. The time estimates for revegetation set forth in the Academy report for the wettest of the potential mining areas (given the natural vegetation characteristics of the area) in the arid and semi-arid areas of the country ranges from 10 years upward. Thus a 10-year standard of the bill represents a minimum time under the most favorable circumstances. Regulatory authorities may establish longer periods of responsibility suitable to subregional climatic and vegetative zones.

54 The time limit set for revegetation responsibility in the more humid areas (over 26 inches of precipitation) was set at five years. This provides sufficient time for the revegetation to prove establishment and regeneration. For instance, "on the average, four years elapsed - after mining - before mine sites are adequately and totally reclaimed in accordance with Kentucky regulations. (Mathematica, page I-54).

54 The Committee recognizes that in some areas and under some conditions, intensive commercial agricultural activity such as row crop cultivation are suitable, post-mining land uses. In those instances where long-term intensive agricultural activities are approved as a postmining land use, the period of revegetation responsibility begins at the date of initial planting of the intensive agricultural crop and the period covers the agricultural activity for

the respective time period. It should be noted that pasture, grassland, and similar agricultural land uses are not considered as intensive uses by the Committee. Such agricultural activities can be conducted on reclaimed mine slopes without requiring variances from the approximate original contour and spoil placement standards. It is also noted that to date little mined land has been returned to row crop or other intensive agricultural use, with those instances being an exception rather than a frequent reclamation land use. It seems reasonable that the greatest likelihood of returning lands to intensive uses is in those instances where the land supported such activities prior to mining. This would also imply that the mining and reclamation cycle would result in the segregation of sufficient top and subsoil material (or other suitable spoil) so as to provide the capability of recreating the upper soil layers in sufficient depth to assure appropriate chemical and physical qualities suitable to such agricultural uses.

55 Some concern has been expressed that where lands are reclaimed for extensive agricultural use such as grazing or pasture, such uses might be prohibited during the period of reclamation responsibility. This is not the Committee's intention. Grazing use of such lands during the period of operator responsibility is allowable, but presumably the type and extent of use would be such that it would not endanger the survival coverage and productivity of the revegetation.

55 MINING IMPACTS ON HYDROLOGIC BALANCE

55 Surface coal mining operations can have a significant impact on the hydrologic balance of the mined area and also its environs. The hydrologic balance is the equilibrium established between the ground and surface waters of an area and between the recharge and discharge of water to and from that system. Some of the measurable indicators of such an equilibrium are: flow patterns of ground water within aquifers; the quantity of surface water as measured by the volume rate and duration of flow in streams; the erosion, transport and deposition of sediment by surface run-off and stream flow; the quality of both ground and surface water including both suspended and dissolved materials; and the interrelationship between ground and surface waters. The hydrologic balance of an area is a complex relationship maintained by a number of factors. The impacts of mining on any one of these factors can trigger changes throughout the system.

55 The total prevention of adverse hydrologic effects from mining is impossible and thus the bill sets attainable standards to protect the hydrologic balance of impacted areas within the limits of feasibility. For most critical areas uncertain fragile hydrologic settings, the bill sets standards that are

imperative to begin to assure that adverse impacts to the hydrologic balance are not irreparable. It is not intended by such minimum standards that these measures will be considered wholly sufficient to meet the objectives of "minimizing disturbance to the prevailing hydrologic balance." It is anticipated that the State regulatory authorities will strengthen such provisions and require whatever additional measures are necessary to meet local conditions.

56 Concern has been expressed that the bill's hydrology provisions somehow require that the hydrologic characteristics of the site prior to mining must be maintained in the actual working mine excavation. Such an interpretation is not justified. Of course, the actual operating area of the mine is necessarily de-watered. The committee is concerned about how extensive the secondary effects could be - such as a drawdown of ground-water in surrounding areas. The bill requires that the operator will take such measures as are necessary to minimize the disturbance to the hydrologic balance in the surrounding areas. In addition, the operator is to conduct reclamation activities on a continuing basis that assure the impacts are minimized after mining has been completed.

56 The impact of coal mining on water resources has been well-documented. A number of studies provide insight into potential water resource impacts of mining in arid and semi-arid areas and of effects of mining in humid areas.

56 Five publications cited and the abbreviations used in this text are listed here:

56 Beaver Creek: Influences of Strip Mining on the Hydrologic Environment of Parts of Beaver Creek Basin, Kentucky, 1955-66, U.S. Geological Survey Professional Paper 427-C, Washington, 1970.

56 Tradewater: Effects of Coal Mining on the Water Resources of the Tradewater River Basin, Kentucky, Geological Survey Water Supply Paper 1940, Washington, 1972.

56 Cheyenne: Hydrology of the Upper Cheyenne River Basin, Sediment Sources and Drainage-Basin Characteristics, Geological Survey Water Supply Paper 1531, Washington, 1961.

56 NAS: Rehabilitation Potential of Western Coal Lands, National Academy of Sciences, A Study for the Energy Policy Project, Washington, 1974.

56 Decker: Hydrology of the Decker Coal Mine and Vicinity, Southeastern Montana, Preliminary Report, Montana, Bureau of Mines and Geology, 1974.

56 Past mining operations have a mixed impact on stream flow regimes, In the

Appalachian mountain mining areas, conventional contour mining has resulted in greater peak flows, more rapid changes in discharge, reduction in base flows and increased flooding of streams (Beaver Creek, page C-1).

56 Reclaimed spoil areas resulting from area mining in more gently rolling terrain under humid conditions act as deposits which can store and slowly release groundwater. Under such conditions, it has been found that "stream flow is sustained during extended periods of no precipitation . . . owing to drainage from mined areas while streams in non-mined sub-basins cease flowing." (Tradewater, page 60).

56 In arid and semi-arid settings, mining alters drainage patterns which can "result in a decrease in storm run-off volume and loss of recharge to alluvial aquifers in downstream valleys" (NAS, page 68). The unconsolidated materials resulting from strip mining can have similar hydrologic properties to the aggradational features of Western streams, which can result in a loss of water to both the surrounding lands and downstream areas (Cheyenne, page 168).

57 Water quality impacts are readily noticeable and have an extended geographic influence. Mining increases the mineralization of waters and is a function of the type or chemistry of the strata disturbed, the amount of water available, and the duration of contact with the disturbed material.

57 In Appalachian mountain mining areas, the dissolved solid content of streams has been measured and found to be 12 times greater than that in non-mined areas (for instance a yield of 1,370 tons per square mile compared to 111 tons per square mile). However, flow directly from mines sites has been measured containing dissolved solid concentrations equivalent to a yield of 1400 tons per square mile - a pollution load increase of 126 times that of unmined areas (Beaver Creek, page C-2).

57 Area mines in humid settings can have similar impacts, with stream flows containing 17 times the amount of dissolved solids and flows from non-mined areas. However, particular constituents had increase concentrations of up to 300 times that of non-mined areas (Tradewater, page 54).

57 These increases in chemicals in surface waters provided significant water problems for all types of uses as well as precluding the realization of the full potential of the streams for recreational and wildlife purposes.

57 In some arid and semi-arid areas, one of the possible impacts of surface mining on water quality is an increase in salinity (sodium, bicarbonate, sulfate). For example, in one instance where water quality is monitored at an

active Western mine, sufficiently high concentration of sodium, up to sixteen times that of the normal concentration in surface flow, indicates a high to very high alkalinity hazard for irrigation and thus for revegetation purposes at the mine site. In this case, downstream water uses are not affected because the volume of flow from the mine at this time is quite small (0.5 cfs) compared to the receiving stream (more than 20 cfs 90% of the time) and there is adequate capacity for dilution (Decker, page 12).

57 Sediment yields from strip mines can be exceedingly high and can persist at high levels for long periods after mining unless adequate revegetation and soil stabilization work is done to replace the appropriate surface drainage at the site.

57 In the Appalachian mountain mining areas, sediment concentrations in streams commonly exceed 30,000 parts per million (ppm) during storms whereas streams in non-mined areas yield 600 ppm under the same hydrologic circumstances. On an annual basis, such yields from watersheds containing strip mines are equivalent to 1900 tons per square mile compared to 25 tons sq.mi. on non-mined areas. Moreover spoil banks yielded a considerably greater amount of sediment, 27,000 tons per sq.mi., which is more than 1000 times greater than yields from non-mined areas. Yields from inadequately reclaimed mine sites continue at a high level of 5,600 ppm (250 tons per sq.mi.) for long periods after mining has ceased (Beaver Creek, pages C-38-41).

58 Sedimentation from coal mining has resulted in shortening the useful life of major public works facilities - flood control reservoirs and navigation channels - as well as clogging streams and increasing flood flows.

58 While the processes of sedimentation in the arid and semi-arid areas of the country are the same as those in humid regions, the potential for large area impacts adjacent to streams is greater in the arid and semi-arid coal areas since the erosional balance of stream valleys is more fragile.

58 Substantial surface mining in the arid and semi-arid areas of the West has not existed long enough to allow full analysis of the hydrologic consequences of such activities. Insight into the potential problem of sedimentation in such areas, however, can be gained through studies of the cumulative effect of past experiences with the destruction of vegetation over large areas (e.g., overgrazing, deforestation and construction). One such case is the experience of sedimentation on the Rio Puerco, a tributary of the Rio Grande River. Briefly stated the pattern presented in that situation entailed the destruction of vegetation in part of the valley triggered substantial erosion and head cutting and deepening of the stream channel. This lowered the

groundwater levels on adjacent alluvial valley floors which resulted in further destruction of vegetation since roots could not reach the lowered water table. Erosion increased and the cycle worsened. Over a period of years, the head cut moved up the valley. Eventually the entire alluvial floor was affected by reducing the amount of and changing the nature of the vegetation which was essential to the local economy as well as to the long-term productivity and stabilization of the land.

58 While the above example is an extreme case in which little was done to manage lands to control erosion, a pattern similar to the history of the Rio Puerco could result from expanded surface coal mining in similar areas of the West without regard for hydrologic consequences (NAS, page 68-69).

58 The purpose of the hydrologic balance provisions of H.R. 13950 is to assure the maintenance of that balance on and off the mining site during and after the mining operation. Looking back at the Rio Puerco situation, the amount of disruption during any one year to the surface area of the basin could have been considered minimal. However, taken together and accumulating over a period of time, the disturbances resulted in a major alteration of the tributary valley.

58 Similarly, individual disturbances caused by mining might be considered minimal and of small geographic consequence. On the other hand, there are indications that their cumulative impact could be of long duration and of large geographic extent.

58 Provisions in the Act directed toward maintenance of the hydrologic balance include: (1) certain mining permit application requirements, (2) permit approval or denial criteria check off, (3) specific environmental standards, (4) monitoring requirements, and (5) compensation requirements for decrease in water availability to users.

59 APPLICATION FOR MINING

59 H.R. 13950 requires that the operator make a determination of the hydrologic consequences of the proposed mining and reclamation operations. It is intended that the data assembled with this assessment be included in the application so that the regulatory authority, utilizing this and other information available, can assess the probable cumulative impacts of all anticipated mining in the area upon the hydrology and adjust its actions and recommendations accordingly.

59 Meeting such requirements will necessitate more planning and engineering

on the part of the mining operator than is now generally the case. It will also involve the necessity to use trained professional persons in a number of fields: mining and civil engineering; geology; hydrology; and plant and soil sciences. Current experience, however, clearly shows that where operators have carried out adequate planning and engineering, they have been able to identify ways of limiting environmental impacts to the mine site and have been able to conduct operations in such critical water and environmental areas as the Hanaford Creek basin in Washington.

59 PERMIT APPROVAL AND DENIAL

59 One of the written findings the regulatory authority makes in the approval or denial of an application for a mining permit addresses the impacts of mining on the hydrologic balance of the area. This finding also includes the authority's assessment of the probable cumulative impact of existing and anticipated mining on the hydrologic balance of the area affected. These specific standards are emphasized at the permit approval stage due to the critical and long-term impacts mining can have on the water resources of the area affected.

59 In addition to the Environmental Performance Standards of section 515 (b), (see discussion later in this report) the bill addresses the alluvial valley floor issue in the permit approval and denial section. In response to criticism of this provision in H.R. 25, the Committee amended the section to clear up any possible ambiguity. It is the intention of the new section to make it certain that its provisions do not apply to -

59 (1) undeveloped range lands which are not significant to farming;

59 (2) lands that the regulatory authority finds that any interruption, discontinuation or prevention of farming will be of such small acreage as to be of negligible impact on the farms' agricultural production; or

59 (3) operations which in the year preceding enactment of this Act (a) produced coal in commercial quantities, and (b) were located within or adjacent to alluvial valley floors or had obtained specific permit approval by the State regulatory authority to conduct surface coal mining operations within said alluvial valley floors, or (c) had obtained specific permit approval by the State to conduct operations within such alluvial valley floors.

59 According to data compiled by the USGS of the 30 major coal producing western mines only five are within the scope of the provision, and these would

be clearly exempted by the grandfather clause.

60 ENVIRONMENTAL STANDARDS

60 Principal environmental standards pertaining to the hydrologic balance focus on preventing toxic drainage, prevention of sedimentation and siltation using the best technology available, avoidance of channel-deepening and enlargement, restoration of recharge capabilities of the mine site, and preserving the functions of alluvial valley floors.

60 With respect to acid mine and other toxic drainage, a wide range of alternatives is available to the industry to avoid pollution of ground and surface waters through a number of techniques, including treatment, diversion of water from producing deposits, and isolation of toxic overburden from ground and surface water flow.

60 Similarly, technology exists to prevent increased sediment loads resulting from mining from reaching streams outside the permit area. Sediment or siltation control systems are generally designed on a mine-by-mine basis which could involve several drainage areas or on a small-drainage-area basis which may serve several mines. There are a number of different measures that when applied singly or in combination can remove virtually all sediment or silt resulting from the mining operation. A range of individual siltation control measures includes: erosion and sediment control structures, chemical soil stabilizers, mulches, mulch blankets, and special control practices such as adjusting the timing and sequencing of earth movement, pumping drainage, and establishing vegetative filter strips.

60 One example of the best available technology for sediment control, which is applicable throughout the U.S. and can be used on a mine-by-mine or a multiple mine basis, is that technology employed at the surface coal mine of the Washington Irrigation and Development Company. This mine is located in the Hanaford Creek drainage, south of Centralia, Washington. The general geographic characteristics of this area are common to other coal areas. Precipitation averages 45-50 inches annually, winter stream flows reach 500 cfs, and summer stream flows can be as low as 2 cfs, background turbidity of natural stream-flows during the rainy season is 20-55 Jackson Turbidity Units (JTU's), the terrain is a rolling topography with steep slopes, and the overburden is of a fine-grained and highly erodable material. The mine produces over 3 million tons per year, and over its 35-year life will actually mine 7,000 of the 21,000 acres contained in the permit area.

60 In this instance, in order to meet year-round water quality standards for migrating fish, the company designed a relatively inexpensive method of settling

virtually all of the sediment in the surface runoff from the mining operation. Several sets of double siltation entrapment ponds were constructed on the small tributaries leaving the mine property. Elimination of sediment loads is achieved through a twostage process, with the initial gravity settling occurring in the first pond and the introduction of a biologically inert flocculating compound into the flow between ponds. This results in a discharge that contains even less silt than the normal background flow (25-55 JTU's):

	Mg/1	JTU's
Entering silt load, upper pond	10,000 to 15,000	+100
Entering silt load, lower pond	12 to 130	81-12
Discharge to stream from second pond	Clear water	4-15

61 Source: Mining Congress Journal (June 1973) at 35.

61 This technology sets a standard for the industry and is representative of the innovation the mining industry can achieve when required to meet specific water standards as a precondition to operation.

61 It should be noted that this approach is applicable not only in areatype mining situations but also in the mountain mining operations in the Appalachian coal fields, where such facilities might serve more than one specific mine site in a small drainage area.

61 The bill requires that the standard for siltation control should be the best available technology in recognition that the application of such technology might well increase present siltation control costs of some mine operations. However, the Committee rejected the notion that the standards should be adjusted to what individual mine operators state they can or cannot afford. The Committee's action requires the adjustment of operation to the environmental protection standards rather than the opposite. With this approach, the Committee believes that operators will find the right combination of techniques to meet the siltation standard on the most cost-effective basis.

61 After regarding to approximate original contour and during or immediately after the replacement of topsoil, one of the major problems facing the operator is control of erosion during the reestablishment of vegetation. It should be noted that the regarding standard of approximate original contour allows for the

surficial shaping of the regarded area to adequately control drainage and erosion. Appropriate control measures involving the shaping of the surface include, for instance, a series of diversion ditches or ridges across the final grade of the slope, the use of grass-lined waterways, gouging to retard surface runoff and increase infiltration into the spoil, and similar measures which are in common use in areas by the Soil Conservation Service or Environmental Protection Agency.

61 In cases where there will be water discharge from the mine sites, the number of such discharges should be minimized by collectively controlling and channeling the water course into an acceptable receiving stream or areal location. It also should be understood that prior to any discharge off the permit area, the discharge should be treated to remove pollutants that may be present. Such treatment must, at a minimum, meet the requirements of this Act and ensure compliance with applicable local, State, or Federal water quality requirements.

61 Avoidance of channel deepening and enlargement is also required for those operations requiring discharge of water. This is particularly important in the arid and semi-arid areas where the natural erosional balance of the streams is in accordance with ground water levels. Deepening of the channel often results in lowering the ground water level since in such areas streams maintain the equilibrium of ground water systems. This is in contrast with streams in more humid areas where ground water levels often determine the flow in streams. The lowering of ground water in the semi-arid and arid areas could result in a reduction in the vegetative cover which in turn would trigger greater erosion from the landscape during rainstorms. Thus the cycle of increased runoff and erosion, channel deepening and additional lowering of the ground water is started and continued. A number of techniques are available to prevent this from occurring, including specifically timing and controlling the amount and rate of release of discharge from mines to stream channels, or the use of other techniques to assure appropriate infiltration downstream from the mine.

62 In order to assure that both the short and long term disruptive impacts of mining and ground water supplies are minimized, it is necessary that reclamation be conducted in such a way so as to maximize the recharge capacity of the minesite upon completion. Recharge capacity refers to the ability of an area to replenish its ground water content from precipitation and infiltration from surrounding lands. Restoring recharge capacity does not mean restoring the

aquifer, but rather that the capability of an area to recharge an aquifer be restored. Spoil handling and placement and grading operations should be designed to enhance the recharge potential of the site. It is anticipated that in those mining operations which singularly or in combination would mine or seriously affect large aquifers, mining should be predicated on the ability of the operator to replace to the extent possible the ground water storage and recharge capability of the site by selective spoil material segregation and handling.

62 ALLUVIAL VALLEY FLOORS

62 Of special importance in the arid and semiarid coal mining areas are alluvial valley floors which are the productive lands that form the backbone of the agricultural and cattle ranching economy in these areas. For instance, in the Powder River Basin of eastern Montana and Wyoming, agricultural and ranching operations which form the basis of the existing economic system of the region, could not survive without hay production from the naturally subirrigated and flood irrigated meadows located on the alluvial valley floors. In reviewing the reclamation potential of lands in the West and adjusting mining to assure its compatibility with existing and future land uses, the National Academy of Science study stated:

62 In the planning of any proposed mining and rehabilitation it is essential to stipulate that alluvial valley floors and stream channels be preserved. The unconsolidated alluvial deposits are highly susceptible to erosion as evidenced by the erosional history of many Western valleys which record several periods of trenching in the past several thousand years. Removal of alluvium from the thalweg of the valley not only lowers the water table but also destroys the protective vegetation cover by draining soil moisture. Rehabilitation of trenched valley floors would be a long and expensive process and in the interim these highly productive grazing areas would be removed from use.

63 H.R. 13950 specifies that the operator is to "preserve throughout the mining and reclamation process the essential hydrologic functions of alluvial valley floors in the arid and semiarid areas of the country." While the Academy study called for the preservation of alluvial valley floors, such a requirement would not recognize that under site-specific circumstances it is possible to mine on valley floors and still be able to assure the maintenance of the hydrologic functions of the area. Where mining is proposed on alluvial valley floors the methods of ground and surface management would have to be designed for the specific characteristics of the site and could be difficult to achieve.

However, given the potential short and long-term disruption of the lands and economy so affected, this additional effort appears necessary and justifiable.

Preserving the essential hydrologic functions during the mining process includes

assuring that the water balance both upstream and downstream of the mine is maintained so that natural vegetative cover is not destroyed and the erosional

balance of the area is not seriously disrupted. In addition, upon the completion of mining, the backfilling, placement of material, and grading, must

assure that the hydrologic function of the area prior to mining is continued and

that the operation does not become a barrier to water movement and availability

in the valley deposit.

63 It should be noted that efforts by the Federal Government to rehabilitate

alluvial valley floors which have been denuded and damaged have been very expensive, of long duration, and only partially successful. The effort to prevent such damage from occurring, however, would have required careful planning, but also would have been much less expensive than later rehabilitation

efforts. Indeed, it is the present practice at a number of existing Western coal mines to avoid damaging such valley floors and stream channels.

63 Concern has been expressed as to the definition of alluvial valley floor

- especially with respect to the scale and size of the deposit and the drainage

area. Alluvial valley floors refers to those unconsolidated deposits formed by

streams (including their meanders) where the ground water level is so near the

surface that it directly supports extensive vegetation or where flood stream flows can be diverted for flood irrigation. H.R. 13950 defines alluvial valley

floors as, "the unconsolidated stream laid deposits holding streams where water

availability is sufficient for subirrigation or flood irrigation agricultural activities". (Sec. 701(27)). In more technical terms, alluvial valley floors

are the upper, near-horizontal surface of the unconsolidated stream-laid deposits which border perennial, intermittent, or ephemeral streams. The alluvium that makes up the stream-laid deposits is composed of clay, silt, sand,

gravel, or similar detrital material that has been, or is being, transported and

deposited by streams. Alluvial valleys within this definition are traversed by

perennial or intermittent streams or by ephemeral stream channels; are irrigated

in most years by diversion of natural flow or ephemeral flood flow on the modern

flood plain and adjacent low terraces, or by subirrigation of the flood plain by

underflow; and are used for the production of hay and other crops that are an integral part of an agricultural operation. Excluded from the definition are the colluvial and other surficial deposits that normally occur along the valley margins, are higher than the modern flood plain and low terraces, are not irrigated by diversion of natural flow or by ephemeral flood flow, and are not subirrigated by underflow. It should also be noted that alluvial valley floors must be in integral part of a drainage network that transverses the area under consideration. These are part of through flowing stream (hydrologic) systems and are not small areas of isolated internal drainage.

64 Some criticism has been directed at the legislation by asserting that much of the western coal fields are entirely overlain by alluvial valley floors. This is simply not the case. In order to determine the geographic extend of alluvial valley floors, a study of 2,200 square miles in southeastern Montana in the Big Horn, Rosebud, and Powder River was made using aerial photographs provided by the Environmental Protection Agency, Forest Services, and Soil Conservation Service at scales of 1:40,000, 1:15,840, and 1:20,000 respectively. Alluvial valley floors - as that term is used in this legislation - were identified on these photos through extensive field mapping in each drainage area by USGS personnel during the summer of 1975. These field determinations were than transferred on to 42 separate 7 1/3 minute USGS topographic quadrangles (scale 1:24,000) for the entire area. Analysis of these maps then revealed that no alluvial valley floors existed in 5 of the quadrangles-270 square miles or 12 percent of the area. It was further determined that only 612.5 square miles or 28 percent of the area studies was underlain by strippable coal (coal overlain by 200 feet or less of overburden). Alluvial valley floors overlay only 16.4 square miles of the strippable coal area or only 2.67 percent the coal in that area.

64 As is discussed in the introduction to this report, this work has been supplemented by additional analysis by the U.S.G.S. which indicates that of proposed surface mines with Federal involvement, no proposed mine has greater than 3.7 percent of its land surface covered by an alluvial valley floor.

64 MONITORING HYDROLOGIC IMPACTS

64 H.R. 13950 also specifies special monitoring procedures to be followed in water scarce areas or in those instances where the mining has a potential to substantially disrupt the hydrologic balance or use of water. Particular types of data to be collected and analyzed are specified. It is intended that the data collection and resulting analysis take place before and continue throughout

the mining and reclamation process, and be conducted in sufficient detail so that accurate assessments of the impact of mining on the hydrologic setting of the area can be determined. Throughout the mining process such data and analysis should also prove useful to the regulatory authority in assessing the impact of additional applications for mining permits and in determining what types of adjustments should be made.

65 The bill also requires a regulatory authority to establish guidelines covering the design, content, and procedures of data collection and analysis in order to assure that such data is accurate and acceptable to all parties.

This

is a long-standing provision of other Federal regulatory programs such as the Environmental Protection Agency, the Atomic Energy Commission and the Federal Power Commission which depend in part on data collected and analyzed by firms being regulated. Consideration might well be given to establishing third party operations (nonprofit groups) for the purpose of monitoring, data collection and analysis, in order to assure that all information collected is handled in a neutral way, and available equally to government, industry and the public.

Such

groups might also be able to make estimates as to prospective impacts of changes

in mining and how such impacts might be minimized in order that an orderly development of the resources may take place without significant or long-term damage to the environment or the productivity of the land.

65 STEEP SLOPE MINING

65 Surface coal mining on steep slopes requires special environmental protection provisions since such operations present special environmental hazards. The provisions of H.R. 13950 addressing steep slope mining were written in recognition of the natural instability of the geologic structure of many steep slope coal areas, which greatly increases the possibility of land slides and leads to rapid and massive erosion. The problems of steep slope mining are magnified by the fact that steep slope areas are located in some of the highest zones of annual average precipitation in the country.

65 Based on available landslide and mining operation data, the Committee defined for the permanent program steep slopes as those slopes of 20 degrees or

more with the recognition that it might be desirable for regulatory authorities

to include lower slopes based on specific geologic conditions, climatic and other factors.

65 Many of the State regulatory programs controlling mining in steep slope areas have some special environmental standards geared to this situation. The effectiveness of these standards for specified practices is problematical. Most

Appalachian states do restrict spoil placement on the downslope and prohibit fill benches (the placement of spoil over the slope) on only the steepest slopes. Fill benches are prohibited in slopes over 33 degrees in Maryland and Kentucky and over 30 degrees in West Virginia. The amount of material that can be placed down slope from the mine bench is controlled in relation to the slope. For instance, Kentucky's regulations specify that the width of the first cut (depth of cut into hillside) which can be thrown over the side are: 45 feet for 31-33 degrees slopes; 55 feet for 29-30 degrees slopes; 60 feet for 28 degrees slopes; 80 feet for 27 degrees slopes, and so on. Experience, however, has shown that it is extremely difficult to stabilize such massive amounts of material placed on steep downslopes. Moreover, regulation of operators is frustrated since it is difficult to determine actually how much material has been placed over the side of the hill. Most contour surface mining in the Appalachian states occurs on steep slopes between 14 and 33 degrees; therefore operations governed by existing state regulations prohibiting fill benches are few. An excerpt from a 1973 Senate study, Factors Affecting the Use of Coal in Present and Future Energy Markets, clearly summarize the situation:

66 [bench] width limits are largely disregarded if the operator finds that the economic limit of mining permits additional cuts. These practices have resulted in continued landslides which occur during mining as well as many years after. A sample study of 190 landslides resulting from strip mines in eastern Kentucky revealed that 86 percent of landslides were on slopes of 20 degrees or more, with 54 percent of the slides being on slopes of 25 degrees or more.

66 Subsequently, in 1970, Kentucky required some operators, on a demonstration basis, to purposely spread out the overburden pushed downslope in order to prevent landslides. Such methods, however, are subject to massive sheet and gully erosion and slumping, especially in the high rainfall areas such as the Appalachian region, and, in effect reduce neither the amount of environmental damage nor the number of operator violations. Substantial insight into the effectiveness of regulating Appalachian mountain strip mining under present laws is given by a study which assessed the enforcement activities of the Kentucky Division of Reclamation. In spite of the fact that the present Kentucky statute and regulations are considered to be model state surface mining legislation, preliminary data reveal the occurrence of significant violations to the State law and regulations by strip mining operators (Table 7). For all

types of mountain strip mining, more than one-third of the inspections (the State inspects each mine every two weeks) revealed major violations including,

for instance: exceeding bench width, operating off permit area, dumping excessive material over the outslope, and lack of drainage controls.

*2*TABLE 7. - Percentage of Official
State Inspections in Which One or More
Violations Found and Recorded in
Eastern Kentucky Strip Mine Operations,
1971

	Percentage of inspections having one or more violations
Mining method:	
Conventional contour	43
Slope reduction	50
Parallel slope fill	34
Head of hollow fill	49
Pit storage of spoil	41
Mountaintop removal	47
Mountain auger	42

66 The significance of this is further emphasized when it is recognized that most damages from such violations cannot be remedied; the operator usually agrees to stop activities which are in violation and to avoid such practices in the future. This evidence reinforces the concept that certain surface mining practices cannot be regulated satisfactorily, and in these instances, the best answer is to prohibit those specific activities.

67 The general standard for steep-slope mining is a prohibition on placing overburden or other materials downslope from the mining bench. The Committee recognized that some temporary placement may be necessary in new operations only in order to provide a site in close proximity for spoil from the first "initial block or short linear cut necessary to obtain access to the coal seam." It is expected that the initial block or short linear cut will only be sufficient to gain access to the coal seam for the initial lift of coal after gaining equipment maneuvering room. The principal factors governing the size of this cut include the type or design of mining technique employed, the scale or size of equipment, and the angle of slope. Thus, such a cut would only be several hundred feet at the most along the outcrop.

67 This temporarily placed material, however, must be removed in order to satisfy the regrading standards of the Act. It should be noted that other options are available to the operator for the disposal of spoil from the first cut in mountain areas. Spoil can be used in the construction of access or coal haul roads, placed on less steep slopes provided they are designated disposal areas identified in the approved mining plan, and spoil can also be placed on

abandoned mine sites which have not been regraded to approximate original contour and which are prevalent in the mountain areas. The use of such sites or designated disposal areas on less steep slopes, is practiced now in West Virginia.

67 The Committee expects that under most circumstances, only one initial cut will be needed on any coal seam beneath the common highpoint of elevation. There may be instances in which an operator may want to make additional cuts into a coal seam at various intervals around the seam outcrop. Spoil from these additional cuts should not be placed on the downslope. In other words, the Committee does not contemplate that the regulatory authority will allow a series of "initial" cuts to be made such that the general prohibition relating to downslope spoil would be frustrated. Present practices in some of the Appalachian States indicate that this is entirely feasible as well as practical since there are alternative places for the placement of spoil from such operations if it is not possible to keep it entirely on the bench.

67 Similarly, with respect to the placement of the spoil from the first initial cut the mine operator need not necessarily use the downslope if, for example, the permit area includes flat land which may be used (if approved by the regulatory authority) as an appropriate area.

67 ECONOMICS AND PRACTICALITY

67 The assertion has been made that meeting the requirements of "approximate original contour" in mountain mining situations is not practical, and is technically or economically impossible. These and related arguments were fully answered in a recent study "The Design of Surface Mining Systems in Eastern Kentucky Coal Fields" a study funded by the Appalachian Regional Commission, directed by the Kentucky Department of Natural Resources and Environmental Protection and conducted jointly by two consulting firms: Mathematica (Princeton, New Jersey) and Ford, Bacon & Davis (New York, New York). The objectives of the study were to identify modified surface mining technologies and regulatory policies and procedures at the State level which would result directly and indirectly in reducing and preventing environmental impacts of surface mining. The findings of this study are generally applicable to mountain mining in the entire Appalachian coal fields since regional applicability was one of the purposes of the study.

68 The study and recommendations fully support the position that the requirement of regrading of mountain mining sites to approximate original contour and limitations on dumping spoil downslope are necessary, workable, and should not result in any significant reduction of coal supply. With respect to environmental impacts of conventional contour mining methods, the study states that:

68 [the] conventional methods employed always result in permanent fill bench
- the result of disposal of overburden on slopes below the coal seam. And, except where entire mountain tops are removed, the conventional methods leave an exposed highwall after mining. These two characteristics of conventional mining
- the permanent fill bench and exposed highwall - are the direct cause of many of the undesirable environmental effects of mining. Landslides occur when the fill benches become unstable, erosion results from unvegetated outslopes, and exposed highwall degrade aesthetic values immediately following mining, at least.

68 The study concludes that:

68 Elimination of the highwall and permanent fill bench would, in our opinion, significantly reduce the major remaining environmental impact of surface mining.

68 This conclusion is expanded in the text:

68 The primary finding in the [mining] methods areas is that complete contour restoration methods are generally desirable and feasible using existing equipment. Those methods involve a change in operating procedures, such that overburden materials are not placed, even temporarily, on natural slopes below the coal seam being mined. While this study was in progress, the practicability of complete contour restoration methods was demonstrated - without government funding of any kind - at mines in West Virginia and Pennsylvania. . . . Planning and operating procedures for two contour-restoration methods - the buried highwall and spoil above highwall methods - are described in detail in Chapter V. of this report. Employment of either of these methods is feasible at the present time in Eastern Kentucky, and would result in an improved appearance, fewer landslides, and better materials classification (thus reduced water pollution).

69 In another section of the report, the authors comment on the economic and practical aspects of meeting these requirements.

69 The surest way to prevent landslides is probably . . . the use of 'no fill bench' mining methods. Such methods - known by various names; including pit storage of spoil and block cutting - have been widely publicized of late but are not practiced in Eastern Kentucky. However, as discussed later in this chapter, such methods are roughly comparable in profitability to existing conventional contour methods and can be practiced using existing equipment.

69 It should be noted that the coal price levels and operating costs used for analysis were for the years 1971-72. Since then, as discussed earlier in

this report, coal prices have risen substantially faster in the years 1973-74 than the costs of the various factors of production, thus removing any doubt about the levels of profitability utilizing such techniques.

69 These conclusions are further substantiated by recently completed work in Campbell County, Tennessee, sponsored by TVA. In December, 1974, TVA released an analysis of a mining operation using a "block-cut" approach on steep slopes (over 26 degrees) including reclamation to approximate original contour. The experience gained on this single-seam mining operation in which the operator used bulldozers and front-end loaders for overburden removal and coal loading, shows that the entire on-site mining and reclamation costs come to \$8 .65 per ton of coal for a 36-inch seam. Costs decrease as seam thickness increases. While these costs do not include haulage to the user, it is clear that such an operation is economically competitive within present market prices and should not exert an upward influence on coal prices which average about twice the amount of the costs shown here. (Congressional Record, December 18, 1974, S22069.)

69 EXCEPTIONS-VARIANCES

69 Although usually preferable, it may not always be best to return mountain lands to their approximate original contour. In various areas such as the mountainous Appalachian coal fields, there is a paucity of flood free, relatively flat developable land. Thus some surface mining operations offer the opportunity for creating a resource which otherwise might not be available or might be prohibitively expensive.

69 The mining application process and environmental standards allow for variances from the regrading and spoil placement requirements for mountain-top mining in order to achieve qualifying post-mining land uses including industrial, commercial (including commercial agricultural), residential, or public facility (including recreational facilities) development. The bill stipulates that such proposed uses of land must be reasonable and capable of being met with respect to public and private investments. It is expected that fill areas created for such development are to be designed and constructed in lifts so that the land is capable of development upon completion of mining. It is intended that the Secretary of Interior will include in regulations to be issued under the Act such fill placement standards as are necessary to assure suitable site development for its intended use upon completion of mining. Standards should parallel those used by the Department of Housing and Urban Development or the Federal Highway Administration for developing fill areas for construction purposes.

70 The Committee felt that these planning and fill placement requirements were reasonable since:

70 (1) The utility of a flat land site on a mountain top is dependent upon suitable access, adequate utilities, such as water, storm water and sewage control. Without indication that public jurisdictions involved will assume responsibility for maintaining the necessary public facilities, the development of flat areas should not be encouraged.

70 (2) Controlled placement and compaction of spoil is desirable so that surface created is suitable for use without waiting for settling prior to development.

70 (3) As the requirement of return to approximate original contour and the limitation of dumping spoil downslope are environmentally preferable, exceptions to the standards should only be granted where it is demonstrated that such exceptions are necessary to allow the desirable and achievable post mining land use. As agricultural and recreational uses can be accomplished by following the general requirements of the Act, it is not contemplated that numerous exceptions will be granted for such uses. Thus most recreational and extensive agricultural uses can be conducted on the mountain slopes which have been regraded to their approximate original contour.

70 SURFACE DISPOSAL OF MINE WASTES FROM PROCESSING PLANTS

70 With respect to surface disposal of mine wastes in dry wastebanks (not in embankments or impoundments), H.R. 13950 requires operators to lay down and compact wastes in layers or lifts in order to prevent combustion, water pollution through leaching, and assure stability of the waste bank. The final outslope grade of such piles and their configurations are to be such that they are compatible with the surroundings. (Presumably such grade would be less than the steep slope definition in the Act since this would help assure stability and prevent massive sheet erosion on such outslopes.) Waste banks are to be revegetated with a diverse and permanent vegetative cover capable of self-regeneration and plant succession and at least equal in extent to the cover of the natural vegetation of the area. Such revegetation should also assure appropriate surface stabilization of the soil in order to meet the hydrology standards of the Act.

70 The Committee also recognized the need to establish standards controlling the construction, use and abandonment of impoundments used for the disposal of liquid mine wastes and coal processing wastes.

70 In order to assure that mine waste impoundments used for the disposal of

liquid or solid waste material from coal mines are constructed or have been constructed so as to safeguard the health and welfare of downstream populations,
H.R. 13950 gives the Army Corps of Engineers a role in determining the standards for construction, modification and abandonment of these impoundments.

71 Authority for the issuance of regulations and inspections of impoundments rests with the Secretary of Interior; however, such regulations should be developed by the Chief of Engineers. It is the intent of the conferees that the safety, engineering and design standards of the Corps of Engineers will apply, through the rules and regulations of the Secretary, to such structures and waste disposal banks which may serve as temporary or permanent impoundments. However, it is not the intent that the Chief of Engineers must therefore monitor or sign off on every such structure. That duty belongs to the Secretary of Interior, who may utilize appropriate skilled personnel from other Federal agencies as provided for in Title II. Concurrence of the Chief of Engineers is intended to also include his approval of the system of inspection and his participation in the training of inspectors to bring about competent and adequate enforcement of the standards.

71 All aspects of surveillance which do not require the actual physical inspection of individual sites would properly fall within the purview of the Chief of Engineers. Thus, the Corps' experience and expertise in the area of design, construction, maintenance, etc. which were utilized for carrying out the Congressionally authorized surveys of mine waste embankments in West Virginia following the disastrous failure of the mine waste impoundments on Buffalo Creek, is to be applied in order to prevent similar accidents in the future. In so doing, however, an unnecessary duplication of effort by two Federal agencies and the costly drain upon available manpower is to be avoided.

71 SURFACE IMPACTS OF UNDERGROUND MINES

71 The environmental problems associated with underground mining for coal which are directly manifested on the land surface are addressed in Section 212 and such other sections which may have application. These problems include surface subsidence, surface disposal of mine wastes, disposal of coal processing wastes, sealing of portals, entry ways or other mine openings, and the control of acid and other toxic mine drainage. Wastes resulting from underground operations are governed by the same standards which apply to wastes from surface mined coal. Mine waste is mine waste regardless of its origin and it is

entirely appropriate to deal with the problem in one bill. Moreover, both types of mines are often in close proximity and frequently wastes are disposed of jointly and operations are intermingled. These provisions are discussed in a separate portion of the report.

71 Subsidence control. Underground coal mining across the country has resulted in creating large areas of land which are subject to surface subsidence. These areas range from intensively developed cities such as Wilkes-Barre and Scranton, Pennsylvania, and Rock Springs, Wyoming, to rural lands being used for agricultural or timber-growing. Surface subsidence has a different effect on different land uses. Generally, no appreciable impact is realized on agricultural and similar types of land and productivity is not affected. On the other hand, when subsidence occurs under developed land such as that in urbanized areas, substantial damage results to surface improvements be they private homes, commercial buildings or public roads and schools. One characteristic of subsidence which disrupts surface land uses is its unpredictable occurrence in terms of both time and location. Subsidence occurs, seemingly on a random basis, at least up to 60 years after mining and even in those areas it is still occurring. The estimated cost for controlling subsidence under the 200 urbanized areas now affected is approximately \$1 billion. It is the intent of this section to provide the Secretary with the authority to require the design and conduct of underground mining methods to control subsidence to the extent technologically and economically feasible in order to protect the value and use of surface lands. Some of the measures available for subsidence control include:

72 (1) leaving sufficient original mineral for support;

72 (2) refraining from mining under certain areas except allowing headings to be driven for access to adjacent mining areas, or

72 (3) causing subsidence to occur at a predictable time and in a relatively uniform and predictable manner. This specifically allows for the uses of longwall and other mining techniques which completely remove the coal.

72 (4) Backstowing or returning mine wastes underground to provide some measure of direct roof support and shoring up pillars left for support.

72 Sealing of underground mine openings. Underground mine openings should be sealed for both health and safety reasons as well as environmental protection purposes when mines are worked out or the openings are otherwise no longer needed. Protection of public health and safety is clearly apparent and is not disputed. The environmental effects of abandoned underground mine openings can be quite severe in those instances where such mines are a source of acid or toxic water pollution.

72 Acid and toxic water pollution. Underground mining is the principal

source of existing acid and mineral pollution from coal mining. Such acid and mineral pollution have already affected more than 10,500 miles of streams in the 8 Appalachian coal states and nearly 6,000 miles of these streams are continuously polluted by acid mine drainage. In terms of the number of sources of acid mine drainage, underground mines account for 67% of the sources, yet produce 88% of acid drainage. Surface mines produce the rest. However, active underground mines are proportionately the greatest pollution source since they represent only 5% of all mines, yet produce 19% overall acid drainage.

72 Contrary to the situation in most industries, the discharge of water from many underground coal mines does not cease when the operation shuts down or is abandoned. Usually mine operators are not required to develop a mining operation in a manner designed to eliminate or minimize polluting discharges after mining. The standards included in the bill pertaining to minimizing the disturbances to the prevailing hydrologic balance both during and after coal mining operations, Sec. 516(b)(9), are intended to meet the problem of continuing pollutional discharges after mining has ceased.

73 SPECIAL BITUMINOUS COAL MINES

73 For some special and very narrowly defined mining situations occurring West of the 100th meridian West longitude, the Committee provided for the adjustment of several environmental standards. This action is predicated on the assumption that there are probably a few "open-pit" type coal mines in the Western States which would be unduly burdened by meeting all of the environmental standards as proposed in the bill. The only example of a mining operation which would be so burdened by being forced to comply with the standards of section 515 brought to the Committee's attention is the "big pit" at the Kemmerer Mine in Wyoming. This section is generalized, however, so that it would be applicable to other mines which have the same unusual characteristics of the "big pit" at Kemmerer.

73 The specific environmental standards which are adjusted are related to: spoil handling, regarding to approximate original contour, the elimination of depressions capable of collecting water, and creation of impoundments. It is thought that some mine pits, because of their setting, design, and duration of existing operation, are sufficiently committed to a mode of operation which makes very difficult the adjustment to the basic standards in the Act. A judgment was made that in these limited cases, such pits could continue with their basic mode of operation, meeting the special requirements of this section and all other requirements in the Act.

73 This section was carefully drawn to apply to pits which were operational

prior to January 1, 1972. New mine pits, those open or restarted after January 1, 1972, must be designed to meet the basic environmental standards of the Act.

This applies even in those same settings where existing pits may be determined eligible for the adjustments addressed here in Sec. 527. In other words, specific pits, not entire operations which may cover thousands of acres, are eligible under section 527.

73 COAL ACCESS AND HAUL ROADS

73 The access and haul roads constructed for the purpose of the mining operation are a major source of siltation on a continuing basis both during and after mining. Present practice, especially in mountain mining areas, is simply to abandon such roads upon completion of mining on the premise that permanent access is provided to the previously "remote or inaccessible" areas. In fact, however, there has been little continuing social or economic value for such access to remain. Moreover, in many instances these roads have been used for nothing more than dumping areas for solid wastes and other debris. On the other hand, the Committee recognizes that such roads, under limited and prescribed conditions, might well continue to serve a useful purpose to landowners. It is expected that such instances will be identified before hand in the approved mining and reclamation plan under which the mining operation is being conducted.

73 In order to overcome the continuing and long-standing environmental problems these roads present, the Committee specifies in the bill that roads are to be designed and constructed with appropriate limits to grade, width, surface materials and culvert placement and size in order to control drainage and prevent erosion outside the permit area. Such design and construction features are especially critical if roads are part of long-term post-mining intensive land use development since they provide a reasonable basis for the post-mining maintenance and use. In such instances, a measure of assurance as to their continuing maintenance is required as part of the mining application.

74 Access roads if appropriately constructed can perform environmental protection functions by breaking up drainage down long slopes or perhaps serving as a barrier to keep spoil off the outslope. The design and construction of such roads under appropriate engineering standards assuring that the environmental and maintenance objectives are met implies that in some instances there well might be some narrow and shallow fill areas on natural slopes for the construction of such roads as an initial activity preceding the actual mining process.

74 ENFORCEMENT

74 H.R. 13950 contains comprehensive provisions for inspections, enforcement notices and orders, administrative and judicial review, and penalties. These requirements are of equal importance to the provisions of the bill regarding mining and reclamation performance standards since experience with State surface mining reclamation laws has amply demonstrated that the most effective reclamation occurs when sound performance standards go hand in hand with strong, equitable enforcement mechanisms.

74 INSPECTIONS AND ENFORCEMENT: FEDERAL-STATE RELATIONSHIP

74 Efficient enforcement is central to the success for the surface mining control program contemplated by H.R. 13950. For a number of predictable reasons - including insufficient funding and the tendency for State agencies to be protective of local industry - State enforcement has in the past, often fallen short of the vigor necessary to assure adequate protection of the environment. The Committee believes, however, that the implementation of minimal Federal standards, the availability of Federal funds, and the assistance of the expertise of the Office of Surface Mining Reclamation and Enforcement in the Department of Interior, will combine to greatly increase the effectiveness of State enforcement programs operating under the Act. While it is confident that the delegation of primary regulatory authority to the States will result in adequate State enforcement, the Committee is also of the belief that a limited Federal oversight role as well as increased opportunity for citizens to participate in the enforcement program are necessary to assure that the old patterns of minimal enforcement are not repeated.

74 Once State programs or Federal programs replace the interim regulatory procedure, section 517 requires that Federal inspections must be made for purposes of developing, administering, or enforcing any Federal program, and assisting or evaluating the development, administration, or enforcement of any State program.

75 In those situations in which the Secretary is the regulatory authority, Federal inspections must occur on an irregular basis averaging not less than one inspection per month for the operations covered by each permit, as is the case when the State is the regulatory authority. In those situations where the State is the regulatory authority and the Secretary carries out inspections for assistance and evaluation purposes, Federal inspections should take place in sufficient number to carry out properly these back-up and monitoring functions. In addition to normally programmed inspections, section 521(a)(1) of the bill also provides for special inspections when the Secretary receives information

giving him reason to believe that violations of the Act or permit have occurred.

It is anticipated that "reasonable belief" could be established by a snapshot of an operation in violation or other simple and effective documentation of a violation. Of course any inspection, Federal or State, must occur without prior notice to the permittee or his agents or employees.

75 By mandating primary enforcement authority to field inspectors, this bill recognizes that inspectors are in the best position to recognize and control compliance problems. The bill establishes three strong but flexible enforcement mechanisms which provide inspectors with the tools necessary to respond to the most minor and the most serious violations.

75 I. Cessation order (section 521(a)(2)). - During any Federal inspection, if the inspector determines that any violation of the Act or permit condition or any other condition or practice exists which creates an imminent danger to the health or safety of the public, or is causing or can reasonably be expected to cause significant, imminent irreparable environmental harm to land, air, or water resources, the inspector must order a cessation of the mining operation causing or contributing to the danger or harm. The cessation order may apply to all or a portion of the surface coal mining and reclamation operation in question. The imminent danger or environmental harm closure provision is so critical that the Federal inspector is required to act even if the inspection is being made for purposes of monitoring a State regulatory authority's performance. To provide otherwise would be to perpetuate the possibility of tragedies such as the Buffalo Creek Flood, which can be at least partially attributed to the sad fact that government regulation of the collapsed mine waste banks fell between the cracks of the not quite meshed functions of various State and Federal agencies.

75 When determining "significant, imminent, irreparable environmental harm," the Committee intends that the fact that the hazard to the environment is physically capable of being repaired should not preclude a cessation order. Rather, the degree of difficulty with which the damage may be undone should be considered along with the significance of the damage. In general, it is the Committee's intention that where there is a risk of significant imminent environmental harm to land, air or water resources, cessation should not be ordered only where the damage can be easily repaired. Moreover, the term "significant" should be construed to include factors other than whether environmental damage to land, air or water resources can be repaired. The test is whether the harm is significant and irreparable.

76 Since neither the Congress nor any regulatory authority can totally predict the public and environmental hazards arising from such a complex endeavor as surface coal mining, the bill does not restrict the closure authority of section 220(a)(2) to violations of the Act or permit. Instead any condition or practice giving rise to imminent danger or environmental harm is sufficient to invoke the authority.

76 II. Notice of violation (section 220(a)(3)). - Where the Secretary is the regulatory authority or Federal inspection is being conducted pursuant to sections 502, 504(b) or subsection (b) of section 521, and a Federal inspector determines that a permittee is violating the Act or his permit but that the violation is not causing imminent danger to the health or safety of the public or significant, imminent environmental harm, then the inspector must issue a notice to the permittee setting a time within which to correct the violation. The inspector can extend this initial period for up to ninety days. If the violation has not been corrected within the established time, the inspector must immediately order a cessation of the mining operation relevant to the violation.

76 The enforcement mechanism of section 521(a)(3) will be utilized by the inspector in the great majority of compliance problems. It not only enables the inspector to gain immediate control of the problem, but also provides him with essential flexibility to appropriately deal with minor as well as major violations.

76 III. Show cause order (section 521(a)(4)). - Where the Secretary is the regulatory authority or Federal inspection is being conducted pursuant to section 502, 504(b) or subsection (b) of section 521, and a Federal inspector determines that a pattern of violations of the Act or permit exists or has existed and that such violations are caused by unwarranted failure of the permittee to comply or are willfully caused by the permittee, the inspector must issue an order to the permittee to show cause as to why his permit should not be suspended or revoked. Further action on the show cause order is subject to the provisions of section 525(d).

76 While the bill grants a great deal of authority to Federal inspectors, it is important to remember that adequate protection must be afforded the regulated parties against the possibility of abuse of this authority. To this end formal internal administrative review and judicial review of inspectors' decisions are

permitted by sections 525 and 526 respectively. Furthermore, section 521(a) (5) insures that due process will begin at the inspectorate level and provides the opportunity to modify, vacate, or terminate a clearly erroneous notice or order without the burden of more formal administrative review.

76 Section 521(d) provides that as a condition of approval of any State program, the enforcement provisions thereof shall, at a minimum, incorporate sanctions no less stringent and identical or similar enforcement procedures to those provided in the Act.

77 ADMINISTRATIVE REVIEW

77 In order to assure expeditious review and due process for persons seeking administrative relief of enforcement decisions of Federal inspectors under the provisions of section 521, section 525 of the bill establishes, clear, definitive administrative review procedures. Those persons having standing to request such administrative review include permittees against whom section 521 notices and orders have been issued and persons having an interest which is or may be adversely affected by such notice or order. Any person with standing may request a public hearing which must be of record and subject to the Administrative Procedure Act. Pending review the order or notice complained of will remain in effect, except that in narrowly prescribed circumstances temporary relief may be granted to a notice or order issued under section 521(a) (3). In no case, however, will temporary relief be granted if the health or safety of the public will be adversely affected or if significant, imminent environmental harm will be caused. This provision will insure that the mining and reclamation performance standards will continue to protect the public health and safety or the environment during any administrative proceeding in which their validity is challenged, until the issue is determined on the merits.

77 In all cases where a section 521(a) (4) show cause order has been issued a public hearing must be held. The Secretary must issue a decision within sixty days following the completion of the hearing as to whether or not to suspend or revoke the permit.

77 JUDICIAL REVIEW

77 Section 526 of the bill establishes specific provisions for judicial review of Secretarial actions. Because of the thoroughness and degree of due

process afforded judicially reviewable actions by the Secretary, judicial review

is to be based on the record made before the Secretary. The findings of the Secretary, if supported by substantive evidence on the record considered as a whole, shall be conclusive. Temporary relief from Secretarial decisions may be granted only under the same kind of narrowly prescribed circumstances as discussed above in the context of administrative review.

77 PENALTIES

77 Where the Secretary is regulatory authority or Federal inspection is being conducted pursuant to section 502, 504(b) or subsection (b) of section 521, section 518 of the bill provides that civil penalties will be mandatory for

violations leading to a cessation order under section 521 or a cessation order

entered by a court pursuant to section 518. The Secretary has discretionary authority to assess civil penalties for other violations. The Secretary is required to make findings of fact and issue a written decision as to the occurrence of a violation and the amount of the penalty which is warranted only

where the person charged has

availed himself of the opportunity for a public hearing and the hearing has,

in fact, been held. The bill also provides that approved State programs must contain criminal and civil penalties no less stringent than the Federal provisions with the same or similar procedural requirements relating thereto.

78 SURFACE OWNER PROTECTION

78 Protecting the interests of the private individual who owns surface lands

over coal reserved to the United States was one of the most controversial subjects addressed by this legislation throughout its development in the 93d Congress. Although H.R. 13950 contemplates the full reclamation of strip mined

lands following the destruction of the surface during the mining process, the interruption of the use of the surface during the mining period and the delay in

the restoration of the surface to full productivity or value requires that the

interests of the surface owner be recognized.

78 The Senate bill of the last Congress, S. 425, dealt with this problem by

prohibiting leasing of Federal coal lying under land not owned by the United States. The House amendment to S. 425 (the text of H.R. 11500) provided that where coal belonging to the United States is to be surface mined, the consent of

the surface owner would be required. According to the Conference Report:

78 The Conferees agreed that neither approach was wholly right. Just as there should not be an absolute prohibition to development of a natural resource

belonging to all citizens of the nation, particularly when there is an energy

crisis, so there ought not to be an opportunity for an individual owning land to reap a windfall in order to obtain his consent.

78 Section 716 of the Conference Report includes a moratorium, but for a short period only from the date of enactment of the bill until February 1976. And it embodies the House concept of surface owner consent, but with a carefully drafted definition of what a "surface owner" is. He must not only hold title to the land, but also, for at least three years before granting consent to a surface mining operation, must have his principal place of residence on the land, or personally farm or ranch the land affected by the mining operation, or receive directly a "significant portion" of his income from such farming. . . . By so defining "surface owner," the Conferees seek to prevent speculators purchasing land only in the hope of reaping a windfall profit simply because Federal coal deposits lie underneath that land." (Statement of Managers accompanying Conference Report to S. 425, Report 93-1522, 93rd Congress, Second Session, December 5, 1974 at 81-82.)

78 The Conference Report emphasized that in the determining what is a "significant portion" of the holder of title to the surface land's income from farming or ranching they did not intend to impose an arbitrary or mechanical formula. "Significance" is to be construed in terms of the importance of the amount to the surface owner's income and is not intended to be measured by a fixed percentage of income.

79 Where a person's gross income is relatively small, the loss of but a fraction thereof may be significant. In adopting this surface owner protection provision without amendment, the Committee agrees with the Conferees that by limiting the definition of "surface owner", speculators will be prevented from purchasing land in the hope of reaping a windfall profit simply because Federal coal deposits lie underneath the land. At the same time, so that there will not be any undue locking up of Federal coal, generous compensation is guaranteed to the surface owner, based not only upon the market value of the property but also the costs of dislocation and relocation, loss of income, and other values and damages.

79 By requiring that coal subject to section 715 be leased only by competitive bidding after the Secretary has negotiated with the surface owner, "side deals" between the surface owner and a speculator should be precluded. In any event, such side deals are prohibited by section 715 and will result in the assessment of a penalty and termination of the lease.

79 Concern has been expressed that this provision might be interpreted to

apply retroactively to require new consents and payments to the surface owner where written consents have already been obtained. It is not the intention of the Committee that the operation of section 716 should nullify valid consent obtained prior to December, 1974.

79 In addition, concern has also been expressed about how the requirement that coal deposits subject to section 716 be offered for lease by competitive bidding after the surface owner gives his consent will affect the existing Federal prospecting permits on such coal deposits. The Committee is of the opinion that whether the holder of a Federal coal prospecting permit has an interest which vests him with the right to a coal lease is a matter of interpretation of the Mineral Leasing Act of 1920 and other applicable laws. However, if the permittee does have a property right, it is not the intention of the Committee to deprive him of it. Section 716(i) specifically states that nothing in section 716 is to be construed as increasing or diminishing any property rights held by the United States or by any other landowner.

79 A related issue, which is addressed in section 717 is the protection of the lessee or permittee of surface lands over Federally owned coal. In this case, a strict written consent requirement is not imposed. Section 717 provides for either written consent or, in the alternative, posting of a bond to secure payment to the lessee or permittee for such damages as may be caused to his surface rights and the use and enjoyment thereof. It is the intention of the Committee that any such damages should be calculated on the basis of the benefits recognized in section 717, which would have been enjoyed by the permittee or lessee during the time remaining under the lease or permit which exists at the time surface use is interrupted by surface mining operations.

79 ROLE OF THE SECRETARY OF THE INTERIOR

79 The administration and enforcement of all Federal provisions contained in the Act is the responsibility of the Secretary of Interior. More specifically, in Title II an Office of Surface Mining Reclamation and Enforcement is created within the Department of Interior, headed by a Director who is to be appointed by the President with the advice and consent of the Senate. The Director is responsible to the Secretary who will assign him duties, consistent with the Act.

80 Initially, the Secretary's responsibility relates to the enforcement of Federal interim performance standards which are implemented during the interim period. It is the Secretary's duty to respond to any reasonable evidence of violations of these Federal standards by using the authority vested in him to bring about compliance.

80 During the interim period, the Secretary also must review the proposed State enforcement programs to determine whether or not the requirements set

forth in the Act are being met, particularly with reference to a State's ability to enforce the full range of Federal performance standards. Once a State program is approved, the Secretary is still obliged to monitor the State's performance and where there is a breakdown in the State enforcement, he may take over the State program in whole or in part. The system of Federal inspection is designed to provide random but regular on-site review of operations during the interim period (triggered where appropriate by information provided to the Secretary by any individual) and to ensure that inspection reports are readily available for review by citizens who desire to monitor the operation. The Secretary must accord any person who reported a violation which brought about an inspection the right to accompany the inspector onto the surface mining site.

80 The establishment of permanent Federal regulatory programs on Federal lands and in States that are without approved State programs, and the promulgation of rules and regulations governing these programs, constitutes another significant aspect of the Secretary's responsibility.

80 The Secretary shares with the Secretary of Agriculture the responsibility for administering the Abandoned Coal Mine Reclamation Fund. Under the provisions of title IV, certain types of land which have been mined or affected by mining for coal may be acquired by the Secretary, reclaimed and disposed of. In addition, other lands may be acquired by the Secretary for use in developing housing for persons affected by coal mining dislocations or by natural disasters. Matching grants to the States may be made by the Secretary to assist in acquiring lands for rehabilitation, and any State's governor may request the filling of voids, sealing of tunnels and disposing of other mine-related public hazards by the Secretary.

80 The Secretary's role is not limited to the environmental protection provisions of the Act. In addition he is given charge of employee protection. Any employee who believes he has been fired or discriminated against in his employment because of actions taken to testify or file proceedings under the Act may appeal to the Secretary. Moreover, a continuing study of shifts of employment resulting from enforcement of the Act is to be conducted by the Secretary.

80 The Secretary's performance in carrying out these provisions will rectify the inadequacies of past reclamation. However, the advice and counsel of the other Federal agencies, notably the Environmental Protection Agency, is required prior to making key decisions enumerated in the bill.

81 DESIGNATION OF NONCOAL MINE LANDS

81 Under the Mining Law of 1872 anyone is free to explore for hard rock minerals in the public domain, including minerals reserved to the United States located under surface held in private ownership. Upon the discovery of a valuable deposit, the mining laws convey the right to mine without regard to the environmental consequences and with severely limited protection for the surface owner or property owners within the vicinity of the mining operation. Quite literally, this allows a mining company to prospect and mine in people's back yards and other developed areas where mining is totally inconsistent with established land uses or areas of extremely important environmental value. While the Committee chose not to address the surface effects of mining of minerals other than coal in H.R. 13950, it did include a mechanism in title VI which would allow the elimination of the worst abuses under the mining law on a case by case basis but would not unduly interfere with the operation of the mining law pending its complete review and revision.

81 Section 601 establishes a program for designating areas unsuitable for mining of minerals other than coal. The process contemplated by Section 601 gives citizens the right to petition for review by the Secretary for a designation of unsuitability on the basis of criteria spelled out in the section. Under these criteria designation could be made in areas of predominantly urban or suburban character or such areas where mineral entry would have an adverse impact on such lands where proposed operations would have an adverse impact on important natural systems or other specified values, or could endanger life or property, designation is also allowed. Pursuant to the definition of the term "Federal lands" in section 701(8), title VI authorizes the designation of areas where both the surface and subsurface rights are owned by the United States, as well as where the United States owns the minerals beneath privately owned surface.

81 Lands upon which there is an actual ongoing mining operation being conducted prior to the hearing on a proposed designation are not eligible for designation and section 601(d) provides that valid existing rights shall be preserved and not affected by a designation.

81 It should be emphasized that the section does not withdraw any area from the operation of mining laws, nor does it ignore the interests of mineral development. Indeed, before any designation could be made, the Secretary would be required to make a determination of the impact of such a designation upon the availability of necessary minerals. The section simply says that where mineral entry is obviously inappropriate from an environmental and planning viewpoint - on the basis of rather narrow criteria - mineral entry may be prohibited.

81 INDIAN LANDS PROGRAM

81 The committee approved, without amendment, the Indian Lands Section of H.R. 13950 that was the product of the conference on S. 425 during the 93d Congress. This section provides for a study of the issues involved in implementing a full regulatory program on Indian lands rather than adopting a regulatory scheme which could be implemented by the tribe under the approved provision. The Secretary is to submit his report by January 1, 1978, along with proposed legislation designed to allow tribes to assume regulatory authority over a surface mining regulatory program. Section 712 also requires operations on Indian lands to comply with requirements at least as stringent as the full program's provisions by 30 months after enactment. The Secretary is to enforce these provisions as well as incorporate such standards into existing and new leases.

82 REHABILITATION OF ABANDONED MINE LANDS

82 Historically, the environmental effects of mining coal have been neglected upon the abandonment of the operation. Even during the heyday of coal production in the Appalachian and Western coal fields, there were few constraints upon the industry to clean up its wastes. Rather, it was assumed implicitly that the permanent degrading of the local surroundings and the pollution of streams was the inevitable price which the community had paid in return for jobs and tax revenue generated by the coal industry.

82 Giant dumps of burning mine waste often containing waste water and constituting a threat to downstream communities; rivers clogged with coal fines from coal treatment plants; streams devoid of aquatic life as a result of acid drainage; derelict tipplers and mine buildings; black roads spreading coal dust; the tumbledown shanties of company towns; surface subsidence of land due to caving of abandoned underground mines and underground mine fires - all too often, this has been the heritage of coal mining in America.

82 With the rapid development of improved surface mining techniques and equipment during the decades following the second World War, many coal communities were faced with new and forbidding factors. The introduction of the bulldozer and shovel into mountainous regions where geological conditions coupled with high rainfall brought periodic floods and landslides in the normal course of events, further extended the variety and severity of environmental costs imposed on area residents. These new forms of mine wastes were brown and red rather than black: silt, rocks and boulders of all sizes, released in the process of uncovering the coal seam, and causing leaching and sedimentation of creeks and rivers of the region.

82 Where the sulfur content of coal is high, exposure of low-grade coal and

other toxic materials which have been cast aside causes the formation of acid, often for long periods of time. These acids further reduce the quality of water available to local people, often runing the domestic water supplies. The widespread use of cheap and powerful explosives to loosen and breaken up overburden lying above the coal seam further complicates these effects by opening fissures into old abandoned underground mines, frequently hastening the process of acidformation underground and simultaneously bringing about its release into aquifers and well.

82 Contour surface mining has created thousands of miles of unstable outslopes below the mined bench. Belatedly, state laws were enacted to control these drastic consequences. However, irrespective of state reclamation laws, coal operators in general have continued in the old tradition, abandoning their operations once the coal was exhausted or its removal no longer economically attractive.

83 The Committee takes the position that the Federal government has a responsibility to remove this longstanding blight from regions which fueled the industrial growth of America nad later the large thermal plants for the generation of electricity. The cost of rehabilitation is estimated at \$7 to \$10 billion.

83 In all, it is estimated that a million and a half acres of land have been directly disturbed by all coal mining and over 11,500 miles of streams polluted by sedimentation or acidity from surface or underground mines.

83 Estimates of program costs for correcting these problems have been made by several Federal agencies during the past four years total nearly \$10 billion and are summarized as follows:

*2*Cost estimates		Millions
Environmental impact:		
1. Stabilization, reshaping and revegetation of strip mined land	\$2,040	
2. Controlling acid mine drainage, clearing heavily silted streams, sealing of mineshafts	6,600	
3. Stabilization of mine waste banks and removal of fire and flood hazards	220	
4. Control of subsidence under urbanized areas	1,000	
5. Extinguishment of underground and outcrop mine fires	50	
Total	9,910	

83 These estimates provide a basis for identifying the order of magnitude of

funds required to correct these problems.

83 In 1974 the Corps of Engineers developed a program to rehabilitate a small area, Cabin Creek, West Virginia. Cabin Creek is a short 10-mile tributary to the Kanawha River near Charleston, West Virginia. The Corps has designed a program for basic rehabilitation which provides for: (1) erosion and sediment control by stabilization of strip mines and coal refuse banks; (2) flood control needed due to sediment-filled streams through clearing stream channels; and (3) water quality control from acid mine drainage. The estimated

first cost for this work is \$11.4 million:

*2*Cabin Creek program - Corps of
Engineers

	Millions
Strip mine and waste bank stabilization	\$6.4
Sediment removal from streams	2.5
Acid drainage and water quality control	2.5
Total (first cost)	11.4

83 This type of program is representative of the work needed in virtually every watershed in which there has been significant amount of underground and surface mining over the past decades.

83 Reclamation also plays a major part in protecting existing public investments in some areas. For instance, the Cabin Creek case study centers on a tributary that contributes a major silt load to navigable waterways. Similarly, the drainage area of the \$5 7 million Fishtrap Dam and Reservoir in

Eastern Kentucky has been substantially affected by both underground and surface mining. Reclamation expenditures are warranted to protect such public investments. Acid mine drainage and other pollution problems substantially have affected the useful life other reservoirs and water control works in the Appalachian chain and other coal fields.

84 The burden of paying for reclamation is rightfully assessed against the coal industry. The bill adopts the principle that the coal industry, and by extension the consumers of coal, must bear the responsibility for supporting special rehabilitation programs to recover and reclaim areas which have been severely impacted in the past by coal mining operations.

84 ABANDONED MINE RECLAMATION PROGRAM

84 In order to help correct the legacy from past coal mining, the Committee approved an abandoned land reclamation program funded by a small reclamation fee on each ton of coal mined after the date of enactment.

84 The program established under the Act is to be administered principally

by the Secretary of Interior for the purpose of protecting the health or safety of the public, protecting the environment from continued degradation from past surface and underground mining activities, conserving land and water resources, expanding public facilities such as utilities, roads, recreation and conservation facilities, improving land and water for the economic and social development of the area, and providing research and demonstration water quality control programs and techniques.

84 Even though the principal responsibility is given to the Secretary of Interior for administration of the program and the fund, however, the Committee recognized that other agencies would have to be involved in order to substantially address and correct past damages. Thus, the Secretary of Agriculture was given specific authorization for a rural lands program and the Secretary of Interior is directed to transfer funds to other Federal agencies such as the Corps of Engineers, the Environmental Protection Agency, and others to carry out purposes of the title.

84 RECLAMATION FEE AND FUND

84 The Committee decided to establish a fund for a period of fifteen years based on a reclamation fee in order to assure the availability of monies for program purposes. The release of monies to the Secretary for obligation from the fund is through the annual appropriation process, thus providing Congress with an opportunity to be informed of the progress being made and to review the specification of the activities, areas, and specific purposes for expenditures in the corresponding fiscal year.

84 During the development of this legislation, the Committee reviewed the history of reclamation fees imposed by States on coal. A number of States have enacted various reclamation fees or taxes on coal, ranging up to the equivalent of 30¢ a ton. It is evident that such fees have not constrained the development or production of coal in these States, nor placed that coal at a competitive disadvantage with adjacent States having no or substantially lower fees. Kentucky is a good case in point. For the three years after imposing a fee of 30¢ per ton, or 4 percent of the sales price (whichever is greater), coal production continues to rise even though the surrounding states had either no or substantially lower fees.

85 Several principal considerations form the basis for the Title IV reclamation fee: first, to set the fee at such a level that it is not a burden on the industry; second, to provide at the same time sufficient funds for meeting program objectives within a reasonable time frame; and third, to

structure the fee so it would not exert an inflationary influence in the economy.

85 A differential fee was established, at 35~ per ton for surface mined coal and 15~ per ton for underground mined coal. This differential reflects the Committee's cognizance of the present disproportionately high social costs incurred by underground coal mine operators in meeting responsibilities under the Coal Mine Health and Safety Act of 1969, as amended. It should be noted that the reclamation fee on surface mined coal can be adjusted somewhat to reflect its heat value: if 10 percent of the value of the coal at the mine after extraction, as determined by the Secretary, is less than 35~ per ton, then the lesser amount is paid into the fund. The Committee expects, though, that only a small proportion of the low-heat sub-bituminous coal will be eligible for this reduced fee. The fee for lignite is set at 5 percent of the value of the cost at the mine site after extraction, as determined by the Secretary, or 35~, whichever is less. As is discussed in the introduction to this report, 20 percent of the fees are to be reserved for the purpose of conducting water and core sample analysis under title V.

85 It is estimated that the reclamation fee adopted by the Committee would yield approximately \$1 40-160 million per year based on the most recent annual coal statistics concerning tonnage, method of mining, and estimated average value at the mine. The fee is quite small relative to current prices of coal. When translated into power costs per kilowatt hour (assuming conservative figures of 10,000 BTU's/lb and a conversion rate of 10.000 BTU's/kwh) it is less than 0.015~ per kwhr of electricity. The consumer is utilizing 250 kwhr per month, this represents an increase of 4~ per month on his utility bill. The Committee does not consider this small increase a burden on current coal consumers or inflationary in nature.

85 RURAL LANDS PROGRAM

85 Rural lands, which have been damaged by mining activity and remain unreclaimed are the focus of a program administered by the Secretary of Agriculture utilizing monies from the fund. Up to one-fifth of the monies accruing to the fund in any one year are to be transferred to the Secretary for this purpose. The Secretary of Agriculture may enter into agreements with landowners, residents, tenants, or owners of water rights to accomplish reclamation on rural lands. The Secretary can share the costs of reclamation work by grants up to 80 percent of the total cost, and the landowner (or participant) can provide the matching amount through labor and equipment.

85 Under certain circumstances, the Secretary of Agriculture can reduce the

non-Federal matching 20 percent cost share if he determines that the principal benefits from the reclamation accrue to improved off-site water quality, off-site impacts and if the 20 percent matching share requirement would place a sufficient burden on the landowner which would probably prevent him from participating in the program.

86 The Committee had previously included a one-time 30-acre limitation for such grants in order to prevent windfall gains by individuals taking part in this program for speculative reasons. This acreage limitation was raised to 170 acres because of the desire to assure program applicability in all coal areas of the country. However, the Committee intends that the Secretary of Agriculture provide through regulation appropriate safeguards to prevent such parties as large corporations, coal companies, and land development concerns from using this program to reclaim lands. This program is intended to stabilize abandoned mountain mines on the properties of small, rural lands residents in the Appalachian coalfields and to bring agricultural lands in Midwestern coal fields back into agricultural production. The one-time eligibility of individuals still applies. It is expected that where larger acreages are involved in such projects, the amount of Federal cost-sharing will be predicated on the expected income production from the post-mining land use.

86 Thus, the higher the expected post-mining income flow, the smaller the Federal cost share. It should also be noted that those whose water rights have been affected adversely by the disturbance of the hydrologic balance due to coal-mining activities, may also qualify for assistance.

86 The Act specifies that the Rural Lands Program is to be implemented through the Soil Conservation Service. With specific authorities for the program to be carried out through the Soil Conservation Districts. Such activities may include grants to appropriate county Conservation Districts since these local organizations are the grass roots counterpart of the S.C.S. and its members in many instances will be doing the actual reclamation work.

86 The Soil Conservation Service may want to consider integrating such projects on a watershed or drainage area basis in order to enhance program effectiveness; however, it is not intended that such an approach and its planning process slow down reclamation or deny work in those areas or instances where the landowners are willing to participate but the watershed planning is not completed. It is also expected that the Rural Lands Program will be coordinated to the extent necessary with the reclamation program implemented by the Department of Interior.

86 DEPARTMENT OF THE INTERIOR PROGRAM

86 The widest range of land and water damage from both underground and strip mining are approached under the grant of authority to the Secretary of Interior.

86 The program authorized for the Department of Interior to provide the mechanism for bringing lands into public ownership prior to reclamation and then utilizing such lands for various purposes which may require a change in ownership.

86 Specific provision is made for reclamation work to be conducted on private lands. However, in order to protect the public interest aspects of the Reclamation Fund and to prevent "windfall profits" from accruing to private landowners, a lien is to be placed on the property for the value of the work accomplished in those instances when the reclamation results in significant increases in the property values. In making such a determination of significant increase in property values, the Secretary shall assure the use the value of the land in its unreclaimed condition and limit such a determination to only that land being reclaimed or the land being primarily benefited. In other words, if the land to be reclaimed is part of a larger property, it is not intended that a comparison be made between the increased value due to reclamation and the entire property, but only that land upon which the work is done, unless the benefits from the reclamation work (and a principle purpose of the project) improve the entire property as might be the case in reduction of acid flows or siltation into streams or correcting adverse aesthetic impacts. The Secretary of Interior has in some instances under the Appalachian Reclamation Program (pursuant to Sec. 205, PL 89-4, as amended), administratively determined that similar reclamation liens would be fully amortized over a 20-year period and at the end of that period would have no value. It is not intended that reclamation liens from this program be amortized.

87 It is expected that appropriate selection of areas will be made in order to undertake land and water reclamation in a systematic way to assure the most critical areas and problems are addressed first. An example of an initial review of such an approach is contained in Ohio's report, Land Reborn, A Study of Unreclaimed Coal Strip Mined Land in Ohio, January 1, 1974.

87 The Secretary of Interior has also been given authority to reclaim lands to be used for the purposes of housing for miners, mining related employees, or persons displaced by natural disasters or catastrophic failures. This authority

grows out of the needs arising after the Buffalo Creek disaster as well as Committee cognizance that Western coal operators, in supplying an even larger share of the Nation's energy requirements, will bring about the movement of workers and families into the new coal regions. Most of the local western political units are in no position to cope with the impending growth problems, especially with respect to tax and bonding capacity, in order to provide funds for public facilities and services. The need to forestall the destructive effects of this growth is seen as requiring the bill's departure from a totally retroactive approach to mined lands rehabilitation.

87 Reclamation work in this instance includes the construction of on-and-off-site public facilities necessary to support such housing. The Act specifically excludes the use of these funds for the actual construction or rehabilitation of such housing. For the purposes of this section, the term "public facilities" includes those public works needed for supporting housing, on-and-off-lands developed for housing sites), including roads, water and sewer systems, education, health, or other municipal facilities; supporting services and equipment required.

87 Such facilities, works, and services may be temporary or permanent. Through this program the Secretary may provide aid to communities undergoing rapid growth due to the opening of coal mines and coal-related operations such as power plants and coal conversion facilities. Employment in all such activities is considered to be coalrelated. The Secretary is given authority to contract for plans, technical assistance, demonstrations, including that planning and technical assistance which is a necessary prerequisite to determining the feasibility of such projects. In order to get such activities under way in a timely manner to meet current needs, contract authority is provided the Secretary in Section 714(a) for the planning work.

88 Even though the Secretary of Interior can carry out this work directly, authorization is also provided to make grants to the States, their instrumentalities, or other public bodies for non-profit organizations designated by the State. Such projects might well provide appropriate opportunity for the Secretary to work through such suitable groups as nonprofit housing corporations and regional commissions which are providing technical assistance to the States and localities concerning similar housing needs. Existing applicable Federal standards for the design and construction of such facilities should, in general, be followed by the Secretary where appropriate; however, the Secretary may fund innovative projects meeting the identified needs.

88 ELIGIBLE LANDS

88 Eligible lands for reclamation program activities as stipulated in Sec.

403, are those which have been mined prior to the date of enactment and left or abandoned in either an unreclaimed or inadequately reclaimed condition; and for which there is not a continuing responsibility (by the operator) for reclamation under existing State or other Federal laws. With respect to the authority granted the Secretary for funding public investments to support housing necessary to accommodate miners and related employees, Sec. 405(b)(4) provides that such investments can be made on lands which do not meet the mining and reclamation test of Sec. 403, if it is in or serves an area of rapid coal development.

88 Areas of rapid coal development can be those experiencing significant population growth due to increases in coal production from existing mine operations or to development of new coal production operations which result in shortages of existing housing and community facilities. Thus an area such as Colstrip, Mont., which had virtually no on-going coal production, but experienced both the start-up of a mine and the construction of a mine-mouth power plant and related population influx would qualify. An area similar to Gillette, Wyoming or the surrounding Wyoming portion of the Powder River Basin coal field would qualify on the basis of significant increases in coal production through the opening of new mines and the expansion of production from existing mines. Rapid coal development also occurs in areas within the central and eastern coal fields in those instances of the construction and opening of major underground or surface mines or conversion facilities and thus some of the investment would also be on reclaimed lands. The basic test to be met is that of significant increase in coal production or conversion which results in a need for additional community facilities and housing to accommodate related population growth.

COMMITTEE ACTION

88 LEGISLATIVE HISTORY

88 As has been discussed in this report, H.R. 13950 is based on the previously passed-but-vetoed strip mining bills of this and the 93rd Congress. The legislative history of H.R. 13950 includes the history of H.R. 25, the Surface Mining Control and Reclamation Act of 1975 Report No. 94-45; S. 425, the Surface Mining Control and Reclamation Act of 1974, report No. 93-1522, 93rd Congress - 2nd Session (December 5, 1974) and H.R. 9725, the Surface Mining Control and Reclamation Act of 1976, report No. 94-896, 94th Congress - 1st Session.

89 HISTORY OF S. 425 IN THE 93RD CONGRESS

89 Hearings:

89 House - Apr. 9, 10, 16 and 17 (H.R. 3) and May 14 and 15, 1973.

89 Serial No. 93-11.

89 Senate - March 13, 14, 15, and 16 (S. 425), 1973 . . . 93-2130.

89 Committee action:

89 House - Reported H.R. 11500, May 14, 1974. H.Rept. 93-1072.

89 Senate - Reported S. 425, Sept. 21, 1973. S.Rept. 93-402.

89 Floor action:

89 House - Floor debate: July 17, 18, 22, 24, and 25, 1974; S. 425 amended by substituting the text of H.R. 11500 as amended and passed July 25, 1974.

89 Senate - Floor debate: Oct. 8 and 9, 1973; S. 425 passed on Oct. 9, 1973.

89 Conference: Conference (after 18 meetings) agreed Dec. 3, 1974.

89 H.Rept. 93-1522.

89 Action on conference report:

89 House failed to pass conference report under suspension Dec. 9, 1974.

89 Passed House Dec. 13, 1974.

89 Passed Senate Dec. 16, 1974.

89 Presidential Action: S. 425 vetoed Dec. 30, 1974.

89 HISTORY OF H.R. 25 IN THE 94TH CONGRESS

89 Committee action:

89 House - Reported H.R. 25 March 6, 1975. H.Rept. 94-45.

89 Senate - Reported S. 7 March 5, 1975. S.Rept. 94-28.

89 Floor action:

89 House - Floor Debate March 14, 17, and 18, 1975, passed on March 18, 1975.

89 Senate - Floor Debate on S. 7, March 10, 11, and 12, 1975, H.R. 25 as amended by substituting the text of S. 7 as amended and passed Senate March 20, 1975.

89 Conference:

89 Conference Report filed the House May 2, 1975. No. 94-189.

89 Senate agreed to Conference Report May 5, 1975.

89 House agreed to Conference Report May 7, 1975.

89 Presidential Action: H.R. 25 vetoed May 20, 1975.

89 House sustained veto June 10, 1975.

89 In addition to consideration of H.R. 25 by the 94th Congress, the Committee on Interior and Insular Affairs reported H.R. 9725 on March 12, 1976 (H.Rept. 94-896). The Committee on Rules tabled this measure on March 23, 1976.

90 RELATION OF H.R. 13950 TO OTHER LAWS

90 Certain aspects of coal mining operations are now subject to regulation under two major Federal programs - the Coal Mine Health and Safety Act of 1969 and the Federal Water Pollution Control Act.

90 Under the Coal Mine Health and Safety Act of 1969, as amended, the Secretary of Interior regulates certain health and safety aspects of both surface mines and surface activities of underground mines.

90 The implementation of this Act though has been directed at the protection of the miner while on the site of the mining operation.

90 In several instances, H.R. 13950 specifies that certain activities are to be conducted in such a way as to provide for the protection of the health or safety of the public (both on and off the mine site). For example, standards are set forth controlling the design, construction and use of impoundments for the disposal of mine wastes. Such provisions are not duplicative of the Coal Mine Health and Safety Act but are supplementary to the authority granted to the Secretary of Interior by the Act.

90 Since the Secretary of the Interior is given the principal responsibility for administering both laws, the Committee feels that he will be able to coordinate the implementation of his responsibilities under H.R. 13950 with those under the Coal Mine Health and Safety Act of 1969.

90 The Committee does not contemplate that any of the environmental protection standards or other provisions of this Act be implemented in such a way as to endanger coal miners working underground nor to contravene the health and safety standards and other provisions of the Coal Mine Health and Safety Act of 1969, as amended.

90 The Committee felt that the requirement for the Secretary of the Interior to obtain the concurrence of the Administrator of the Environmental Protection Agency is necessary to ensure that any environmental requirement of this Act is consistent with the environmental programs and authorities of the EPA and, in particular, those programs authorized under the Clean Air Act, as amended, and the Federal Water Pollution Control Act, as amended. Specifically, the Secretary must obtain the Administrator's concurrence in the coal surface mining regulations and requirements under the environmental protection and State program approval provisions of the bill, as well as the final approval of any State Program. The EPA has been directed by the Congress to ensure the environmental well-being of the country. EPA has established water quality standards, air quality standards, and implementation and compliance requirements for the coal mining and processing industry, and issues permits to the industry to ensure appropriate pollution abatement and environmental protection. The committee concluded that because of the likeness of EPA's abatement programs and the procedures, standards, and other requirements of this bill, it is imperative that maximum coordination be required and that any risk of duplication or conflict be minimized.

90 Statutory authority to regulate the adverse environmental effects of surface and underground coal mining under the Federal Water Pollution Control Act, as amended, is limited to the treatment or removal of any pollutants from discharges into the waters of the United States. Section 402 of the Act requires operators of all industrial facilities having point source discharges, including most but not all coal mines, to obtain a permit to discharge their effluent. Such permits are conditional to require the removal of pollutants by employing the best practicable control technology currently available. Section 304(a)(2) of the Act requires EPA to promulgate effluent guidelines specifying the requirements for coal mining. In most cases surface and underground coal mining operations may be required to treat or otherwise control their discharge to remove or reduce iron, manganese, suspended solids, acidity and alkalinity, heavy metals, and other toxic substances.

91 The vast majority of coal mines are covered by this program. Some coal mines which do not have any discharge or do not have a point source discharge, that is, they do not discharge through a defined culvert, pipe, ditch, channel, or other conveyance structure, are not covered by the program. Section 304(e)

of the Act requires the EPA to issue guidelines for processes, procedures, and methods to control nonpoint sources of pollutants from mining activities, including runoff and siltation from new, currently operating, and abandoned surface and underground mines.

91 The above programs authorized by the Federal Water Pollution Control Act, as amended, can deal only with a part of the problem. The FWPCA does not contain the statutory authority for the establishment of standards and regulations requiring comprehensive preplanning and designing for appropriate mine operating and reclamation procedures to ensure protection of public health and safety and to prevent the variety of other damages to the land, the soil, the wildlife, and the aesthetic and recreational values that can result from coal mining. The statute also lacks the regulatory authority to deal with the discharge of pollutants from abandoned surface and underground coal mines.

91 It is clear that broader authority, such as that proposed in H.R. 9725 is necessary to provide the needed authority and regulatory framework to minimize the adverse environmental effects of coal mining.

91 COST AND BUDGET ANALYSIS

91 In compliance with clause 7 of Rule XIII of the Rules of the House of Representatives, and subsection (a) of section 255 of the Legislative Reorganization Act, the following is a cost estimate prepared by the Congressional Budget Office:

91 CONGRESS OF THE UNITED STATES, CONGRESSIONAL BUDGET OFFICE,
Washington,
D.C., August 13, 1976.

91 Hon. James A. Haley, Chairman, Committee on Interior and Insular Affairs, U.S. House of Representatives, Longworth House office Building, Washington, D.C.

91 DEAR MR. CHAIRMAN: Pursuant to section 403 of the Congressional Budget Act of 1974, the Congressional Budget Office has prepared the attached cost estimate for H.R. 13950, Surface Mining Control and Reclamation Act of 1976.

92 Should the Committee so desire, we would be pleased to provide further details on the attached cost estimate.

92 Sincerely,

92 ROBERT A. LEVINE, Deputy Director.

92 CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

92 AUGUST 13, 1976.

92 1. Bill number: H.R. 13950.

92 2. Bill title: Surface Mining Control and Reclamation Act of 1976.

92 3. Purpose of bill: This bill would create and specify the responsibilities for an Office of Surface Mining Reclamation and Enforcement in the Department of the Interior. The bill would also establish and provide initial funding for a trust fund to be known as the Abandoned Mine Reclamation Fund. Finally, the bill would authorize funds to stimulate and support research and demonstration efforts in coal mining technology and funds for specified in-depth studies of mining conditions and techniques.

92 4. Cost estimate:

In millions of
dollars]

Fiscal year 1978:	
Authorization	
levels	119
Program costs	70
Fiscal year 1979:	
Authorization	
levels	94
Program costs	91
Fiscal year 1980:	
Authorization	
levels	99
Program costs	97
Fiscal year 1981:	
Authorization	
levels	101
Program costs	100
Fiscal year 1982:	
Authorization	
levels	103
Program costs	102

92 5. Basis of estimate: The bill authorizes funds beginning in fiscal year 1978. Except for the 16-year authorization for the Reclamation Fund, the estimated outlays are based on historical spendout rates of the Interior Department. Unless otherwise indicated, authorization levels are those stated in the bill.

92 Section 301, State Institute Grants. - This section would authorize appropriations to assist participating States in the support of mining and mineral resources research institutions. The funds were spread over 2 years according to a pattern of 67 percent in the first year and 33 percent in the second, based on Interior spendout rate estimates for program assistance to States. Authorization levels were estimated based on the assumption that 35 States would qualify.

93

2[In millions of dollars]
Fiscal year 1978:

Authorization levels
7.0

Program costs
4.7
Fiscal year 1979:
Authorization levels
10.5
Program costs
9.3
Fiscal year 1980:
Authorization levels
14.0
Program costs
12.8
Fiscal year 1981:
Authorization levels
14.0
Program costs
14.0
Fiscal year 1982:
Authorization levels
14.0
Program costs
14.0

93 Section 302, Research Funds. - To encourage and fund research and demonstration projects, this section would authorize grants to research institutions. These funds were projected using a spendout rate of 45 percent, 25 percent, 20 percent, and 10 percent, based on similar programs in water research and technology.

2[In millions of dollars]
Fiscal year 1978:

Authorization levels
15.0
Program costs
6.8
Fiscal year 1979:
Authorization levels
17.0
Program costs
11.4
Fiscal year 1980:
Authorization levels
19.0
Program costs
15.8
Fiscal year 1981:
Authorization levels
21.0
Program costs
19.1
Fiscal year 1982:
Authorization levels
23.0
Program costs
21.1

93 Section 306, Printing and Publishing. - These funds are expected to be

spent entirely in the year appropriated.

2[In millions of dollars]

Fiscal year 1978:

Authorization levels

1

Program costs

1

Fiscal year 1979:

Authorization levels

1

Program costs

1

Fiscal year 1980:

Authorization levels

1

Program costs

1

Fiscal year 1981:

Authorization levels

1

Program costs

1

Fiscal year 1982:

Authorization levels

1

Program costs

1

Sections 708 and 709, Studies. - These sections would authorize the Secretary of the Interior to contract with the National Academy of Sciences for studies of mining techniques in Alaska and of current mining technology. The funds were projected using a spendout rate of 40 percent, 60 percent, based on similar planning and development programs.

2[In millions of dollars]

Fiscal year 1978:

Authorization levels

0.75

Program costs

.30

Fiscal year 1979:

Authorization levels

Program costs

.45

Fiscal year 1980:

Authorization levels

Program costs

Fiscal year 1981:

Authorization levels

Program costs

Fiscal year 1982:

Authorization levels

Program costs

94 Section 712(a), Initial Regulatory Procedures, and Section 712(c), Administration and Other Purposes. - These sections would provide funds for salaries and operating expenses of the Office of Surface Mining Reclamation and

Enforcement and for coal mine inspection procedures while State and Federal programs are being established. These funds were projected using a 90 percent, 10 percent ratio based on historical administrative costs.

2[In millions of dollars]

Fiscal year 1978:

Authorization levels

20

Program costs

18

Fiscal year 1979:

Authorization levels

30

Program costs

29

Fiscal year 1980:

Authorization levels

30

Program costs

30

Fiscal year 1981:

Authorization levels

30

Program costs

30

Fiscal year 1982:

Authorization levels

30

Program costs

30

94 Section 712(b), Trust Fund. - This section would provide initial funding for the Reclamation Fund. This 16-year authorization is expected to be required primarily in the first years of the fund's existence, that is, until the reclamation fees have accumulated sufficiently to allow the fund to become self-supporting. A spendout rate of 45 percent, 20 percent, 5 percent, 2 percent, and 2 percent was used with the remaining 26 percent reserved for later years if necessary. Since expenditures for abandoned mine reclamation are expected to be completely offset by the reclamation fees on coal, no budgetary impact for this activity is projected.

95

[In millions of dollars]

Fiscal year 1978:

Authorization levels

40

Program costs

18

Fiscal year 1979:

Authorization levels

Program costs

8

Fiscal year 1980:

Authorization levels
Program costs
2
Fiscal year 1981:
Authorization levels
Program costs
.8
Fiscal year 1982:
Authorization levels
Program costs
.8

95 Section 713, Research and Demonstration. - This section would authorize appropriations to conduct and coordinate research and demonstration of coal mining technology. Outlays were projected using a 60 percent, 30 percent, 10 percent ratio, based on similar executive agency research and development programs.

2[In millions of dollars]
Fiscal year 1978:

Authorization levels
35.0
Program costs
21.0
Fiscal year 1979:
Authorization levels
35.0
Program costs
31.5
Fiscal year 1980:
Authorization levels
35.0
Program costs
35.0
Fiscal year 1981:
Authorization levels
35.0
Program costs
35.0
Fiscal year 1982:
Authorization levels
35.0
Program costs
35.0

95 Revenue Loss. - The reclamation fees, \$.35/ton of surface mined coal and \$.10/ton of underground mined coal, together with an estimated \$.85/ton of surface mined coal for compliance with mandated reclamation standards, could affect Federal revenues. The increased cost per ton of coal could cause the mining companies which lease Federal lands to reduce bonus bid payments to the Interior Department. The magnitude and timing of such revenue loss would be determined by such speculative factors as the number of leases negotiated per year, the size of tracts used, the depth of seams, and mining company cash flow

statistics. However, estimating trends in bonus bid payments is difficult since no lands have been leased since 1971 and the Bureau of Land Management has not yet determined when new coal lease bids will be accepted. If few new tracts are leased, the revenue loss would be expected to be small. For example, if the 1968-1971 bonus payment trend is projected and the reclamation fees are assumed to reduce payments to the Government by 5 percent of bonus payments, the total loss of revenue is less than \$300,000 in fiscal year 1977, increasing to less than \$400,000 in fiscal year 1982. If, however, the level of bonus payments increases substantially as new bidding procedures are adopted, the revenue loss under the same assumption could rise significantly. Due to large uncertainties that can not be resolved at this time, formal estimates of revenue loss are not included in this cost estimate.

96 6. Estimate comparison: None.

96 7. Previous CBO estimate: None.

96 8. Estimate prepared by: William B. Taylor.

96 9. Estimate approved by: _____, for James L. Blum, Assistant Director for Budget Analysis.

96 INFLATION IMPACT

96 Pursuant to clause 2(1)(4), Rule XI, of the House of Representatives, the Committee estimates that enactment of H.R. 13950 will have virtually no inflationary impact on the U.S. economy. The following analysis, provided by the Library of Congress for H.R. 25, passed in May of 1975, is still applicable (the modifications of H.R. 13950 having only decreased any burden on cost development). The study concludes that the Federal expenditures authorized under the Act, if assumed all inflationary in nature, would translate to a 0.026% push per year. This is an insignificant amount.

96 FISCAL BURDEN

96 Authorized public spending for the administration, enforcement, and research attendant to the Strip Mining bill, including Mineral Institute funding, would ascend from \$80 million to \$130 million. In terms of impact on general economic and fiscal aggregates - private and public demand levels, present budget estimates, and even recommended shifts in Federal spending - this sum would work no appreciable change.

96 The influence of fiscal policy on output, employment, and prices is determined by the relative balance of revenues against outlays; a strong case

currently argues that lack of discipline in past years accounts for much of our immediate difficulties with inflation. But the steady increases in living costs since 1965 followed persistent and vast Federal deficits whose pattern was set not by incremental boosts in relatively small Federal programs, but by an unplanned or unplanned-for growth in the responsibilities of our national government. The cost of implementing H.R. 25 should certainly enter into future calculations of needed tax receipts - the "fiscal impact" of this measure will be determined by the willingness to finance it and other spending programs out of current revenues. Yet even if expenditures required by the bill constituted an uncompensated-for addition to prevailing budget commitments, its magnitude severely limits any possible impact. By way of comparison: \$130 million represents about 0.4% of present Federal spending; assuming a rather generous multiplier of 3.0, and further premising that all additional spending pushed prices rather than real production up, \$130 million translates to a \$390 million boost in total public and private demand - or enough to feed a "demand-induced" inflation of about .026% per year.

97 Such observations do not deny the importance of renewed discipline in government budgeting as a tool of economic management - they merely demonstrate that changes in either expenditures or tax schedules must be both large and sustained to work any significant alteration on general economic conditions. With or without H.R. 25, the task will remain precisely the same; seeking a workable convergence between spending and revenue trends.

97 COST OF RECLAMATION TO PRODUCERS AND CONSUMERS

97 The relative inconsequence of H.R. 25's fiscal impact traces to the bill's fundamental approach; placing on private industry and the free market the real burden of adequate reclamation progress. The legislation's cost to producers of coal - and their customers - would take two basic forms: 1) Payments into a reclamation fund of 35¢ per ton of stripped coal and 10¢ per ton of deep-mined ore;

97 2) The costs of compliance with mandated reclamation standards set by H.R. 25 and the regulatory machinery it establishes. (This latter cost would be partially prepaid via performance bonds refundable upon satisfactory compliance.)

97 * While the committee raised the deep mine fee to 15 cents per ton, this modification does not significantly alter the conclusions of the study.

97 Precise quantification of the likely impact of these twin cost elements is of course impossible. But examination of their relation to present and prospective coal prices can indicate an "order of magnitude" or scale against

which to assess their importance. Combining a 35~/ton reclamation fund payment with 85~/ton for conformance with mandated standards (Cost of Permit, Steep Slope, and Impoundment requirements, all surface mines, from recently presented Interior Department estimates) we obtain a burden of about \$1.20 per ton of stripped coal.

97 Against this deliberately generous calculation of reclamation costs we have the following price data for delivered coal:

97 According to the Federal Power Commission, October 1974 coal prices averaged \$17.58 per ton. **

97 Also from FPC data, spot coal prices in October averaged \$3 0.67 per ton, contract coal stood at \$13.30 per ton for the same months.

97 The Wholesale Price Index reports a 72.0% advance in coal prices from January 1974 to January 1975.

97 ** The average price of coal in 1975 was over \$1 8.00 per ton.

97 Comparison of the above figures establishes two basic points: reclamation costs are both small when matched with prevailing market prices and these market prices are themselves registering dramatic gains that are mainly unrelated to increased costs, reclamation or otherwise. The link between coal prices and a cartel-dominated petroleum market is probably sufficiently understood to require little elaboration. With delivered residual oil selling at twelve dollars a barrel, a "BTU parity" price for coal could range up to \$5 0/ton. Given coal's disadvantages in emission control, ease and cheapness of use, a figure of \$4 0/ton may seem more reasonable and recent press reports have indicated substantial selling at or near this level. In any case, spot coal sales and, eventually, contract coal must tend toward a basic equivalency with prices set in the overall energy market. Long-term coal contracts with escalator clauses based on certain classes of cost increases may accelerate the achievement of this parity given boosts in industry expenses from reclamation, labor payments and safety goals, but none of these factors can significantly alter the fundamental trend. Indeed, the present disequilibrium condition of energy markets - with prices bearing little relation to total cost and normal profit levels - ironically provides the one situation in which increased industry costs would not expectantly affect prices. The expense of enhanced environmental standards would not compel a net addition to consumers' energy costs until traditional relationships between production costs and market prices are restored - not a likely prospect for several years. And this observation leads to one further, vital point: increases in the price of one commodity are not commonly understood to boost general price levels within an efficiently

operating market system. During the relative price stability of the 1950's and the early 1960's, for example, coal prices fluctuated by substantially wider margins than that represented by reclamation costs as a proportion of present coal prices. Inflation in the price of one commodity or commodity group becomes a plausible cause of general inflation only when the increase is so substantial, and so sudden, as to frustrate the stabilizing mechanisms of free markets. Such is obviously the case during the past two years for agriculture and petroleum - two of the largest economic sectors whose price levels, at the raw stage, more than doubled within an extremely brief timespan. There is no reasonable way of concluding that these reclamation expenses, marginal when compared to prevailing prices and gradual in their direct impact on a disordered market, could play a similar role in the future.

98 OVERSIGHT STATEMENT

98 No recommendations were submitted to the Committee pursuant to Rule X, Clause 2(b)(2) of the House of Representatives.

98 CHANGES IN EXISTING LAW

98 In compliance with clause 3 of Rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italics, existing law in which no change is proposed is shown in roman):

98 Section 1114, Title 18, United States Code

98 @ 1114. Protection of Officers and employees of the United States

98 Whoever kills any judge of the United States, any United States Attorney, any Assistant United States Attorney, or any United States marshal or deputy marshal or person employed to assist such marshal or deputy marshal, any officer or employee of the Federal Bureau of Investigation of the Department of Justice, any officer or employee of the Postal Service, any officer or employee of the secret service or of the Bureau of Narcotics and Dangerous Drugs, any officer or enlisted man of the Coast Guard, any officer or employee of any United States penal or correctional institution, any officer, employee or agent of the customs or of the internal revenue or any person assisting him in the execution of his duties, any immigration officer, any officer or employee of the Department of

Agriculture or of the Department of the Interior designated by the Secretary of Agriculture or the Secretary of the Interior to enforce any Act of Congress for the protection, preservation, or restoration of game and other wild birds and animals, any employee of the Department of Agriculture designated by the Secretary of Agriculture to carry out any law or regulation, or to perform any function in connection with any Federal or State program or any program of Puerto Rico, Guam, the Virgin Islands of the United States, or the District of Columbia, for the control or eradication or prevention of the introduction or dissemination of animal diseases, any officer or employee of the National Park Service, any officer or employee of, or assigned to duty, in the field service of the Bureau of Land Management, any employee of the Bureau of Animal Industry of the Department of Agriculture, or any officer or employee of the Indian field service of the United States, or any officer or employee of the National Aeronautics and Space Administration directed to guard and protect property of the United States under the administration and control of the National Aeronautics and Space Administration, any security officer of the Department of State or the Foreign Service, or any officer or employee of the Department of Health, Education, and Welfare or of the Department of Labor or the Department of the Interior assigned to perform investigative, inspection, or law enforcement functions, while engaged in the performance of his official duties, or an account of the performance of his official duties, shall be punished as provided under sections 1111 and 1112 of this title, (June 25, 1958, ch. 645, 62 Stat. 756; May 24, 1949, ch. 139, @ 24, 63 Stat. 93; Oct. 31, 1951, ch. 655, @ 28, 65 Stat. 721; June 27, 1952, ch. 477, title IV, @ 402(c), 66 Stat. 276; July 29, 1958, Pub.L. 85-568, title III, @ 304(d), 72 Stat. 434; July 2, 1962, Pub.L. 87-518, @ 10, 76 Stat. 132; Aug. 27, 1964, Pub.L. 88-493, @ 3, 78 Stat. 610; July 15, 1965, Pub.L. 89-74, @ 8(b), 79 Stat. 234; Aug. 2, 1968, Pub.L. 90-449, @ 2, 82 Stat. 611; Aug. 12, 1970, Pub.L. 91-375, @ 6(j)(9), 84 Stat. 777; Oct. 27, 1970, Pub.L. 91-513, title II, @ 701(i)(1), 84 Stat. 1282; Dec. 29, 1970, Pub.L. 91-596, @ 17(h)(1), 84 Stat. 1607.)

99 COMMITTEE RECOMMENDATION

99 The Committee on Interior and Insular Affairs recommends the enactment of H.R. 13950 as amended. The motion ordering the bill reported favorably was adopted by a rollcall vote August 25, 1976, with 28 votes cast for and 11 votes cast against.

99 DEPARTMENT REPORT

99 A report from the Department of the Interior was received as follows on June 22, 1976:

100 U.S. DEPARTMENT OF THE INTERIOR, OFFICE OF THE SECRETARY, Washington, D.C., June 22, 1976.

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

100 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.

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

100 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.

100 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.

100 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.

100 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.

100 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.

100 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.

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

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

101 Sincerely yours, , Acting Secretary of the Interior.

SECTION-BY-SECTION EXPLANATION OF H.R. 13950

103 SHORT TITLE

103 The short title of the Act is the "Surface Mining Control and Reclamation Act of 1976".

SECTION-BY-SECTION ANALYSIS OF H.R. 13950 TITLE I STATEMENT ON FINDINGS AND POLICY

103 Section 101. Findings

103 This section sets out congressional findings relating to surface mining

of coal and other minerals. These include the fact that (1) surface mining is only one of various methods of mining; (2) surface mining is a significant activity in our national economy; (3) surface mining has numerous adverse economic environmental and social effects; and (4) surface mining and reclamation technology are developing so that effective and reasonable regulation of surface coal mining is appropriate and necessary to minimize these adverse effects.

103 These findings conclude that (1) because of the diversity of terrain, climate, biologic, chemical, and other physical conditions the States should have the primary responsibility for regulating surface mining and reclamation; that (2) while there is a need to regulate surface mining operations for minerals other than coal, more data and analyses are needed to provide a basis for effective and reasonable regulation; that (3) surface and underground coal mining should be conducted in an environmentally sound manner through a cooperative effort established by this Act.

103 Section 102. Purposes

103 This section states that the purpose of Congress in passing the Act is to establish a nationwide program to protect society and the environment from adverse effects resulting from surface coal mining operations as well as the surface impact of underground coal mining operations. Guidelines are provided in the method of implementing that goal. These recognize that, while all adverse effects of surface mining cannot be prevented immediately and that coal is an essential source of energy, a strong nationwide regulatory program based on minimum Federal standards should be implemented rapidly. This program would assure that coal surface mining operations are not conducted where reclamation which meets these minimum standards is not feasible. The Federal Government would assist the States in developing and implementing such a program. If and when a State manifests a lack of desire or an inability to participate in or implement that program and to meet the requirements of the Act, the Federal Government is to exercise the full reach of Federal constitutional powers to insure the effectiveness of that program.

104 Another significant purpose of the Act is to provide a means for supplementing existing programs for conducting research in production of minerals and for training manpower through the establishment of appropriate centers in various States.

SECTION-BY-SECTION ANALYSIS OF H.R. 13950 TITLE II RECLAMATION AND ENFORCEMENT

104 Section 201. Creation of Office

104 This title creates in the Department of the Interior a new office, the Office of Surface Mining Reclamation and Enforcement.

104 The Director of the Office shall report directly to the Secretary and is to be appointed by the President, confirmed by the Senate and compensated at a salary rate for Level IV of the Executive Schedule.

104 The staff of the office is to be recruited on a basis of professional competence and capability in objectively administering provisions of the Act. In addition, program responsibilities directed at the development or use of coal or other mineral resources or the regulation of health and safety of miners under provisions of the Federal Coal Mine Health and Safety Act of 1969, are not to be assigned to the office.

104 The title also lists the chief functions of the office which include: the administration of all programs for controlling surface mining operations required by this Act; review, approval, or disapproval of State programs for the control of surface mining operations; implementation of the initial regulatory program and the Federal enforcement activities required by this Act; providing assistance to States and Indian tribes for the development of programs to assure adequate control of surface mining operations; developing and maintaining an information and data center on surface mining, reclamation, and surface impacts of underground mining and assuring that such information is made available to State and local agencies conducting land use operations; assisting the States in developing appropriate standards and procedures for determining those areas of a State to be designated unsuitable for all or certain types of mining; monitoring Federal or State research programs concerning mining and reclamation, and administering the program for acquisition and reclamation of abandoned and unreclaimed mined lands.

104 In carrying out his duties under the Act, the Director shall not use on a permanent or temporary basis any person responsible for inspecting coal mines under the Federal Coal Mine Health and Safety Act of 1969, unless he finds and publishes in the Federal Register that use of such persons would not interfere with inspections under the 1969 Act.

104 The Office of Surface Mining Reclamation and Enforcement is to be considered an independent Federal agency for the purposes of section 3502 and 3512 of Title 44 of the U.S. Code, which require Federal agencies to place a minimum burden on business enterprises when obtaining needed information.

104 Finally, the Title stipulates that no employee of the Office or any other Federal employee performing duties under the Act will be allowed to have a direct or indirect financial interest in surface or underground coal mining operations. Knowing violators can be fined up to \$2 500 or sentenced to not more than 1 year in prison, and the Director is required to establish procedures for enforcing these provisions, and reporting any actions or violations to Congress on an annual basis.

SECTION-BY-SECTION ANALYSIS OF H.R. 13950 TITLE III STATE MINING AND MINERAL RESOURCES AND RESEARCH INSTITUTE

TEXT: 105 Section 301. Authorization of State Allotments to Institutes

105 This Section authorizes appropriations to assist States in carrying on the work of mineral resources research institutes. Funds are to be distributed by the Secretary of the Interior at the rate of \$200,000 for the first fiscal year, \$300,000 for the second fiscal year, and \$4 00,000 for each fiscal year thereafter for five years, to a public college or university in each participating State.

105 An advisory Committee created under this title will determine the eligibility of colleges or universities under guidelines requiring that the public college or university have a school, division or department conducting a program of substantial instruction and research in mining or minerals extraction or beneficiation engineering which must have been in existence for at least two years and must have at least four fulltime faculty members. Matching non-Federal funds must be available on a dollar for dollar basis, with the Governor of the State deciding between qualifying colleges or universities within a State, and the Advisory Committee selecting an eligible private college or university in a State which has no qualifying public college or university.

105 Section 302. Research Funds to Institutes

105 This section authorizes an annual appropriation of \$1 5,000,000 to the Secretary of Interior for fiscal year 1976 and increasing by \$2 ,000,000 each fiscal year for six fiscal years thereafter, to assist institutes in carrying out projects of industrywide application which could not otherwise be undertaken. Grants must be approved by the Secretary under criteria which incorporate a prohibition against the use of grant money for the acquisition of land or the rental, purchase, construction or upkeep of buildings.

105 Section 303. Funding Criteria

105 This section requires that each institute designated to receive funds under sections 301 and 302 must set forth a plan showing its curriculum, its policies and procedures and its fiscal responsibility for ensuring that purposes of this title are implemented. If the Secretary finds that Federal monies received by an institute are improperly diminished, lost or misapplied, further allotments to the State concerned will be suspended until such funds have been replaced. Cooperative endeavors between institutes and other agencies and individuals are encouraged.

105 Section 304. Duties of the Secretary

105 This section charges the Secretary of Interior with administering the title, prescribing rules and regulations consulting with, assisting and coordinating research with other Federal agencies. In his annual report to Congress, the Secretary will indicate whether the allotment to any State has been withheld, based on a determination as to compliance with provisions of section 303, made by him on or before July 1 of each year following enactment of the title.

106 Section 305. Autonomy

106 This section disclaims any intent to interfere with the legal relationship between participating colleges and universities and related State governments, or to authorize Federal control of education at such colleges and universities.

106 Section 306. Miscellaneous Provisions

106 This section instructs the Secretary of Interior to cooperate with other Federal agencies, private institutions and individuals in order to avoid duplication of effort and to stimulate research in otherwise neglected areas as part of a comprehensive nationwide program of mining and mineral research. He is to make available information on projects planned, in progress, or completed. The Secretary at the same time is specifically barred from assuming any authority over mining and mineral research or related responsibilities of other Federal agencies.

106 Provisions of section 3684 of the Revised Statutes may be waived by the Secretary in arranging for mining and mineral resources research work under this title. No appropriated funds may be expended unless all information, patents and other developments resulting from the activity will be made public. However, the existing rights of patent owners will be protected.

106 The section contains authorization for appropriation of necessary funds for publishing results of activities carried out by the institutes and for administrative functions, not to exceed \$1,000,000 in any fiscal year.

106 Section 307. Center for Cataloging

106 This section directs the Secretary of Interior to establish a center for cataloging current and projected scientific research in all fields of mining and mineral resources which will classify for public use such information as is provided by all Federal and non-Federal agencies, colleges, universities, private institutions, firms and individuals. Federal agencies are required to cooperate.

106 Section 308. Interagency Cooperation

106 This section authorizes the President to clarify agency responsibility and foster interagency coordination in mining and mineral resources research, including review of Governmentwide research, eliminations as to allocation of technical effort, review of manpower needs and actions to facilitate interagency communication

106 Section 309. Advisory Committee

106 This section provides for the appointment of an Advisory Committee on Mining and Mineral Research by the Secretary of Interior, to be composed of the Director of the Bureau of Mines, the Director of the National Science Foundation, the President of the National Academy of Sciences, the President of the National Academy of Engineering, the Director of the United States Geological Survey, and not more than four other persons knowledgeable in the field of mining and mineral resources research. The Chairman will be designated by the Secretary, who will consult with and consider recommendations of the Committee in conducting research and making grants under this title. Members of the Committee will be compensated at a rate fixed by the Secretary but not to extend maximum rate of pay under pay grade GS-18 for time spent on committee business or travel time, unless they are Federal, State, or local government employees or officers.

SECTION-BY-SECTION ANALYSIS OF H.R. 13950 TITLE IV ABANDONED MINE RECLAMATION

107 Section 401. Abandoned Mine Reclamation Fund

107 This section establishes in the U.S. Treasury and Abandoned Mine Reclamation Fund which derives its dollars from: funds from the lease, sale, rental of lands reclaimed under this Act; user charges on reclaimed lands; and

from a reclamation fee of thirty-five cents per ton of coal produced by surface mining and 15 cents per ton of coal produced by underground mining, or ten per cent of the value of the coal at the mine, whichever is less. The reclamation fee for lignite coal shall be 5% of the value of the coal at the mine, or 35 cents per ton, whichever is less. The Secretary shall determine the value of the coal at the mine where the fee is based on a percentage of such value. Twenty percent of the reclamation fees collected during any calendar quarter will be reserved for the regulatory authority to perform the determination of hydrologic consequences and statement of the result of test boring for small operators, as required under section 507(c).

107 The reclamation fee is to be paid within 30 days after the end of each calendar quarter, beginning with the first calendar quarter occurring after January 1, 1977, and ending 15 years after enactment of the Act, unless extended by Act of Congress. Fifty percent of the revenues derived from a State or Indian reservation are to be returned to that State or Indian reservation to be expended by the Secretary, after considering the recommendations of the appropriate state Governor or tribal governing body, to accomplish the purposes of the Title.

107 Section 402. Objectives of Fund

107 According to this Section, the primary objective of the Fund is the reclamation of previously mined areas. Other objectives are to be given a priority in the following order: (1) protection of health or safety of the public; (2) protection of the environment from continuing degradation and conservation of land and water; (3) the protection, construction, or enhancement of public facilities and their use; (4) improvement of lands and waters to a suitable condition useful in the economic and social development of the area affected; and (5) research and demonstration projects relating to reclamation and water quality control programs.

108 Section 403. Eligible Lands

108 This section specifies that only those lands which were mined for coal or affected by such mining, waste banks, coal processing, or other mining processes and abandoned or left in an inadequate reclamation condition prior to the enactment of this Act are eligible for expenditures under the Fund. In addition, there must be no continuing responsibility for reclamation under State or other Federal laws for such lands to be eligible.

108 Section 404. Reclamation of Rural Lands

108 This section establishes a program to provide small rural landowners

technical and financial resources to reclaim lands affected by coal surface mining operations which were left unreclaimed or inadequately reclaimed.

108 Any one landowner (including owner of water rights), resident, or tenant is limited to a total of 120 acres of land on which reclamation can be conducted under this section. The Federal share of such work shall be established by the Secretary of Agriculture in accordance with his determination of the public interest and the productivity potential of the land after reclamation. The Federal share shall not exceed 80 percent of the costs unless the Secretary finds that a greater share is justified to enhance offsite water quality, esthetics or other offsite benefits, or is necessary to enable participation in the program by a landowner for whom even a 20 percent matching share would be financially incapacitating.

108 This program is administered by the Secretary of Agriculture and the reclamation work is to be accomplished according to a mutually-agreed-upon plan through contracts with the landowner or owner of water rights, resident or tenant for periods of not more than ten years, to accomplish the land stabilization conservation work required in order to reclaim the affected lands.

108 Up to one-fifth of the money available in the Abandoned Mine Reclamation Fund during any one year would be made available to the Secretary of Agriculture for the purposes of this section.

108 Section 405. Acquisition and Reclamation of Abandoned and Unreclaimed Mined Lands

108 This section establishes a program administered by the Secretary of Interior for the reclamation of abandoned mine lands or lands affected by surface coal mining operations which are large tracts or lands to be developed for specific purposes such as commercial, industrial, residential, and other intensive land uses. This program complements the rural lands program provided in section 404.

108 Four basic steps are required under this program: land identification, acquisition of the land or an appropriate interest therein, land reclamation, and post-reclamation land use including disposition.

108 Prior to initiating reclamation programs on particular tracts of land, the Secretary shall make a thorough study of the areas involved, identifying those lands needing reclamation and establishing projects according to the priorities established in Section 402 above and with costs and benefits to the public specifically computed.

108 Land acquisitions for those parcels on which work will be done can be accomplished by either the Secretary of Interior or the States involved.

109 If a State acquires such land and transfers it to the Federal Government, up to 90 percent of the acquisition costs may be federally funded.

For those projects which because of public health or safety or environmental damages require quick action, specific authority for entry onto the land and corrective action is provided to the Secretary of Interior.

109 For reclamation performed on lands remaining in private ownership, a lien on the property shall exist after reclamation to the extent the reclamation has improved the market value of the land.

109 After reclamation, land may be retained in Federal ownership, made available to States or local governments, or disposed of to parties in the private sector. If such land was originally made available to the Federal Government through State acquisition, such State may have a preference to purchase lands after reclamation. The Secretary has the authority to sell land to State or local governments at a price less than fair market value, providing that it is used for valid public purpose and that the cost to the State and local governments shall be no less than the cost to the Fund for the purchase and reclamation of the land. Disposition of the land to the private sector is allowed in those instances for industrial, commercial, residential, or other intensive private uses. Such disposition shall be under a system of competitive bidding, accepting not less than fair market value of such lands and under other such regulations as the Secretary may require to assure lands are put to a proper use and that the reclamation work is not obviated. The Secretary is also authorized to acquire, develop and transfer land to any project, public or private, for housing sites for persons employed or disabled by mining or dislocated by natural disasters or catastrophic failures. Areas experiencing rapid development of coal reserves qualify for assistance of this type.

109 The Secretary is directed to hold a public hearing in each county in which lands be reclaimed are located in order to afford local citizens and governments the maximum opportunity to participate in decisions concerning the use of lands once reclaimed.

109 Section 406. Filling Voids and Sealing Tunnels

109 This section authorizes the Secretary to fill voids, seal tunnels, shafts and entryways and reclaim surface impacts of underground or surface mines, if he is requested to do so by a State Governor or Tribal chairman, and he determines that such action is necessary to prevent hazards to public health and safety or degradation to the environment. Funds for this purpose are to

come only from moneys to be expended in States or Indian reservations under Section 401(e). Pursuant to a request by a Governor or Tribal chairman, the Secretary may carry out filling, sealing and reclamation activities under this section without regard to whether the hazards or environmental degradation were created by coal mining operations, as long as the reclamation activities are needed to protect the public health and safety.

109 The Secretary may acquire such interest in lands as he deems necessary to carry out the provisions of this section.

109 Section 407. Fund Report

109 This section requires the Secretary to make an annual report to Congress on reclamation activities accomplished and underway which

{110} are supported by the Fund together with recommendations as to future uses of the Fund.

110 Section 408. Transfer of Funds

110 This section authorizes the Secretary to transfer funds to other appropriate Federal agencies in order to carry out the reclamation activities authorized by this title

SECTION-BY-SECTION ANALYSIS OF H.R. 13950 TITLE V CONTROL OF ENVIRONMENTAL IMPACTS OF SURFACE MINING

110 Section 501. Environmental Protection Standards

110 This section grants the Secretary of Interior the authority necessary to promulgate regulations covering the full surface mining and reclamation control programs both state and federal established in the Act within 180 days after the date of enactment. Public review and public hearings are provided during this process and the Secretary must obtain written concurrence of the Administrator of the Environmental Protection Agency with respect to those regulations promulgated which relate to Federal air and water quality laws.

110 Section 502. Initial Regulatory Procedures

110 Since the Federal environmental protection standards and other provisions of the Act pertaining to coal surface mining operations will not come into full force until 30 months or more after the date of enactment of the Act, this section presents an initial regulatory program providing environmental protection standards for the most critical and damaging activities of surface mining with respect to environmental impacts and the health or safety of the

public. The initial regulatory program also provides a transitional step toward the fullscale regulatory program, with which it will be integrated. In essence, the initial regulatory program consists of:

110 (a) a set of environmental protection standards;

110 (b) procedural requirements with respect to submitting permit applications;

110 (c) Federal enforcement and funding capable of backing up the States in their implementation of the initial program; and

110 (d) basic elements of public disclosure provisions contained in the bill.

110 Environmental protection standards incorporated into the initial regulatory program will require conformance with permanent environmental protection standards relating to:

110 (1) restoration of affected land to capability of uses higher or better than prior to mining;

110 (2) restoration of the mined site to its approximate original contour;

110 (3) separation and replacement of topsoil;

110 (4) minimizing the disturbance to the prevailing hydrologic balance on and off the mine site;

110 (5) establishing a permanent vegetative cover;

110 (6) special provisions relating to reclamation of mined areas on steep slopes; and

111 (7) placing mine waste banks and impoundments under supervision of the Army Corps of Engineers.

111 Variances to the standard for restoration of the approximate original contour are allowed in certain cases.

111 On and after 6 months from the date of enactment of the Act, all new coal surface mining operations must comply and all new permits required from State regulatory authorities must contain terms requiring compliance with the initial environmental protection standards. Existing operations have one year from enactment within which to comply during which time the State regulatory authorities must amend existing permits. Operators who expect to surface mine for coal 8 months after a State program has been approved pursuant to section

503, must file an application for a permit not later than 2 months after approval of the State program or implementation of the Federal program.

111 The application shall be processed and approved or denied by the regulatory authority within 8 months of approval of the state program or imposition of a Federal program, and in no case later than 36 months after enactment of this Act.

111 Within six months after the date of enactment, the Secretary of the Interior is required to issue rules and regulations for implementing a Federal enforcement program, which will remain in effect in each state until a state or federal program has been approved. As part of this program, the Secretary must inspect any operation found to be in violation of the environmental protection standards during two consecutive State inspections, and must take necessary enforcement actions.

111 The section assures citizens access at centrally located Federal offices to all inspection reports submitted by State regulatory agencies, and enables citizens to provide the Secretary with information which could lead him to believe that environmental standards are not being enforced. This information must trigger Federal inspection of the operation in question, with the complainant being given the opportunity of accompanying the Federal inspector onto this site.

111 Section 503.State Programs

111 In order for any State to assume its primary role in administering surface mining regulation, this section requires submission to the Secretary of Interior, within 18 months after the passage of the Act, of a State program which demonstrates that the State has legal financial, and administration capability for carrying out the provisions of the Act.

111 The State program must specifically show that the State has a law providing for the regulation of surface mining and reclamation in accordance with all provisions of the Act and subsequent regulations. The State program must provide for sanctions or penalties for all violations of State laws, regulations, or conditions of permits concerning surface mining, must meet the minimum requirements of this Act, must provide sufficient administrative and technical personnel with funding to fully implement and enforce provisions of this Act, must show that a process for designating areas unsuitable for surface coal mining has been established and that a process exists for coordinating review of any mine permit with any other Federal or State permit issued under this Act.

112 The Secretary of the Interior is directed to approve or disapprove each State program in whole or in part within 6 months after submission. Prior to

such decision he must hold at least one public hearing within the State on the program, disclose views of all Federal agencies having special expertise pertinent to the proposed State program, obtain the written concurrence of the Administrator of the Environmental Protection Agency for those aspects of the State program relating to federal air and water quality laws.

112 If the Secretary disapproves a State program in whole or in part, the State shall have sixty days to resubmit a revised State program or appropriate portion thereof. The Secretary must approve or disapprove a resubmitted State program within 60 days of its resubmittal.

112 Where a State is unable to prepare its program because of a court injunction, its eligibility for financial assistance under the Act is not affected, and interim regulatory provisions will remain in force during the period of injunction.

112 Section 504. Federal Programs

112 This section directs the Secretary no later than 30 months after enactment of the Act, to establish a Federal program for the permanent regulation of surface mining in any State which fails to: (1) obtain complete approval of its program, or (2) resubmit its program if disapproved, or (3) adequately enforce, maintain, or implement this program once approved. Authority is also granted the Secretary to provide Federal enforcement of any or all parts of the approved State program on any or all mines pursuant to the enforcement authority in Section 521 of the Act.

112 Where an act of the State legislature is required an extension of six months beyond the 18 month period for submission of the program may be granted. Permits issued under an approved State program shall be valid but reviewable under a Federal program and vice versa. Implementation of a Federal program does not preclude the State from resubmitting its program for approval at any time.

112 Section 505. State Laws

112 This section stipulates that existing State laws and regulations shall remain ineffect unless inconsistent with provisions of the Act. Any provision of State law or program which provides more stringent environmental protection from surface coal mining than do the provisions of this Act is not to be construed as inconsistent with this Act. This provides the Secretary of Interior with the legal basis to approve State regulatory programs with more stringent controls. The right of any person to fully protect his interest in water resources as effected by the surface coal mining operation is also protected.

112 Section 506. Permits

112 This section stipulates that after six months from the Federal approval of a State program or the implementation of a Federal program in a State, no person shall conduct surface coal mining unless a permit is obtained in full compliance with this Act except where administrative delay has prevented issuance of a permit for an operation existing on the date of enactment which is in good faith compliance with all other requirements. The duration of such permit is not to exceed five years, and is nontransferable, except to a successor in interest who applies within 30 days after succeeding to such interest and is able to obtain a bond.

113 A permit will automatically terminate if no surface coal mining operations or reclamation commences within 3 years. Where the coal is to be mined for use in a synthetic fuel facility, initiation of construction of the facility will be deemed to constitute the commencement of operations. Renewal of a permit is provided for, but may not exceed the original permit period nor include areas beyond the boundaries of the original permit.

113 Section 507. Application Requirements

113 This section lists basic data necessary for development of the mining reclamation plan which must be submitted along with the permit application. The information required here is a key element of the operator's affirmative demonstration that the environmental protection provisions of the Act can be met as stipulated in section 510 and includes:

113 (1) identification of all parties, corporations, and officials involved to allow identification of parties ultimately responsible for and most directly affected by the operation as to crosscheck the mining application with other applications in the same State and other States;

113 (2) description of method of mining, starting dates, location, termination dates and schedule of activities;

113 (3) summary listing of past mining and reclamation permits including those suspended or revoked in the 5 year period prior to submission of the application;

113 (4) maps and data sufficient to fully describe the surface and subsurface features of the area to be mined, the chemical and physical properties and geologic setting, so that basic information is available to the regulatory authority in order to determine the impact of the mining operation and to be able to replicate the conclusions reached by the operator with respect to the environmental protection measures proposed in the mining and reclamation plan. Such information shall also include all relevant legal documents, test borings, keyed to the appropriate maps (with certain data regarding the coal seam to be held confidential); and

113 (5) a full description of the on- and off-site hydrologic consequences of mining and reclamation, including the impact on the quality and quantity of water in ground water systems. If the probable annual production of an operator will not exceed 250,000 tons, the regulatory authority will perform and pay for the determination of hydrologic consequences and the statement of the result of test borings.

113 The applicant must file a complete copy of the application with the local court house of the county in which mining is proposed at the time of submission to the State, so that this application will be available for public review. A reclamation plan must be filed with the permit application.

114 The application to the regulatory authority is to be accompanied by a fee to be determined by the regulatory authority which shall not exceed, but may be less than, the cost to the regulatory authority of administering and enforcing the permit. An applicant shall also submit a certificate of insurance indicating that he has sufficient liability protection for on and off site personal injury and property damage.

114 Section 508. Reclamation Plan Requirements

114 This section specifies that a mining and reclamation plan be part of the application and include, among other items, the following major points:

114 (1) a plan for the entire mining operation for the life of the mine including identification of the subareas anticipated to be included on a permit by permit basis, their sequencing, and mining and reclamation activities;

114 (2) an identification and description of the land use setting of the area to be affected prior to mining and its proposed postmining land use, its configuration, drainage plans, including specific evidence that the proposed land use is reasonable with respect to its practicality and if additional resources are necessary that they will be available on a timely and adequate basis; and

114 (3) a detailed description of all schedules and methods for complying with environmental standards.

114 Section 509. Performance Bond

114 With respect to posting a permit bond, this section includes specific requirements that:

114 (1) the bond is to be filed with the regulatory authority after the mining and reclamation plan is approved but before the permit to mine is issued;

114 (2) the bond is to be payable to the regulatory authority and conditioned upon the operator's meeting all applicable requirements under the Act;

114 (3) the amount is to be sufficient to assure that all reclamation will be accomplished by a third party in the event of default or forfeiture by the mining operator, and it is not to be less than \$10,000;

114 (4) the bond shall cover part or all of the area under permit, and must cover that land on which the operator is conducting coal surface mining operations. If the bond is for only part of the permit area, it must be adjusted and increased as new portions of the permit area are disturbed or affected;

114 (5) liability under bond is for the duration of the surface mining and reclamation operation, including the full period of the operator's responsibility for revegetation requirements; and

114 (6) the bond can be (1) a surety issued by a company licensed in the State of operation, (2) cash, (3) negotiable bonds of the U.S. Government or such State, or (4) negotiable certificates of deposit in any bank. Cash deposit or the market value of negotiable bonds or certificates shall be equal to or exceed the amount of the bond required.

115 The amounts of the initial and subsequent bonds are to be determined by the regulatory authority. In all cases the amount must be sufficient to cover the full cost of reclamation.

115 The section also establishes guidelines by which cash or securities deposited for bonding purposes can be placed under responsible financial management on behalf of the operator in order to protect their value and utility to both the regulatory authority and the operator. An alternative to a bonding program, such as an insurance system, can be approved by the Secretary as part of a state or Federal program as long as it will achieve the objectives and purposes of this section.

115 Section 510. Permit Approval or Denial

115 This section establishes general and specific criteria which must be met if a mining permit or permit renewal is to be approved. Generally, in order to approve a mining permit application, the regulatory authority must find in writing that: (a) all requirements of this Act have been met; (b) there is assurance that reclamation can be achieved; and (c) the proposed area is not included in an area designated as unsuitable for surface coal mining.

115 Specifically, the regulatory authority cannot approve a mining permit application and issue a permit unless the permit application demonstrates that, and the regulatory authority makes specific written findings to the effect that:

115 (1) reclamation of land to be affected will be done in accordance with the Act;

115 (2) assessment of probable cumulative impacts of all anticipated mining on the area and design of the operation have been made so as to prevent irreparable offside adverse impacts;

115 (3) proposed mining area is not in an area designated unsuitable for surface coal mining or in an area under study for a designation, unless there has been substantial legal and financial commitment prior to date of enactment;

115 (4) alluvial valley floors west of the one hundredth meridian will be protected from surface mining operations where such operations would either interrupt, discontinue or prevent farming on the alluvial valley floors, or adversely affect the quantity or quality of water systems supplying the floors. However, the alluvial valley floor provisions will not apply to undeveloped range lands which would not be significant to farming, small amounts of acreage, which if disturbed by mining would not impact importantly on a farm's overall production, and ongoing mining operations which, in the year before enactment of this Act, produced coal in commercial quantities on or adjacent to alluvial valley floors or had obtained specific permit approval to do so from a state regulatory authority;

115 (5) the impacts of the mining operation on the hydrologic balance on and off the permit area are minimized; and

115 (6) the operator is not currently in violation of the Act or other Federal environmental laws and regulations.

115 An applicant for a permit, or revision or renewal of a permit, will have the burden of proving that his application is in compliance with all requirements of the applicable State or Federal program.

116 Section 511. Revision of Permits

116 This section establishes a process for the revision of a permit during its term as well as review by either a State regulatory authority or the Secretary of existing permits issued prior to the assumption of regulatory jurisdiction by the current regulatory authority.

116 An operator may submit an application for a permit revision to the

regulatory authority and within a period of time established by that agency, the application shall be approved or disapproved. The regulatory authority is to establish guidelines for procedures which may vary depending upon the scale and extent of the proposed revision. In all events, however, the process will be subject to the Act's notice and hearing requirements and a proposed revision would extend the area covered by existing permit (other than incidental boundary revisions) is to be made through the normal permit application process.

116 The regulatory authority may require revision of a permit during its term provided that it follows the State or Federal program's notice and hearing requirements.

116 No transfer, assignment or sale of rights under a permit may be made without the written approval of the regulatory authority.

116 Section 512. Coal Exploration Permits

116 This section requires that any coal exploration operations which may substantially disturb the land surface, be conducted in accordance with exploration regulations issued by the regulatory authority. Such regulations will be issued pursuant to a state or Federal program, and will at least require notification to the regulatory authority of intent to explore, and reclamation of all lands disturbed. Exploration on Federal lands will be governed by section 523, whereas states may devise their own program for lands within their jurisdiction.

116 Section 513. Public Notice and Public Hearings

116 This section assigns the responsibility for giving public notice, holding hearings and submitting comments to the mining permit applicant, the regulatory authority, and interested third parties.

116 The applicant is required to -

116 (a) place an advertisement identifying the ownership, precise location, and boundaries of the land to be affected in a local newspaper of general circulation in the locality of the proposed new surface mine. This advertisement must appear at least once a week for four consecutive weeks;

116 (b) submit, along with the mining permit application, a copy of this advertisement; and

116 (c) assume, if a public hearing is held, the burden of proving that the application is in compliance with all the requirements of the applicable state or Federal program under this Act.

116 The regulatory authority must:

116 (a) receive, and make available to the public comments on the application from local agencies, in the same manner and at the same location as are copies of the mining application;

116 (b) provide for public hearings upon request and place notice of such hearings, including date, time, and location, in a newspaper of general circulation in the locality at least once a week for three consecutive weeks prior to the scheduled hearing date;

117 (c) respond in writing to written objections on the mining application received from any party not less than ten days prior to any proposed hearing. Such response shall include (1) the regulatory authority's preliminary assessment of the mining application; (2) proposals as to the terms and conditions of the permit to mine; (3) the amount of bond to be set for the operation; and (4) answers to material factual questions presented in the written objections; and

117 (d) notify various local governmental bodies of the intention to surface mine and allow opportunity for assessment by these agencies.

117 For the purpose of such hearings, the regulatory authority may administer oaths; subpoena witnesses and written or printed materials; compel attendance of witnesses or production of materials; take evidence, including site inspection of the land to be affected or other mining operations carried on by the applicant; and keep a complete record of each public hearing.

117 Section 514. Decisions of the Regulatory Authority and Appeals

117 Under the administrative procedure established in this section, if hearings on the mining application have been held within 30 days after their completion, the regulatory authority shall provide to the applicant and all parties to the administrative proceeding its written findings granting or denying the permit in whole or in part and stating its reasons.

117 In instances where no hearings have been held, the regulatory authority is to notify the applicant in writing of its decision. If the application has been denied in whole or in part, specific reasons for denial must be included. This response must be given within a reasonable time after submission of the permit application.

117 Approval of the application results in the issuance of the mining permit. If, however, the permit is denied, then: (a) within 30 days of denial the applicant may request a hearing on the disapproval; (b) upon such a request the regulatory authority will hold the hearing within 30 days, notifying all interested parties and following the procedure outlined above.

117 Any person who has participated in the administrative proceeding shall have the right of judicial review by the appropriate court in accordance with State and Federal law.

117 Section 515. Environmental Protection Performance Standards

117 Environmental protection performance standards set forth in this section are the heart of the bill. The operator will be required to:

117 (a) maximize utilization and conservation of the coal being mined;

117 (b) restore the land to a condition at least fully capable of supporting uses it was able to support prior to mining;

117 (c) protect off-site areas from damage occurring during mining and reclamation operations;

117 (d) limit the amount of area disturbed at any one time and keep current with the reclamation schedule;

117 (e) separate topsoil and protect it from deterioration, or segregate and protect a more suitable subsoil if available;

118 (f) stabilize and protect all surface areas including spoil piles to control air and water pollution;

118 (g) separate and promptly bury toxic materials;

118 (h) bankfill, compact and grade to restore the approximate original contour with all highwalls, spoil piles and depressions eliminated, unless the operator can demonstrate the waste material from the entire permit area is insufficient or excessive in which case less stringent requirements are allowable;

118 (i) create impoundments under the approved reclamation plan, only if such factors as size, stability, water quality and level, access, and effect on adjacent landowners are acceptable;

118 (j) refrain from constructing roads in or near streams or drainage channels;

118 (k) replace topsoil or best available subsoil on graded areas;

118 (l) establish on the regraded areas a diverse vegetative cover native to the area and capable of self-regeneration, with introduced species allowable in accordance with approved postmining land use;

118 (m) assume responsibility for successful revegetation for five years

after the last year of augmented seeding, fertilizing, irrigation or other work to assure adequate survival and plant density, except in regions having an annual average precipitation of 26 inches or less when the operator's period of responsibility is extended to ten years;

118 (n) minimize disturbances to the hydrologic balance onsite and on associated offsite areas by avoiding toxic drainage, preventing offsite flows of suspended solids by using the best available technology, restoring recharge capabilities of the mined area, replacing the water supply of those whose supply for domestic, agricultural or industrial uses has been adversely affected by the mining operation, preserving alluvial valley floors in arid and semi-arid areas, and avoiding channel deepening and enlargement in operations discharging water from mines;

118 (o) prevent offsite damdges and immediately correct such conditions;

118 (p) construct, operate, maintain and remove new or existing impoundments in accordance with standards to be promulgated by the Secretary (with written concurrence of the Corps of Engineers) within 135 days of enactment of this Act;

118 (q) stabilize and revegetate all mine wastes deposited on the surface;

118 (r) in using explosives, give advance written notice to local governments and adjacent affected residents and limit type and equipment and other factors so as to prevent injury to persons, property, underground mines and ground or surface waters;

118 (s) refrain from surface coal mining within 500 feet of an underground mine unless mining through an abandoned mine;

118 (t) fill all auger holes; and

118 (u) construct access roads, haul roads, or haulageways with appropriate limits applied to grade, width, surface materials, spacing and size of culverts, and avoid stream beds and channels.

119 In addition, this section sets forth certain other performance standards designed to protect the environment, and applying only to steep slope surface coal mining (which term is not to include mining operations on flat or gently rolling terrain which will leave a plain or predominantly flat area) as follows:

119 (1) spoil or waste materials may not be placed on the slope below the

bench or cut, except where temporarily necessary to gain access to the coal seam and then only under specified conditions to prevent slides, erosion and water pollution.

119 (2) the site must be returned to the approximate original contour by covering highwalls completely and limiting disturbance above the highwall; and

119 (3) "steep slope" is defined as any slope above 20 degrees or a lesser slope as determined by the regulatory authority after due consideration of the soil, climate and other environmental characteristics of a region or State;

119 Variances may be granted from performance standards which require the restoration of the approximate original contour, the covering of all highwalls, the prohibition against placement of spoil on steep slopes, and liability for establishing revegetation, only in case of mountaintop removal where industrial, commercial, residential, or public facility development is proposed for post-mining land use and where the regulatory authority, after public notice and public hearing, issues a written finding that the proposed use is a higher or better economic or public use which can only be obtained if one or more of the variances are granted. However, no such variance is to be effective for more than three years, unless substantial progress toward completion of the development is underway according to the schedule shown in the approved mining and reclamation plan.

119 Section 516. Surface Effects of Underground Mining Operations

119 Certain environmental protection standards for surface coal mining operations also apply to underground mines. In this section, the Secretary is required to incorporate in his regulations the following key provisions concerning the control of surface effects from underground mining:

119 (1) Underground mining is to be conducted in such a way as to assure appropriate permanent support to prevent surface subsidence of land, except in those instances where the mining technology approved by the regulatory authority at the outset results in planned subsidence.

119 (2) Portals, entryways, shafts, exploratory holes or accidental breakthroughs between the surface and the underground mine workings must be sealed when they are no longer needed for the conduct of the mining operation.

119 Environmental standards for minimizing disturbances to the hydrologic balance at the mine site for surface disposal of mine wastes and for the operation of impoundments are the same as those discussed in the previous section (Section 515).

119 After surface operations or other mining impacts are complete at a particular site, the area must be regarded and a diverse and permanent vegetative cover established.

120 In order to prevent the creation of additional subsidence hazards from underground mining in developing areas, permissive authority is provided to the regulatory agency to prohibit underground coal mining in urbanized areas, cities, towns, and communities and under and adjacent to industrial buildings, major impoundments, or permanent streams.

120 Provisions of the Act and regulations pertaining to State and Federal programs, permits, bonds, inspection and enforcement, public review and administrative and judicial review are applicable with such modifications to the application requirements, permit approval and denial procedures and bond requirements, permit approval and Secretary in order to accommodate differences between surface and underground mines.

120 Section 517. Inspections and Monitoring

120 This section instructs the regulatory authority to carry out inspection of each mining operation according to the following criteria:

120 (1) irregular and averaging not less than one per month for each operation;

120 (2) occurring without prior notice to the operator;

120 (3) including filing of reports adequate to insure the enforcement of the requirements under this Act; and

120 (4) rotating inspectors at adequate intervals.

120 After each inspection, the inspector shall notify the operator and the regulatory authority of each violation of any requirement of the Act. Copies of all inspection reports are to be made available to the public at central locations and at Washington, D.C.

120 For the purpose of administering and enforcing any approved State or Federal program under this Act, every permittee must establish and maintain appropriate records, make monthly reports to the regulatory authority, install, use and maintain any necessary monitoring equipment or method, evaluate the results of such monitoring in accordance with the procedures established by the regulatory authority, and provide such other information relative to surface mining as the regulatory authority deems reasonable and necessary.

120 Special additional monitoring and data analysis are specified for those mining and reclamation operations which remove or disturb strata that serve as aquifers which significantly insure the hydrologic balance or water use either on or off the mining site. Access to the mine site, monitoring equipment, areas of monitoring, and records of such monitoring and analysis must be provided promptly to authorized representatives of the regulatory authority without advance notice and upon request.

120 A clearly visible sign must be maintained at the mine entrance.

120 This section further provides that no state employee performing any function or duties under this Act may have a direct or indirect interest in any underground or surface coal mining operations. Sanctions for violations, and reporting requirements are identical to those discussed for the Federal Office and employees in Section 201 of the Act.

121 Section 518. Penalties

121 Any permittee who violates any permit condition or who violates any other provisions of this title may be assessed a civil penalty by the Secretary not to exceed \$5,000 for each violation according to this section.

121 A civil penalty shall be assessed only after an opportunity for a public hearing has been afforded the person charged with a violation.

121 Any person who willfully and knowingly violates a condition of a permit, or fails or refuses to comply with an order issued by the Secretary under this Act, shall be fined not more than \$1 0,000, or imprisoned for not longer than one year, or both.

121 Any person who knowingly makes a false statement, representation, or certification with respect to any application, record, report, plan or other document filed or required to be maintained under this Act shall be fined not more than \$1 0,000, or imprisoned for not longer than one year, or both.

121 Section 519. Release of Performance Bonds or Deposits

121 Under this section, the release of the operator from financial obligations under bond may be done in two stages depending on the amount of reclamation accomplished.

121 The operator may request that up to 60% of the bond for any area may be released after completion of backfilling, regarding, and drainage control for a bonded area in accordance with the approved mining and reclamation plan. The decision is to be made based on the regulatory authority's inspection and

assessment of: (a) conformance with the requirements of the Act; and (b) an assessment of the significance of residual problems of surface and ground water pollution, and the cost of completing reclamation and abating pollution.

121 The second bond release step is after completion of the revegetation requirement including the operator's responsibility for the time-period specified in section 515. On request for such final bond release by the operator, the regulatory authority must inspect and evaluate the reclamation work within a reasonable time prior to responding. Denial of the request requires the regulatory authority to set forth reasons for unacceptability and recommend actions for correcting the deficiencies. The amount of bond retained must be sufficient to cover the cost of a third party re-establishing vegetation for the period of liability.

121 For any bond release request, public notice must be given on a substantive basis equivalent to public notice for mining applications. The advertisement in newspapers is for five successive days. In addition, letters substantively stating the release request must be sent to adjoining property owners and appropriate public agencies or local government bodies which are potentially affected by release of the bond and operator's responsibility for the work covered by the bond.

121 Provisions for written comments, objections, and requests for hearings by interested parties and government agencies or bodies and the responsibility of the regulatory authority to answer in writing and hold such hearings are similar to those regarding the application for mining permits. In formal conference procedures to resolve written objections may be used in lieu of formal transcribed hearings, but this shall not preclude rights to a formal hearing if requested.

122 Section 520. Citizen Suits

122 This section provides standing to any person having an interest which is or may be adversely affected to commence a civil action in a United States district court against (1) the United States, any other governmental instrumentality or agency alleged to be in violation of any provision of the Act or regulations promulgated thereunder or order issued by the regulatory authority or any other person who is alleged to be in violation of any rule, regulation, order or permit issued pursuant to the Act; or (2) a regulatory authority where there is a failure to perform any act or duty under this Act excepting discretionary actions, including the Secretary.

122 Any resident of the United States injured in any manner through failure of any operator to comply with the provisions of this Act, regulations issued thereto, orders, permits issued by the Secretary, may bring action for damages in U.S. district court.

122 Citizens suits in some instances may not be commenced before the expiration of 60 days after an operator is notified of the alleged violation, or, if the Secretary or State has commenced and is diligently prosecuting a civil or criminal action to require compliance with a mining permit, orders, or provisions of the Act. However, in such instances, the person may intervene as a matter of right.

122 The court in issuing any final order may award litigation (including reasonable attorney and expert witness fees) to any party whenever appropriate. The court may also require filing a bond or equivalent security if request for temporary restraining orders or injunctions is sought.

122 Section 521. Enforcement

122 The eFederal enforcement system contained in this section while predicated upon the States taking the lead with respect to program enforcement, at the same time provides sufficient Federal backup to reinforce and strengthen State regulation as necessary. Federal standards are to be enforced by the Secretary on a mine-by-mine basis for all or part of the State as necessary without a finding that the State regulatory program should be superseded by a Federal permit and enforcement program.

122 The provisions for Federal enforcement have a number of specific characteristics:

122 (1) The Secretary may receive information with respect to violations of provisions of this Act from any source, such as State inspection reports filed with the Secretary, or information from interested citizens.

122 (2) Upon receiving such information, the Secretary must notify the State of such violations and within ten days the State must take action to have the violations corrected. If this does not occur, the Secretary shall order Federal inspection of the operation. If the inspection is based on data from a third party, that party shall be afforded the opportunity to accompany the Federal inspector.

122 (3) If on the basis of inspection, the Secretary determines that a violation has occurred, which creates an imminent danger to public health or safety or can cause significant imminent irreparable environmental harm, he shall immediately order cessation of the operation or a relevant portion thereof, until the violation is abated or the order modified by the Secretary.

123 In the case of a violation which does not cause such imminent danger, the Secretary must issue a notice setting a period of no more than 90 days for

abatement of the violation. A pattern of violations caused by unwarranted or willful failure to comply with provisions of the Act requires the Secretary to order the permittee to show cause why his permit should not be suspended or revoked.

123 All orders issued by the Secretary take effect immediately and all orders shall be specific and substantive with respect to the nature of the violation, the remedial action required, time for compliance and seriousness of the violation.

123 If violations occurring under an approved State program appear to result from the failure of the State to enforce the program effectively, the Secretary shall so inform the State. If the problems extend beyond thirty days, the Secretary shall give public notice of his finding with respect to the State program. After public notice, and until the State satisfies the Secretary that it will enforce any permit condition required by this Act, shall issue new or renewed permits for surface mining operations, and issue other orders as necessary for compliance with the provisions of this Act. Upon request of the Secretary, the Attorney General of the U.S. may enforce such Secretarial orders for various actions in a district court of the U.S.

123 The Secretary may request the Attorney General to apply for injunctive relief whenever a permittee violates an order of the Secretary, hinders implementation of the Act, refuses to permit inspection of the mine, or refuses to furnish information.

123 Section 522. Designating Areas Unsuitable for Surface Coal Mining

123 As a condition of having a State program approved by the Secretary of Interior, this section requires States to establish a planning process enabling decisions on the unsuitability of lands for all or any type of surface coal mining.

123 Lands must be so designated if reclamation as required by this Act is not feasible.

123 Lands may be so designated if: (1) Surface coal mining would be incompatible with Federal, State, or local plans to achieve essential government objectives; (2) the area is a fragile or historic land area; (3) the area is in "natural hazard lands" - those lands where development could endanger life and property, such as unstable geological areas; (4) the area is in "renewable resource lands" - those lands where uncontrolled or incompatible development could result in loss or reduction of long-range productivity, and could include

watershed lands, aquifer recharge areas, significant agricultural or grazing areas. In complying with this section, a State must have established an appropriate agency, data base and inventory system, and methods for implementing land use planning decisions and affording adequate public review.

123 The Secretary of Interior is to review Federal lands to make determinations based on the standards set forth above, but he may permit surface coal mining on Federal lands prior to the completion of this review. Any person having an interest which may be adversely affected may petition either the State or Federal Government to have an area so designated based on the above criteria or to have a designation terminated. Public hearings on any area to be so designated must be held within 10 months of receipt of the petition.

124 Land upon which surface coal mining operations are being conducted on the date of enactment, or for which there is substantial legal and financial commitment prior to September 1, 1974 are not to be so designated.

124 Subject to valid existing rights and excepting operations existing on date of enactment, no surface coal mining operations shall be permitted:

124 (1) if located in the National Park System, National Wilderness System, National Wildlife Refuge System, or Wild and Scenic Rivers System;

124 (2) on any Federal lands within the boundaries of any national forest;

124 (3) which will adversely affect lands and water used by the public unless appropriate screening is approved;

124 (4) within one hundred feet of any public road (except at the junctions of haulage roads); and

124 (5) within three hundred feet of any occupied building or public facility.

124 In addition, prior to the designation of any area as unsuitable for mining, the regulatory authority must prepare from existing and available information a statement on the potential coal resources in the area affected, the overall demand for coal, and the impact of the designation on the environment, the area's economy and the supply of coal.

124 Section 523. Federal Lands

124 This section requires the Secretary of Interior to implement Federal lands program regulating coal surface mining operations which at a minimum meets all the requirements of this Act.

124 Within 6 months after enactment the Secretary shall promulgate and implement a Federal lands program and all provisions of this Act are to be

incorporated by reference or otherwise in any Federal lease, permit, contract, issued by the Secretary which may involve surface coal mining and reclamation operations or surface impacts of underground coal mine operations. With regard to coal owned by the United States, the Secretary shall develop a program to assure that no class of purchasers of mined coal will be unreasonably denied purchase of such coal. Any exploration on Federal lands which will cause substantial disturbance to the natural land surface will require a permit issued by the Secretary. Each permit application will be accompanied by a fee, and data relating to location, extent and duration of planned activities, reclamation plans, and notice to the surface owner of intent to explore.

124 The Secretary may arrange with a State to have the checkerboard-Federal and non-Federal lands jointly managed under a State mining regulatory program or accept such authority from a State for non-Federal lands. Such agreements must at a minimum include all requirements of this Act.

125 This section does not authorize the Secretary to delegate to any State or any authority jurisdiction over mining activities taking place on Federal or Indian lands or to delegate to the States trustee responsibilities toward Indians and Indian lands.

125 Section 524. Public Agencies, Public Utilities and Public Corporations

125 This section requires all agencies, units or instrumentalities of Federal, State or local government which propose to engage in surface coal mining operations subject to the requirements of the Act to comply with provisions of Title V.

125 Section 525. Review by the Secretary

125 This section provides that any permittee who has had his permit revoked or suspended, and any person adversely affected by such revocation or suspension, may apply to the Secretary for review of such revocation or suspension within 30 days after such revocation or suspension upon receipt of an application the Secretary shall conduct an appropriate investigation, including public hearings and grant or deny relief expeditiously.

125 Section 526. Judicial Review

125 Any decision of the Secretary approving or disapproving a State program under section 503 or preparing and promulgating a Federal program under section 504 may be reviewed in an appropriate United States Court of Appeals by a

petition filed within 60 days of such decision by a person who participated in the administrative proceedings and who was aggrieved by such decision according to this section.

125 All other decisions or orders of the Secretary shall be reviewable in the appropriate United States District Court for the locality in which the surface coal mining operation is located. Commencement of a proceeding under this section shall not operate as a stay of action by the Secretary unless so ordered by the court.

125 Section 527. Special Bituminous Coal Mines

125 This section authorizes the regulatory authority to issue separate regulations for special bituminous coal mines located west of the one hundredth meridian west longitude and meeting various criteria and existing on the date of enactment. Such alternative regulations shall pertain only to the standards governing on-site handling of spoil, elimination of depressions, creation of impoundments and regarding. to approximate original contour, shall specify that remaining highwalls are to be stable, and that all other environmental protection standards in the Act shall apply along with the other provisions.

125 Section 528. Surface Mining Operation Not Subject to this Act

125 This section removes application of the provisions of this Act from situations where a landowner extracts coal for non-commercial use from his own land, and where commercial coal mining operations affect two acres or less.

125 Section 529. Anthracite Coal Mines

125 This section requires the Secretary to issue separate regulations for anthracite coal surface mines, adopting the State environmental protection provisions applying to anthracite surface coal mines and surface effects of underground coal mines. With the exception of bond limits and periods of revegetation liability, all other provisions of the Act shall be reflected in the Secretary's regulations.

126 The Secretary is to report to Congress biennially, beginning on December 31, 1975, concerning the effectiveness of State anthracite regulatory programs operating in conjunction with the Act with recommendations for program changes.

SECTION-BY-SECTION ANALYSIS OF H.R. 13950 TITLE VI DESIGNATION OF LANDS UNSUITABLE FOR NONCOAL MINING

126 Section 601. Designation Procedures

126 Under this title, for Federal lands within a State the Secretary may, and if requested by a Governor, shall review any such lands to determine if they

are unsuitable for mining or minerals other than coal. Federal lands may be so designated if they are -

126 (1) predominatly urban or suburban land and the mineral estate remains in the public domain;

126 (2) lands used primarily for residential purposes where mining could result in adverse impacts; or

126 (3) where operations could result in irreversible damage to important historical, cultural, scientific or aesthetic values or natural systems, of more than local importance, or could unreasonably endanger human life and property.

126 Any person shall have the right to petition the Secretary to seek exclusion of an area from mining. Such person shall obtain a hearing within a reasonable time. The Secretary may withdraw the land to be reviewed temporarily, not to exceed 2 years, from mineral entry or leasing.

126 No lands may be designated unsuitable for mining operations under this section if there are mining operations being conducted thereon on the date of enactment of this Act.

126 Prior to any designation under this section the Secretary shall prepare a statement on -

126 (1) the potential mineral resources of the lands in question;

126 (2) the demand for such minerals; and

126 (3) impact of the designation or failure to designate on the environment, economy, and supply of such minerals.

126 Any person with a valid legal interest who participated in proceedings under this section, and who is aggrieved by a decision of the Secretary under this section, shall have the right to appeal to the appropriate United States District Court.

SECTION-BY-SECTION ANALYSIS OF H.R. 13950 TITLE VII ADMINISTRATIVE AND GENERAL PROVISIONS

126 Section 701. Definitions

126 The following terms are defined in this section: Secretary; State; Office; commerce; surface coal mining operations; surface coal mining and reclamation operations; lands within any State; Federal lands; Indian lands; Indian Tribe; State program; Federal program; Federal lands program; reclamation plan; State regulatory authority; regulatory authority; person; permit; permit

applicant; permittee; fund; approximate original contour; other minerals; operator; permit area; unwarranted failure to comply; alluvial valley floors; and imminent danger to the health or safety of the public.

127 Section 702. Other Federal Laws

127 Section 702 disclaims any conflict between the Act or any State regulations approved pursuant to it, and the Mining and Minerals Policy Act, the National Environmental Policy Act, Mine Health and Safety Act, the Federal Water Pollution Control Act, the Clean Air Act as amended, the Solid Waste Disposal Act, the Refuse Act, and the Fish and Wildlife Coordination Act.

127 This section also authorizes the Secretary and other Federal agency heads to modify licenses, leases, contracts as appropriate to regulate surface coal mining.

127 Section 703. Employee Protection

127 Section 703 makes unlawful the firing or discrimination against any person who has filed a suit or testified under provisions of the Act, and gives such person recourse to review by the Secretary. After opportunity for public hearing, the Secretary is to make findings of fact and issue orders where a violation has occurred, for reinstatement of the employee with compensation. The Secretary's orders are subject to judicial review. The applicant in a successful pleading is to be reimbursed for his costs, including attorney fees. The Secretary is required to evaluate the effects of enforcement of the Act on employment, to investigate complaints, and hold public hearings concerning alleged discharges and layoffs. His subsequent report and any recommendations are to be made public.

127 Section 704. Protection of Government Employees

127 This section amends the United States Code in compliance with authority granted the Secretary of the Interior in section 703.

127 Section 705. Grants to the States

127 This section authorizes the Secretary to cooperate with and to make annual grants to States for administering State programs under the Act, disbursed at the rate of 80% of total costs the first year, 60% the second year, and 40% during the third and fourth years. Technical assistance, training, instructional material and a continuing inventory of information for evaluating the effectiveness of State programs are among the types of assistance to be rendered by the Secretary. All Federal departments and agencies having relevant data are to assist as well.

127 Section 706. Annual Report

127 This section requires the Secretary to submit an annual report on Federal and State activities pursuant to the Act and recommendations for appropriate administrative or legislative action.

127 Section 707. Severability

127 Section 707 establishes that the application of the remainder of the Act is not to be affected by invalidation of any of its parts.

128 Section 708. Alaskan Surface Coal Mine Study

128 This section instructs the Secretary to suspend application of provisions of the Act to surface coal mining operations in Alaska up to three years from the date of enactment if, in his judgment, it is necessary to insure continued operation of such mines. In such cases, public notice and public hearings are prerequisites. Only mines existing on the date of enactment are eligible for such suspension, and eligibility is stipulated as an operation which produced coal during the calendar year preceding date of enactment. New operations in Alaska must comply with the interim standards of the Act.

128 An in-depth study of surface mining conditions in Alaska is to be initiated by the Secretary to determine which, if any, provisions of the Act should be modified as applied to Alaska surface coal mining. Within two years from date of enactment, the Secretary is to report back to Congress with his recommendations.

128 Section 709. Study of Reclamation Standards for Surface Mining of Other Minerals

128 This section mandates a study to be submitted to Congress and the President within 18 months from the date of enactment concerning surface and open pit mining and reclamation technologies for minerals other than coal.

128 Principal emphasis is given to oil shale and tar sands which occur primarily in the States of Utah, Wyoming, and Colorado. The large fuel reserve of these resources and their potential role in energy development in the coming years, along with the early indications that significant environmental impacts could occur with their development, mandate immediate attention in a study to identify what additional reclamation standards are required.

128 Section 710. Indian Lands

128 This section requires a study of the regulation of surface mining on Indian lands by the Secretary in consultation with Indian tribes, to be submitted not later than January 1, 1976 to Congress.

128 All coal surface mines on Indian lands shall comply with the interim

environmental protection standards of the Act within 135 days after enactment.
Within 30 months of enactment the permanent environmental protection standards are to be incorporated by the Secretary into all existing and new leases. Additional requirements as set forth by the Indian tribes are to be made a further condition of the leases issued by the Secretary.

128 \$7 00,000 will be earmarked for assisting the Indian tribes to participate in the study.

128 Section 711. Experimental Practices

128 This section allows the regulatory authority to authorize deviations from the required environmental protection standard of sections 515 and 516 on an experimental basis, so long as the level of protection afforded environment and public is no less than that intended by the standards and so long as the scope of operation is no greater than necessary.

129 Section 712. Authorization of Appropriations

129 This section authorizes appropriations to the Secretary in the following categories:

129 (1) Through contract authority to the Secretary of Interior, \$10 0,000,000 available upon enactment and \$1 0,000,000 for each of the two succeeding years, to implement sections 502, 522, 405(b)(3) and 712, having to do with initial regulatory programs, designating areas unsuitable for surface mining, abandoned mined lands reclamation and Indian lands. This assures the availability of funds upon enactment.

129 (2) For a period of 15 years after September 30, 1977, any appropriations necessary to carry out the purpose of section 507(c) to make up the difference between the total of \$4 0 million and funds reserved for implementation of section 507(c) from the abandoned mine reclamation fund.

129 (3) \$10,000,000 for the first fiscal year \$2 0,000,000 for each of the two succeeding fiscal years, and \$3 0,000,000 for each fiscal year thereafter, for administrative and other purposes of the Act.

129 Section 713. Research and Demonstration Projects on Alternative Coal Mining Technologies

129 This section authorizes the Secretary to conduct research and training, enter into contracts and make grants to qualified institutions, agencies and persons, in addition to contracting and making grants for demonstration projects and training relating to developing alternative coal mining technologies to

reduce surface disturbance, maximize resource recovery and improve health and safety.

129 Section 714. Surface Owner Protection

129 This section applies only to coal owned by the United States under surface to which the rights are owned by a surface owner as defined, where surface mining is contemplated under a lease issued by the Secretary. The written consent of the surface owner is necessary before the Secretary may lease the coal.

129 Surface owner is defined so as to require that a person must not only hold title to the land but also for at least 3 years before granting consent to the surface mining operation, must have his principal place of residence on the land or personally farm or ranch or receive a significant portion of his income from the land. A schedule of compensation to the surface owner is set forth in the section, based on the fair market value of the property and on costs of dislocation, relocation, loss of income and other values.

129 The surface owner is to deal only with the Secretary in granting or withholding his consent. Penalties would be assessed to discourage the making of "side deals" in order to avoid this requirement.

129 As a further criterion for the leasing of Federal coal, the Secretary is instructed to refrain from leasing such split-ownership coal lands to the maximum extent practicable.

129 Section 715. Federal Lessee Protection

129 This section concerns surface mining of coal owned by the Federal Government under surface subject to lease or permit, where in the alternative the surface coal mining permit applicant must either obtain the written consent of the lessee or give evidence of having executed a bond to secure payment of damages to the surface estate as determined by the parties involved.

130 Section 716. Alaska Coal

130 This section establishes that nothing in the Act shall be construed as altering the rights of any owner of Alaska coal conveyed from the United States to the State of Alaska under the Alaska Water Claim Settlement Act to surface mine such coal so long as the operation meet the requirements of the Act.

130 Section 717. Water Rights

130 This section specifies that no provision of the Act shall be construed as affecting in any way the right of any person to enforce or protect, under

applicable State law, his interest in water resources affected by surface coal mining.

APPENDIX

130 U.S. DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY, Reston, Va., June 16, 1976.

130 Hon. PATSY T. MINK, Chairwoman, Subcommittee on Mines and Mining, Interior and Insular Affairs Committee, House of Representatives, Washington, D.C.

130 DEAR MRS. MINK: In response to the recent telephone request by Andy Wiessner to Montis R. Klepper for data on alluvial valley floors in areas of proposed surface coal mines with Federal involvement, we are forwarding the enclosed summary of proposed surface coal mines. The data is based on mining plans presently being held by the Survey, as well as some information from State agencies. The mining plans were submitted prior to the publication of the Coal Mining Operating Regulations on May 17 of this year. It would be expected that these regulations may prompt some readjustments in the existing mining plans.

130 The estimates of land surface covered by alluvial valley floors are based on photointerpretation and field geological studies. The measurements indicate that none of the mines proposed have greater than 3.7% of their land surface covered by alluvial valley floors.

130 Sincerely yours,

130 V. E. MCKELVEY, Director.

130 Enclosure.

*5*OCCURRENCE
OF ALLUVIAL
VALLEY FLOORS
N1 IN AREAS OF
PROPOSED
SURFACE COAL
MINES WITH
FEDERAL
INVOLVEMENT -
MONTANA,
WYOMING,
COLORADO, AND
NEW MEXICO n2

Name of proposed mine Agricultural activity in alluvial valley	Size of proposed mine area (square miles) n3	Size of alluvial valley floor in proposed mine area (square miles)	Percent of proposed mine area classed as alluvial valley floor	Source of information
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floor				
Montana:				
1. Decker Coal				
Co. - Decker				Open-file
East	3.46	0.13	3.7	report 76-162
Deer Creek				
valley used in				
places for				
cultivation of				
hay. Other				
agricultural				
activity				
limited to use				
as natural				
pasturage.				
2. Decker Coal				
Co. - Decker				
North	2.13	.07	3.3	do
Agricultural				
activity				
limited to use				
as natural				
pasturage.				
3. Shell Oil				
Co. - Youngs				
Creek	3.28	.03	1.0	do
Do. Wyoming:				
				Unpublished
				surficial
				geologic map
				(V. S.
				Williams,
				1975).
4. Amax - Belle				
Ayr North	4.43	.07	1.6	
Do.				Unpublished
				surficial
				geologic map
				(D. S.
				Fullerton,
				1975).
5. Carter Oil				
Co. - Caballo	8.24	.23	2.8	
D Do.				Unpublished
				surficial
				geologic map
				(V. S.
				Williams,
				1975).
6. Kerr-McGee				
No. 2 - East				
Gillette	4.73	4.02	.	
Do.				Unpublished
				surficial
				geologic map
				(D. A.
				1975).
7. Peabody				
Coal Co. -				
Coates,				
Rochelle	3.21	.08	2.4	
Do.				Unpublished
				surficial

8. Sun Oil Co. - Belle Fourche (Cordero)	6.42	.13	2.0	geologic map (D. S. Fullerton, D. A. Coates, 1975).
Belle Fourche Valley used in places for cultivation of hay and other crops.				
9. Arco - Coal Coates, Creek	9.42	.19	2.0	Unpublished surficial geologic map (D. A. 1975).
Do. Colorado: 10. Peabody Coal Co. - Seneca Photointerpreta II-Yost (Area B)	.670	None	0	tion, R. F. Madole, 1976
No alluvial valley floor. Peabody Coal Co. - Seneca II-W (Area C)	1.11	None	0	do
Do. 11. Utah International - Yampa	10.50	None	0	do
Do. 12. W. R. Grace - Colowyo	1.92	None	0	do
Do. New Mexico: 13. Photointerpreta Peabody Coal Co. - Star Lake	17.07	None	0	tion, H. E. Malde, 1976
Do.				

130 n1 The term alluvial valley floor as used here includes alluvial valleys where width exceeds 25 ft (8m) and includes stream channel, flood plain, and low alluvial terrace deposits. They may be subirrigated by underflow of near-surface water or irrigated by diversion of flood flow. Included are alluvial terraces generally not higher than 5 ft (1.5m) above channel floor of small streams but as much as 8 ft (2.5m) high along principal streams. Terraces have distinct boundaries along bordering alluvial fans or colluvium, either at a step a few feet (about 1m) high or, less commonly, along a line at which the ground surface begins to slope upward.

130 n2 Excludes proposed extensions of 3 operating mines: Western Energy-Colstrip; Utah International-Navajo (Wesco); and Westmoreland-Absaloka (Sarpy Creek); and proposed Burnham mine of El Paso Natural Gas for which detailed mining plan has not been filed.

130 n3 Total area likely to be surface-mined according to mining plans on file with the conservation division, USGS, data from Eastern Powder River EIS, and data from State agencies. Alluvial valley floor crosses extreme margin or corner of proposed mine or holdings.

Concurring, additional, separate and dissenting

RUPPE, LAGOMARSINO, STEELMAN, JOHNSON, PETTIS, CLAUSEN

STEIGER, SEBELIUS, YOUNG, BAUMAN, SYMMS, SMITH

SKUBITZ

STEIGER, BAUMAN, SYMMS, SMITH, YOUNG

SUPP-VIEW: CONCURRING VIEWS

We, as minority members of the Committee on Interior and Insular Affairs, support the report recommending enactment of H.R. 13950. This bill is the product of the Committee's critical scrutiny and careful modification of previously reported legislation and represents a sincere effort to strike a better balance between achieving our energy goals and protecting and enhancing the quality of our environment.

H.R. 13950 contains significant changes from other surface mining bills that have been passed by the Congress and vetoed by the President.

MODIFICATIONS CONTAINED IN H.R. 13950

The time period for implementation of reclamation standards and administrative procedures has been extended for both existing and new coal surface mines. The bill delays implementation of interim performance standards for existing operations from 135 days after enactment to 1 full year. Permit application deadlines have been extended from 20 months after enactment to 26 to 32 months after enactment depending upon the time necessary to put an approved State program in operation. We believe that these revised implementation schedules will provide the coal industry and especially small operators a more realistic time period within which to adjust to the new law. Continuity of coal production is an important objective of this legislation.

The Committee unanimously agreed to an amendment by Mr. Ruppe to strike section 502(f)(1) of H.R. 13950. This amendment deletes mandatory Federal

inspections of every surface mine in every State once every 3 months during the interim regulatory period. The amendment will greatly simplify and streamline the role of the Federal Government during the interim period without sacrificing the basic intent of the legislation to provide Federal backup authority to insure that States are fully implementing interim standards pending the approval of permanent programs. The public is protected by retaining section 502(f)(2) which provides that the Secretary shall order an immediate Federal inspection and the necessary enforcement actions upon receipt of information which would give rise to reasonable belief that such standards are being violated by any surface coal mining operation.

Several modifications have been made to H.R. 13950 which will make it procedurally easier and less costly for the small operator to comply with the permit application requirements. Section 507(b)(11) requires that the operator submit an analysis of the hydrologic consequences of the proposed mining as well as the results of test borings or core samples. The Committee, in recognizing the expense of these activities could be burdensome, provides in section 507(c) that the regulatory authority shall perform the water and core analyses for operators mining less than 250,000 tons. Funds reserved from the abandoned mine reclamation program will be used to cover the cost of performing these analyses. This legislation has been further modified to allow the regulatory authority to set application fees which may be less than the actual or anticipated cost of reviewing, administering, and enforcing the permit.

Procedural requirements have been streamlined elsewhere in the legislation. Exploration permits are no longer required for coal exploration on lands within the jurisdiction of the States. Section 512, instead of requiring an application for and approval of a permit prior to conducting exploration activities, now merely requires that notice of intent to conduct exploration activities be given and that all exploration be conducted pursuant to regulations designed to require reclamation of disturbed lands.

The regulatory authority has been given more flexibility in deciding what information must be submitted with the permit application. Core sampling may be waived in areas where the geology is well known. The requirement that information on the nature of the stratum lying below the coal seam be submitted with the permit application has been deleted.

The paperwork involved in submitting a permit application has been further reduced by (1) requiring that only adjacent property owners be listed on the application rather than all owners within 500 feet of the permit area; (2)

requiring that previously issued surface mining permits be listed in the application only for the preceding 5 years; and (3) limiting the scope of the notice and hearing requirements pursuant to releasing a bond.

H.R. 13950 contains other significant modifications designed to ease the impact of the regulatory program on the operator. Clarification of the burden of proof has been made. Language that the applicant "affirmatively demonstrate" that he is in compliance with the law has been replaced with language stating "the applicant . . . shall have the burden of establishing that the application is in compliance" with the program. Clarification of the definition of "approximate original contour" has been made by deleting the word "depressions." New language has been added which would allow the States to implement an alternative system to bonding such as an insurance system. All of these clarifications and modifications have been made in response to legitimate criticisms of past bills while insuring that the basic concepts of the legislation have been retained.

CONCLUSION

There is still a tremendous need for a nationwide program that will reduce the environmental impacts of present and future surface coal mining and provide for the reclamation of previously mined and unreclaimed lands. While it is true that all of the major coal producing States have now enacted legislation to regulate surface mining, these State laws vary greatly in stringency and enforcement. Federal legislation would remove the unfair competitive advantage now enjoyed by States which are allowing poorly regulated strip mining to create hazardous environmental conditions.

Plans for expansion of surface mining on a very large scale in the West points up a special need for a comprehensive law. The Federal Government owns over 80 percent of the vast Western reserves of lignite and subbituminous coal. The low sulfur content of this coal is essential in meeting current air quality standards. The surface mining regulations announced by the Secretary of the Interior on May 11, 1976, apply only to Federal lands. We need a national standard applicable to all lands to provide the level of certainty and consistency that industry can rely on in making investment decisions.

Since the climate in the West is arid and water is therefore in short supply, the removal of thick coal seams and the consequent disruption of stream and river channels will pose difficult and in some cases insurmountable reclamation problems. We firmly believe that reclamation of mined lands should be national policy. If reclamation is not possible, coal surface mining should not be permitted.

We believe that H.R. 13950 performs the task fairly and equitably. It is not perfect legislation. It is susceptible to amendment. It is not, as some are alleging, the product of environmental extremism. It is designed to permit surface mining to grow in an orderly and environmentally acceptable manner.

This legislation has received strong bipartisan support since early drafts were introduced in the 92d Congress. We believe that H.R. 13950 represents a legislative work product that is much improved over previous efforts. We strongly urge its passage in the 94th Congress.

PHILIP E. RUPPE.

ROBERT J. LAGOMARSINO.

ALAN STEELMAN.

JAMES P. JOHNSON.

SHIRLEY N. PETTIS.

DON H. CLAUSEN.

137

ADDITIONAL VIEWS

In our additional views on H.R. 9725, we observed that bill could not be considered in this Congress without violating the House rule prohibiting second consideration of a bill of the same substance as one already rejected. H.R. 9725, which was virtually identical to the rejected H.R. 25, was tabled in the Rules Committee.

We make the same point here. H.R. 13950, the Committee's third surface mining control bill in this Congress, is so nearly like the vetoed H.R. 25 (which was rejected when the veto was sustained) as to clearly constitute a bill "of the same substance". Thus a vote by the House on H.R. 13950 would violate section XLIII of Jefferson's Manual:

. . . a question once carried cannot be questioned again at the same session, but must stand as the judgment of the House; and a bill once rejected, another of the same substance cannot be brought in again the same session.

We note that the sponsor of H.R. 13950, Representative John Melcher, has once again sought to distinguish this surface mining control bill from the rejected H.R. 25 in order to escape the "same substance" test. But his 20 changes added

to the nearly 200-page text of H.R. 25 have no more made H.R. 13950 a different bill than the growth of 20 leaves on a large tree makes it a different tree. Nor does the tacking of a sign on the tree reading "This is a different tree", make it in fact a different tree.

We note for the record that only two non-Melcher amendments were added in Committee and one of those restored exact language of the original H.R. 25. The amendments offered by Mr. Melcher in Committee were technical, correcting printing errors and clarifying ambiguous language. The insignificance of the earlier changes by Mr. Melcher are spelled out in other views filed with this report.

In our earlier views on H.R. 9725, we argued the importance of the House rule banning a second consideration of a bill of the same substance as a rejected bill. We reprint that argument for this record:

We believe the rule against "second consideration" has an important purpose. It is more than a limitation against those who would waste the time of the House in repeated agitations of the same question. It fixes the judgment of the House. If every question of close decision were permitted to be brought again, the judgment of the House would never be known.

Of course, a new Congress is not bound by the decisions of an earlier Congress. We agree that the next Congress could again examine the surface mining control issue as presented in H.R. 25 or H.R. 9725. But this Congress has decided against passing H.R. 25, or any other bill of the same substance, by sustaining the veto of H.R. 25. The judgment must be regarded as the will of the 94th Congress, and H.R. 9725 cannot be brought.

The test of what constitutes "of the same substance" is not without precedent. In 1856, the Speaker overruled a point of order against a bill allegedly "of the same substance" by finding that the one bill differed from the other "in the very material manner of wanting the proviso, which is the subject matter of controversy . . .".ⁿ¹ As we have pointed out, H.R. 9725 has not eliminated any section of controversy from H.R. 25. Nearly all provisos are identical to H.R. 25, leaving the two bills "of the same substance."

We are aware of an instance in 1864 in which the Speaker observed that "a resolution which the House had laid on the table might not be presented again, unless one or two words were changed, to make it in fact a different resolution".ⁿ² Proponents of H.R. 9725 believe this opinion (which was not a formal ruling) requires only a literal change in one or two words to defeat the test "of the same substance." We disagree. We believe the words, "to make it in fact a different resolution," govern the meaning of the Chair's opinion. We believe

the Chair intended that a word or words changed must affect the meaning of the bill so as to make it different. Otherwise, if all that is required is cosmetic change, the rule against "second consideration" has no purpose. Such an interpretation is wrong because it renders a House Rule useless without a vote to repeal it.

n1 See Section 3384, Cannon's Precedents, p. 295.

n2 See Section 3385, Cannon's Precedents, p. 295.

In short, surface mining control legislation in the form of H.R. 25/9725/13950 has had its day in court. Other, more important legislation, now deserves the remaining time of the House in the closing days of this Congress.

SAM STEIGER.

KEITH SEBELIUS.

DON YOUNG.

ROBERT BAUMAN.

STEVE SYMMS.

VIRGINIA SMITH.

139

SEPARATE VIEWS OF REPRESENTATIVE JOE SKUBITZ

This is the third time this Committee has reported a surface mining control bill in the 94th Congress. I am somewhat embarrassed for the Committee. Not because the persistence has failed to produce a Federal surface mining law, but because we continue to engage in a futile legislative exercise. There is not two whits difference among the three bills we have reported. So we are asking the House to decide the same issue over and over again as if the sustained veto of H.R. 25 did not count.

Our second attempt at this issue, H.R. 9725, was tabled by the Rules Committee on March 23, 1976. Yet here we are again with H.R. 13950, a nearly identical bill. We have not made changes which would cause Members to change their votes from their original position on the first surface mining control bill. We certainly have not changed the administration's mind. In his June 22 letter to the Committee the Acting Secretary stated:

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.

Nevertheless the sponsor of H.R. 13950, Representative John Melcher, insists changes have been made. But Mr. Melcher opposed my motion in Committee to hold hearings on the changes. Mr. Melcher insists these "changes" would help the small operator, but the Committee has not received one shred of evidence to support that claim. In fact, the Committee has not held open hearings, with public witnesses permitted to testify since May 15, 1973.

In effect the Committee admits this bill is just like the others. I am aware the opening paragraphs of this report tediously highlight the changes claimed by Mr. Mecher, but the remaining 120-some pages are identical to those of earlier reports. Perhaps that explains why the Committee staff was able to put together this thick report in less than 24 hours from the time it was ordered reported.

This repetition is expensive as well as futile. With the printing of this report, the Committee will have spent nearly \$30,000 just to reprint the report for H.R. 25, H.R. 9725, and H.R. 13950. This does not begin to take into account the many other costs the Committee has incurred with this duplicate effort on one bill. It does not cover the costs of printing the 21 surface mining bills introduced in the House in this Congress, a sum totaling \$113,458. Nearly half of this amount is the reprinting of this nearly 200-page bill 8 times by one Member with minute changes each time. One printing reflected less than 200 word changes in the 41,000 word text.

Since H.R. 13950 is so nearly like the earlier reported H.R. 9725, I have no reason to change my opinion of the merits of this legislation.

140 I shall not reprint my views on H.R. 9725 here, but refer my colleagues to page 141 of House Report No. 94-896. That, at least, will save some small portion of the printing costs.

Suffice it to say, in summary of those earlier views, that although I supported H.R. 25 all the way through conference, I voted to sustain the President's veto. I did so because if the President is wrong then all that can result is a loss of funds - temporarily - to reclaim orphan lands. It will result in very little despoiling of land since every State that now mines coal has already enacted reclamation laws. But if Mr. Udall is wrong, then we do irreparable damage to our economy through increased fuel costs, increased prices

of commodities, increased unemployment, and disaster insofar as the production of energy is concerned. I see no change in our energy crisis which would make this restrictive bill more timely now. We still need coal more than ever before.

JOE SKUBITZ.

141

DISSENTING VIEWS

We strongly oppose the passage of H.R. 13950, the "Surface Mining Control and Reclamation Act of 1976," as amended and reported by the Committee on Interior and Insular Affairs.

As introduced, this bill contains the same objectionable features as H.R. 9725 which was virtually identical to H.R. 25, the bill twice vetoed by the President. The proponents of H.R. 13950 would have us believe that the 14 amendments to H.R. 9725 now reflected in H.R. 13950 have been substantive amendments. This is simply not true. Furthermore, if these amendments were in fact substantive, an opportunity for hearings was not provided prior to offering such amendments nor were hearings held prior to their inclusion in this bill.

As a matter of fact, these amendments were offered by Congressman John Melcher the day before the bill was scheduled for a rule before the Rules Committee as a ploy to secure the granting of a rule. It should also be noted that hearings have not been held on any of the surface mining bills in over 4 years. This is particularly important in view of the changes in State laws and regulations governing coal development as well as the promulgation of surface mine regulations by the Department of the Interior and the enactment of the "Federal Coal Leasing Amendments Act of 1976."

Thus, on March 23 before the Rules Committee the request for the rule was overwhelmingly denied. A record vote of 10 to 5 on a procedural motion just prior to the final vote establishes the overwhelming defeat. We are confident that the distinguished members of the Rules Committee will once again recognize that the changes made in H.R. 9725 as reflected in this bill are cosmetic and virtually insignificant. One of the few amendments offered and passed in Committee on August 25 is identical to language contained in H.R. 25, thus moving H.R. 13950 closer to the exact text of the vetoed H.R. 25. Therefore, H.R. 13950, like H.R. 25, does not take into consideration geographical and geological differences among various sections of the country. The same administrative and legal delays built into the earlier bill and repeated in H.R.

13950 would necessitate final decisions to be made by the courts after lengthy litigation.

It is our strong view that H.R. 13950 would:

Cause coal production losses at a time when coal should be used increasingly as an energy source;

Cause losses of valuable coal reserves at a time when conservation of our resources is important;

Cause unnecessary employment losses when unemployment is already too high;

Cause increased oil imports;

Cause the cost of coal to rise and thereby cause the consumer's cost of electric power to rise;

Create yet another bureaucracy at a time when big Government is a deep concern to all;

Cause increased Government spending to feed the bureaucracy;

Weaken and eventually destroy existing State programs of enforcement, most of which have been vastly improved in the past few years;

Further undo the existing Department of the Interior regulations for controlling surface mine reclamation on public lands;

Lead to countless years of regulatory delays, litigation, and uncertainty against the best interests of achieving our environmental and energy objectives because of ambiguous, vague, and complex provisions;

Inject the Federal Government immediately into a field which is already regulated by most States because of cumbersome and unwieldy Federal-State regulatory and enforcement provisions;

Prevent a national resource from being used in the national interest because of these provisions which enable State governments to ban surface mining of coal on Federal lands; and finally

Prevent mining operations of any kind for noncoal minerals on

Federal lands declared unsuitable vague and subjective standards which could apply essentially to any area in the United States.

We consider it to be ironic and irresponsible that this Congress should continue to attempt to pass anticoal legislation at a time when virtually all energy experts agree that the production and use of this country's vast coal

reserves and resources are vital toward solving the Nation's energy problem. It should be recognized that with the recent passage of the "Federal Coal Leasing Amendments Act of 1976" on June 21 coupled with the new Department of the Interior coal leasing regulations and modifications in State surface mining laws and regulations, there is absolutely no need for a Federal surface mining statute.

PROGRESS AND IMPORTANCE OF FEDERAL AND STATE REGULATORY MECHANISMS

(a) State regulatory mechanisms on control of coal development. - All of the coal producing States have now enacted legislation to control the surface mining of coal. Moreover, many of these States have, even since the introduction of H.R. 25, substantially revised or upgraded their laws so that with respect to lands subject to their control, the need for Federal legislation that would override their State programs is greatly diminished. Indeed, provisions designed to correct the specific abuses against which H.R. 25 was drafted have been adopted in many recent amendments of State laws. The differences, however, between these State programs and H.R. 25/H.R. 13950, are still significant. The State provisions are generally more flexible, and allow appropriate recognition by each State's regulatory authority of the particular physical, geological, hydrological, and social conditions of their State and of the particular mine sites and proposed operations.

Even the most cursory review of these State laws and regulations, particularly those of the Western States, indicates that for the most part they are working. The abuses which occurred under or in the absence of the legislation and regulations which existed in the past are not occurring, and cannot occur, under modern State regulatory mechanisms.

*9*STATE SURFACE MINING LAWS -
 ENACTMENTS AND/OR AMENDMENTS
 SINCE JAN. 1, 1969
 9[Key: E - Original
 enactment, A - Amended or new
 enactment, P - Now pending in
 State legislature]

State	1969	1970	1971	1972	1973	1974	1975
1976							
West Virginia n1			A				
Indiana n1				A	A	A	
Illinois n1			A			A	
Pennsylvania n1		A	A	A	A		
Ohio n1				A		A	A
Kentucky n1			A			A	
Maryland n1				A			
Virginia n1				A	A		

Montana n1	A	A	A	A	
Tennessee n1			A	A	
Iowa n1				A	A
Oklahoma n1		A	A		
Kansas n1				A	
Wyoming n1	E			A	A
North Dakota n1	E			A	A
Arkansas n1	E				
Minnesota	E			A	
Colorado n1	E		A	A	
Maine	E				
Alabama n1	E				A
Washington n1		E			
Michigan n1		E	A		
Idaho			E		
South Dakota n1			E	A	
North Carolina			E		
Missouri n1			E		
Oregon n1			E		
New Mexico n1				E	
South Carolina				E	A
New York					E
Texas n1					E
Utah n1					E
California					E
Massachusetts					
P					
Mississippi					
P					

n1 Coal producing States.

These mechanisms have been adopted by the States and represent their balanced judgments on the important questions involved. H.R. 13950, however, like its predecessors H.R. 25/H.R. 9725 would begin by overriding such State programs and requiring Federal law to control ongoing operations. Moreover, State programs would be required to be revised substantially and new programs in compliance with H.R. 13950 be developed, enacted and submitted within 18 months from the date of enactment (sec. 503). It may be that there was a time when such direct, detailed and inflexible intrusion by the Federal Government in ongoing State programs would have been appropriate. It simply is not so today and in our view would seriously disrupt the vigorous initiatives underway at the State level to oppose stringent controls on surface mining of coal within their own boundaries.

Some have argued that a Federal law is necessary in order to assure uniformity between and among the States in this regulatory area. We do not believe this is the case. First, a review of State laws and of H.R. 13950 indicates that no State regulatory mechanism approaches the detail and inflexibility of the proposed Federal law. H.R. 13950 is not, therefore, an

example of minimum Federal requirements. It is an example of the arbitrary and unnecessary imposition of Federal judgments upon questions more appropriate for State judgment. Moreover, there will inevitably be instances in which the specific judgments of States will differ, and requirements of different but equally acceptable levels of stringency may be applied. In such cases, to require the most stringent level of protection adopted by any State to apply outside of its borders, and control development within another, perhaps neighboring, State would do serious violence to our ordered concepts of State jurisdiction. But that is precisely what some proponents of H.R. 13950 have in mind. In this light, Federal legislation is viewed as a way to impose the strictest standards upon all States and relieve the competitive disadvantage which a State adopting particularly stringent requirements might otherwise suffer with respect to other States adopting a more balanced judgment. The fact that this measure might be adopted by the Federal Government does not change the character of its intrusion upon the appropriate discretion of each State.

(b) Federal regulatory mechanisms on control of coal development. - State regulatory mechanisms are, however, only a part of the story. Since H.R. 25 was vetoed, the Department of the Interior has acted vigorously to control the leasing and development of the huge Federal coal resources of the West.

After several years of development, debate and public comment, on September 5, 1975, the Department published proposed regulations of the Bureau of Land Management and U.S. Geological Survey. These regulations provide for the imposition of stringent operating and reclamation standards upon both the issuance of Federal coal leases and specific proposed plans of operation of individual mines.

The period for public comment on these proposed regulations was extended to insure maximum opportunity for participation by interested parties. Moreover, following his installation as Secretary of the Interior on October 17, 1975, the new Secretary Thomas S. Kleppe directed that additional opportunity for public participation be offered. As a result, public meetings were held on December 18, 19, and 20, 1975, in Cheyenne, Wyo.; Denver, Colo; and Billings, Mont. In all, the Department informs us that more than 1,000 pages of written comments and 300 pages of testimony were received from more than 100 separate participants. These included all of the major environmental and public interest groups, as well as the Governors or appropriate representatives of each of the Western States and of the member States of the Interstate Mining Compact.

Based upon the review of this extensive public participation and the detailed, carefully considered opinions of the States involved, the Directors of

the BLM and the USGS on February 13, 1976 presented their recommendations for final rulemaking to the Secretary. A detailed final environmental impact statement under section 102(2)(C) of the National Environmental Policy Act of 1969 accompanied these recommendations. A review of these regulations, and of the impact statement written on them, clearly indicates that the Department has made major and significant progress toward developing and implementing a regulatory mechanism that will enable it to balance the need for stringent environmental protection and increase domestic production of coal more rapidly, more efficiently and with a greater flexibility and regard for State interests than would H.R. 13950.

These regulations were decided upon and enacted as final rulemaking by the Department on May 17, 1976. The Secretary has continually indicated his determined conviction that stringent standards be adopted and enforced with respect to the development of Federal coal and, moreover, that more stringent State standards be applied and enforced unless overriding national interests dictate otherwise.

In our view, the Interior regulations, operating in conjunction with the increasingly stringent State laws, provide adequate recognition of the important interests to be protected. They will do the job, and should be given an opportunity to work.

In any event, the Department's regulations deserve careful attention in light of the many questions and problems that have been raised with respect to H.R. 13950. More importantly, letters sent to Secretary Kleppe on May 5, 1976 from Mr. Russell H. Peterson, Chairman of the Council on Environmental Quality and Mr. Russell E. Train, Administrator of the Environmental Protection Agency state in effect: We have endorsed these regulations precisely because they protect our environment.

EXECUTIVE OFFICE OF THE PRESIDENT, COUNCIL ON ENVIRONMENTAL QUALITY,
Washington, D.C., May 5, 1976.

Hon. THOMAS S. KLEPPE, Secretary of the Interior, Washington, D.C.

DEAR TOM: I am happy to inform you that the Council on Environmental Quality endorses the revised surface mining regulations for federal coal which you plan to promulgate next week.

As you know, this final version is the result of intensive discussions among Federal agencies over the past couple of weeks. CEQ believes that these regulations are now sufficiently strong that they will provide adequate protection to the environment throughout the entire process of mining Federal coal and reclaiming the land affected by mining.

The new performance standards not only provide strong protective measures, but enable operators and mining supervisors to plan operations using definite standards. We are pleased that the Department plans to formulate criteria for designating lands unsuitable for mining and intends to issue more detailed guidance in the form of general mining orders for specific geographic areas. Those orders will provide the guidance necessary to fit the regulations to site-specific conditions. The regulations will be applied to all existing leases and on-going operations - a measure that will greatly enhance environmental protection. States which have enacted effective surface mining control laws will be able to have their own laws apply to Federal coal. The provision for partial plans now requires initial submission of all critical information which will enable the mining supervisor to make decisions based on complete data. Finally, the regulations provide for appropriate interagency concurrence and consultation so that resources other than coal will receive adequate protection.

In conclusion, the Council is pleased that, working with other Federal agencies, States, and the public, the Department has adopted final regulations which are environmentally acceptable, compatible with sound energy development, and worthy of broad support.

Sincerely,

RUSSELL W. PETERSON, Chairman.

ENVIRONMENTAL PROTECTION AGENCY, Washington, D.C.

Hon. THOMAS S. KLEPPE, Secretary of the Interior, Washington, D.C.

DEAR TOM: EPA welcomes this opportunity to endorse the Department of Interior's coal leasing regulations governing mining and reclamation activities. These regulations are extremely important as they establish the environmental ground rules for Western coal development as well as serve as a model for national policy for all coal mining operations.

The Department has made a number of substantive changes to these regulations since they were initially proposed. These changes include:

A program of well-defined environmentally protective performance standards which operators must meet; and a bona fide variance mechanism subject to thorough public review to allow a variance to performance standards to ensure compatibility with the post-mining land use.

Special requirements for protecting valuable water resources in alluvial valley floors including such measures as but not limited to avoiding mining, replacing aquifers, aquicludes, and soils, and minimizing, controlling, and preventing disturbances to the hydrologic system by the use of best practicable commercially available technology to protect against the potential for siltation. Reclamation will proceed contemporaneously with the mining

operations to ensure that the period of time in which the land is disturbed is minimized.

These requirements will ensure that water quality standards will be protected and that off-site effects will be precluded.

EPA is pleased that the Department is incorporating references to the EMARS program in BLM's coal leasing procedures to ensure that pre-mine planning will take environmental considerations into account. Also, the development of Federal coal will be accomplished in a manner that is at least as stringent as required by State law.

EPA is also pleased that the Department is taking steps to develop criteria for designating lands unsuitable for mining and General Coal Mining Orders to cover specific details of road construction, soil testing analyses, water monitoring and site-specific requirements for revegetation. These criteria and orders combined with effective implementation of the regulations will ensure that mining will occur in an environmentally acceptable manner.

I appreciate your willingness to work closely with EPA on these regulations. Although we have differences with some portions of them, we believe these regulations will provide needed protection against the damages from surface mining of Federal coal.

Finally, I should like to point out that these regulations are exemplary of the fact that our energy and environmental goals are compatible and can be attained. I congratulate you for a job well done.

Sincerely yours,

RUSSELL E. TRAIN.

It is unnecessary to review these regulations in detail, but we believe that a brief summary of how they will solve some of the major dilemmas still posed by this bill is in order.

The regulations impose stringent levels of environmental protection, and allow the Department to incorporate these levels of protection in the specific requirements of each Federal lease or approved plan of operations. No lease or plan of operations will be issued or approved unless reclamation of the lands involved is both attainable and assured.

147 Performance bonds adequate to cover the cost of all remaining

reclamation must be furnished to the Department and maintained and adjusted in amount throughout the course of the operation.

The regulations cover such important elements as backfilling and grading to restore the approximate original contour of the affected lands, protecting the hydrology of affected areas before, during, and after mining, requiring revegetation at least equal in density and permanence to the preexisting vegetation, restoration to an equal or better postmining land use and appropriate consideration of natural wildlife and any land use planning goals which have been adopted for the areas in question.

As already noted, State laws which provide protection of environmental values more stringent than would occur under the Federal regulations will, by formal rulemaking become applicable to Federal coal development as well. In a similar rulemaking proceeding, specific agreements may be entered into with individual States or groups of States providing for joint Federal-State enforcement mechanisms to eliminate overlap and duplication in those many areas where Federal and State jurisdictions are involved in coal development.

Unlike H.R. 13950, the proposed regulations do not purport to change the balanced judgments of the States, as expressed by the provisions of their common or statutory law, as to what rights are to be given to surface owners to consent or withhold consent to the mining of Federal coal which underlies their surface estate. Instead, the regulations expressly provide that surface owners' rights which may arise under State law shall not be construed as being altered or diminished by the regulations.

This is consistent with the position that the administration has taken with respect to H.R. 25, and in our judgment leaves the right and responsibility to make decisions in this important area at the State level where it properly belongs.

The regulations incorporate some elements of flexibility as to the levels of control that will have to be met by operators in those areas which we all recognize are the most difficult to prescribe in advance by regulatory language. These areas deal with such questions as whether or not to require the elimination of all highwalls and the degree of protection to be afforded the hydrology of those areas where significant farming and ranching operations are involved.

Creating this flexibility has been one of the most difficult questions that

the Congress or the executive branch has had to face, because creating the opportunity for flexibility necessarily involves creating the possibility that such flexibility, or the administrative discretion involved, might be abused.

The regulations guard against any such abuse. In general, they greatly expand the opportunity for public participation in the regulatory actions of the Department. The significant decisions of the BLM and the USGS must be in writing and set forth the factual basis and the rationale for such decision. A "note of availability" of all major pending decisions relating to lease issuance, plan approvals, or cessation of operations and release of bonds must be prepared, published in the Federal Register and the local newspapers, and mailed to all interested parties and anyone who has expressed a desire to receive such notices. Where particularly sensitive elements of discretion or flexibility such as determinations of what the highest levels of control reasonably commensurate with the cost of achieving such controls might be, the notice of availability of any decision which includes the exercise of such discretion must so inform the public.

Thereafter, any person with an interest which is or may be adversely affected may request a public hearing on the decision itself. Where such requests are made, public hearings are mandatory on such important questions as approval of mine plans, abandonment of operations or release of bond. The transcript of such hearings must be maintained and, along with the decisions of the Department which are required to be in writing, are to be made available to the public. The ultimate decision must take into account all testimony and written comments received at such hearings.

This mechanism not only seems workable, but it is a significant improvement over the inflexible and difficult to administer provisions of H.R. 13950.

CONTINUATION OF THE ARBITRARY, CONFUSING, UNNECESSARY, AND UNREASONABLE PROVISIONS OF H.R. 25, H.R. 9725, AND H.R. 13950

As noted above, the legislation which has been reported out by the Committee continues to be virtually identical to H.R. 25. The controversies which have previously been identified with respect to this bill remain controversies. Its absence of flexibility and the arbitrary, confusing, unnecessary and unreasonable procedural requirements that it would impose upon both the Federal and State governments will in our view substantially delay or prevent the development of this vital national resource. The problems presented by the impossible burdens of proof and requirements for affirmative demonstration of the absence of negative impacts by an applicant for a permit, coupled with the broad citizen suit provisions, will tie up coal development programs in litigation for many years.

Some minor changes have been made since H.R. 25. They do not begin to rectify the adverse impacts of this bill. The majority of these changes have been time changes which would merely extend the times for compliance imposed in various sections of the bill. However, as mentioned earlier, one of the six amendments accepted by the Committee on August 25 is one which revives the same objectionable language formally contained in H.R. 25. This provision was deleted, for obvious reasons by the members of the House and Senate conference in 1975. The negative impact of this single onerous amendment is so great as to cancel out severalfold any superficial gains alleged to have been made by the proponents of this bill. This is a clear indication of a piecemeal approach to return to the legislation that has burdened the Members of Congress for three sessions and imposed an exorbitant financial burden on the taxpayer.

We will not attempt to raise objections to all of the sections of this bill as we did in our views concerning H.R. 9725. If we did, they would be the same. However, we do believe that our strong criticism of certain major sections bear repeating inasmuch as the majority has reprinted the text of its defense of H.R. 25/9725.

First, section 510(b)(5)(A) and (B) still contains language that is more confusing and onerous than that contained in the vetoed H.R. 25. Without completely restating our rebuttal to this section, which remains the same as stated in our dissenting views accompanying H.R. 9725, we believe that an example reflecting the inherent confusion in the language contained in this section coupled with that contained in the definition of "alluvial valley floors" is appropriate at this point.

Proponents of this bill, in an attempt to show that the definition of "alluvial valley floors" could be accurately interpreted by a responsible agency of the administration and further that the amount of strippable coal overlain by so-called "alluvial valley floors" was in fact negligible, directed the U.S. Geological Survey to undertake a mapping project in an area of southeastern Montana known to contain large tonnages of strippable coal. The questionable results of this mapping project revealed that, of the 27.6 percent of the area of three mapped counties that contain strippable coal, only 2.7 percent was overlain by alluvial valley floors. Note, however, that later this data and the manner in which it was to be used was discredited.

The above information was made available to Congressman Melcher in a letter from Mr. M. R. Klepper, Acting Director of the USGS on March 3, 1976.

U.S. DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY, Reston, Va., March 3,

1976.

Hon. JOHN MELCHER, Chairman, Subcommittee on Public Lands, Committee on Interior and Insular Affairs, House of Representatives, Washington, D.C.

DEAR CONGRESSMAN MELCHER: In response to a telephone request from Mr. Harry Crandall of your office, attached are copies of maps of 42 quadrangles in the northern Powder River Basin, Montana, showing alluvial valley floors and areas underlain by strippable coal. We believe that the definition of alluvial valley floor used in preparation of these maps is consistent with that of H.R. 9725. Measurement indicates that 2.7% of the area underlain by strippable coal in the region covered by these maps lies beneath alluvial valley floors. We believe that the area is typical of the Powder-River Basin as a whole. This is consistent with the estimate of less than 5% for the more restricted wording of S. 11 made last year.

Estimates based on preliminary studies suggest that less than 1% of the area of strippable coal in the Yampa Basin, Colorado, and less than 5% of the area of strippable coal in the Kaiparowitz Plateau, Utah, lie beneath alluvial valley floors.

Another map that may be of interest to you is USGS Misc. Geologic Investigations Map I-484F, which shows probable environmental effects of surface mining of the Wyodak-Anderson Coal, Campbell County, Wyoming. This map has just been printed in Denver, and copies are on their way to Reston, but have not yet been received. We will forward you a copy as soon as they arrive.

Sincerely yours,

M.R. KLEPPER, Acting Director.

Enclosures.

150 Information contained in the above letter was used by the proponents of H.R. 9725 in an attempt to show that that bill would not preclude development of substantial quantities of strippable coal in the Northern Great Plains region of the west. However, when Mr. Klepper was later asked to review the language contained in section 510(b)(5)(B) of H.R. 9725 and report what the possible impacts would be on development of strippable coal in these areas, he responded to this in another letter to Congressman Melcher dated March 17, 1976 in which he stated that -

It is the opinion of our hydrologists that the wording of section 510(b) (5) clause (B), if enforced vigorously, could virtually preclude surface coal mining in the Northern Great Plains in areas upstream of alluvial valley floors as defined in H.R. 9725.

U.S. DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY, Reston, Va., March 17, 1976.

Hon. JOHN MELCHER, Chairman, Subcommittee on Public Lands, Committee on Interior and Insular Affairs, House of Representatives, Washington, D.C.

DEAR CONGRESSMAN MELCHER: My letter to you of March 3 addresses specifically and solely the narrow subject of alluvial valley floors and strippable coal in three coal-bearing areas west of the 100th meridian and was based on detailed mapping in one area and preliminary studies in two areas. The estimates of the percentage of each area underlain by prospectively strippable coal that lies beneath alluvial valleys are not an index of the amount of coal that might be denied under provisions of Section 510(b) (5) of H.R. 9725. The estimates, though relevant to Clause (A) of that section, cannot validly be extrapolated to indicate the amount of coal underlying alluvial valleys in the many coal-bearing areas of the West. More importantly, the estimates have no relevance to Clause (B) and thus provide no indication whatsoever of the total amount of coal that would be denied. Reliable estimates of coal that might be denied under Clause (B) cannot be made on the basis of available hydrologic data. It is the opinion of our hydrologists that the wording of Section 510(b) (5) Clause (B), if enforced vigorously, could virtually preclude surface coal mining in the Northern Great Plains in areas upstream of alluvial valley floors as defined in H.R. 9725.

Your phoned request for an analysis of proposed plans for surface mining of coal on file with the Department is similar to a request made a few days ago by the Office of the Assistant Secretary, Energy and Minerals. Information is already being assembled. We will provide you with our evaluation of which of the proposed mines appear to lie on, or partly on, alluvial valley floors as defined in H.R. 9725, as soon as our analysis is completed.

I enclose for your information copies of recent transmittals pertaining to H.R. 9725 from me to Deputy Assistant Secretaries Peck and Reid.

Sincerely yours,

M.R. KLEPPER, Acting Director.

151 more recent and continuing attempt by the proponents of this bill to misrepresent data received from the USGS is the reference to the letter of June 16, 1976 to Congresswoman Mink from the Director of the USGS (see letter in Appendix to this report). Once again we have the proponents of this bill taking purely professional technical data and slanting it to further their legislative ends. They would have us believe that the USGS estimates of land surface covered by alluvial valley floors in areas of proposed surface coal mines is but a small percentage (3.7 percent) of the total area to be mined and would thus not cause any meaningful disruption to such proposed mining operations. Here again, this a distortion of the facts. Mr. Terrell of the minority staff contacted Mr. Klepper of the USGS on August 31, 1976 to ascertain if the percentage of alluvial valley floors reflected in the June 16 letter from USGS taken together with the hydrologic requirements as contained in section 510(b) (5) (B) would in fact cause any meaningful disruption of proposed Western coal mining. Mr. Klepper's response to Mr. Terrell was identical to that conducted in his letter of March 17, 1976 to Congressman John Melcher as previously printed herein.

Furthermore, it is important to note that neither the definition of "alluvial valley floors" nor the wording of section 510(b) (5) (B) have been changed from H.R. 9725 to the present H.R. 13950.

Secondly, title VI of this bill deserves special attention since it is clearly nongermane to the rest of the bill. This title, if rigorously implemented, would result in excessive delays through litigation and would seriously jeopardize all rights granted pursuant to the General Mining Law of 1872 and would also seriously impede the continued disposition of other minerals under the Mineral Leasing Act of 1920 and mineral materials pursuant to the Materials Sales Act of 1947. Furthermore, it is inconsistent and in direct conflict with the withdrawal provisions contained in the recently passed "Federal Land Policy and Management Act of 1976" (H.R. 1377/S. 507).

Lastly, some attention must be given to the misconception that proponents of this bill have regarding the impact of the existing language on small coal mine operators. It is their contention that changes from H.R. 9725 to this bill have, to a large extent, eased the administrative burdens on small coal mine operators. This is simply not true. This bill still contains the onerous and virtually unachievable requirements contained in title V which adversely affects both the large and small coal mine operators in most coal mining areas of the country.

It would be pointless to discuss in greater detail the multitude of deficiencies in H.R. 13950. They have already been addressed by the Congress and the executive branch in the lengthy and frustrating proceedings that surrounded the passage, veto and sustaining of the veto of H.R. 25.

Since those events, the Nation's energy situation has deteriorated, not improved. Whatever long range salutary effects the compromise energy legislation recently enacted by the Congress and signed by the President may have, in the short term it will increase, not decrease, the Nation's reliance upon insecure foreign sources of energy. As a result, it will inevitably help to sustain the high price of oil set by the international cartels of foreign producing nations.

The cost to the Nation of enactment of H.R. 13950, both in terms of delayed or diminished development of the Nation's domestic energy resources, and in terms of the economic consequences of such results, are significantly greater than they were when H.R. 25 was rejected in the constitutional process of enactment and veto. To reenact the same legislation would be even more irresponsible now, and we strongly oppose any such action by the Congress.

SAM STEIGER.

ROBERT BAUMAN.

STEVE SYMMS.

VIRGINIA SMITH.

DON YOUNG.