

HOUSE REPORT NO. 95-218  
Legislative History  
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Following is the April 22, 1977, Report from the Committee on Interior and Insular Affairs on H.R. 2. 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.

PROVIDING 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 Interior and Insular Affairs Committee; HOUSE OF REPRESENTATIVES REPORT No. 95-218; 95TH CONGRESS 1st Session; H.R. 2. APRIL 22, 1977. - Ordered to be printed

Mr . UDALL, from the Committee on Interior and Insular Affairs, submitted the following

REPORT together with ADDITIONAL, CONCURRING, SEPARATE AND DISSENTING VIEWS

[To accompany H.R. 2]

[Including the Congressional Budget Office cost estimate]

The Committee on Interior and Insular Affairs, to whom was referred the bill (H.R. 2) 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, report favorably thereon with an amendment and recommend that the bill as amended do pass.

#### INTRODUCTION

57 The future of the coal industry is bright. This is true for a number of sound policy reasons, including the country's need to decrease its reliance on imported oil, conserve its dwindling supply of natural gas and oil, and proceed cautiously with the development of hazardous nuclear technology.

57 While coal in the past has contributed significantly to the industrial and economic growth of the United States, the environmental and social costs of coal extraction have been enormous. To this day coal mining in Appalachia too often results in a legacy of polluted streams below multilated mountain sides left treacherously unstable. In the arid West, permanent rehabilitation of mined areas is yet to be demonstrated. If not properly conducted, current and planned western coal development could leave behind barren wastelands susceptible to continual erosion and disrupted groundwater systems,

significantly diminishing the productivity of agricultural areas. By imposing workable reclamation standards nationwide through the enactment of H.R. 2, the unnecessary degradation of land and water resources will be avoided as the country makes good use of its abundant coal supply.

#### THE PURPOSES OF H.R. 2

57 H.R. 2 is the descendent of a number of bills dating back to the 92d Congress. Although the Congress passed two bills (in the 93d and 94th Congresses), both met a Presidential veto. As new environmental problems were identified and mining practices evolved, the bills were amended so that it can be rationally asserted that H.R. 2 now benefits from a 6-year evolution being "fine-tuned" and updated as it moved through the legislative process. The fundamental concept of "the strip mining bill", however, has remained constant. Thus H.R. 2 is like its predecessors in that it would enact a set of national environmental performance standards to be applied to all coal mining operations and to be enforced by the State with backup authority in the Department of the Interior. More specifically, H.R. 2 will implement a national system of coal mining regulation by -

57 (1) Covering all coal surface mining (contour, mountaintop, area stripping and open-pit operations) and the surface impacts from underground mines and coal processing;

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

57 (3) Providing authority for a Federal regulatory program to augment State programs if necessary on non-Federal lands;

57 (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;

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

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

58 (7) Establishing a new Office of Surface Mining Reclamation and Enforcement for implementing provisions on this act;

58 (8) Establishing a Federal grant-in-aid program to the States for State

mining and mineral resource research institutes;

58 (9) Establishing procedures for public review of the administrative and enforcement program through access to data, hearings, inspections and standing to sue for damages for noncompliance with the act; and

58 (10) Recognizing the rights of surface owners and offsite water users.

#### 58 THE IMPACT OF CURRENT COAL MINING PRACTICES

58 Many of the hazards and environmental impacts of surface and underground coal mining practices are well-known and have been documented in the legislative history of the predecessors to H.R. 2. n1 Hearings conducted by the Subcommittee on Energy and the Environment of the committee in January and February of this year established that the problems associated with coal mining have not gone away. Indeed, as new mining technologies have evolved, new problems have been identified.

58 n1 See section of this report dealing with the legislative history of surface mining legislation.

58 Among the side effects of coal mining in the humid areas of the East and Midwest detailed in previous committee reports were:

58 Acid drainage which has ruined an estimated 11,000 miles of streams; the loss of prime hardwood forest and the destruction of wildlife habitat by strip mining; the degrading of productive farmland; 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. n2

58 n2 House Report to accompany H.R. 13950 (H.Rept. 94-1445, Aug. 31, 1976) at 19.

58 In addition, as the scale of surface coal mining has expanded in Appalachia, large earth-moving technologies have raised issues of stability and planning that are not yet fully resolved. Moreover, despite claims from some quarters that State reclamation laws have improved so significantly that Federal mining standards are no longer needed, the hearing record abounds with evidence

that this is simply not the case. For a variety of reasons, including the reluctance of the State to impose stringent controls on its own industry, serious abuses continue. For example, in one State the Veterans' Administration

has suspended home financing in certain strip mining regions because poorly regulated blasting practices of the area's mines have diminished residential property values. The hearing record also contains testimony concerning serious

incidents of landslides, erosion, siltation, and other environmental problems associated with the modern surface mining industry. In his testimony before the

subcommittee, Maj.Gen. Ernest Graves of the U.S. Army Corps of Engineers addressed the corps' experience with loss of the utility of corps water projects

- amounting to hundreds of millions of dollars of wasted tax money - due to siltation attributable to poorly reclaimed coal mining operations:

59 The most widespread damages resulting from the effect of mining upon the water resource are environmental in nature. Water users and developers incur significant economic and financial losses as well.

59 Reduced recreational values, fishkills, reductions in normal waste assimilation capacity, impaired water supplies, metals and masonry corrosion and deterioration, increased flood frequencies and flood damages, reductions in designed water storage capacities at impoundments, and higher operating costs for commercial waterway users are some of the most obvious economic effects that stem from mining-related pollution and sedimentation.

59 In some small watersheds, other indirect economic and social problems can be related to the overall adverse consequences of mining. In others, mining has posed serious threats to life and property in the form of hazardous flooding conditions or potentially dangerous pollutants. n3

59 The instream problems, primarily sedimentation and chemical pollution, are related not just to surface mining, but to various other aspects of the industry as well. Land disturbances caused by underground mining are equally as significant as surface mining in some locations, and even more so in others.

59 n3 After the early April 1977 floods in the Appalachian coal fields, the Appalachian Coalition also provided the Committee with information on the impact of strip mining on exacerbating flood impacts, which information has been placed in the Committee files.

59 Issues in the western mining were also addressed in the committee report accompanying previous legislation:

59 In the Western States and the Northern Great Plains region the discovery of vast reserves of lignite and subbituminous 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:

59 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.

60 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)

60 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. n3

60 n3 House report to accompany H.R. 13950 (H.Rept. 94-1445, Aug. 31, 1976).

60 Recent hearings and field investigations by the committee reveal that these issues have not been settled with passage of time. If the Nation is to increase reliance on western coal, at a minimum, the ground rules for mining should be set and this will be accomplished by enactment of H.R. 2.

60 The committee is satisfied that the reclamation standards and procedures of the reported bill will not result in any serious disruption of coal supply. In this regard, the committee notes the concurrence with this view by Dr. James

Schlesinger, assistant to the President. In a letter to the committee (reprinted later in this report), Dr. Schlesinger notes:

60 From the perspective of energy policy, I should like to express the position of the administration regarding the strip mining legislation which your committee has so effectively developed.

60 This Nation cannot expect to increase its reliance on coal unless the mining and burning can be done in a healthful and environmentally sound manner. The passage of clear and effective strip mining legislation is therefore a prerequisite to greater use of coal as part of a sound energy policy.

60 Negative arguments have characterized the strip mining debate for too long. Adequate safeguards of the land are not in conflict with a policy of expanded coal production. The Nation's coal resource is quite large and the portion of that resource made unavailable by this legislation is extremely small - less than 1 percent of the resource base and no more than 5 percent of total reserves. The modest costs of reclamation should not noticeably inflate fuel prices. It is money well spent in terms of benefits to the Nation.

60 And, with expanded deep mining and more intensive reclamation efforts, more, not fewer, jobs will result.

#### 61 SUMMARY OF CHANGES

61 As indicated previously in this report, the provisions of H.R. 2 have evolved over years of congressional consideration of the legislation. In the last Congress, H.R. 13950 (a bill reported by the committee after the House sustained the President's veto of H.R. 25) contained a number of changes designed to meet the previous administration's objections to previous versions of the strip mining bill. These modifications - largely retained in H.R. 2 - were designed to help the small to medium-size operator comply with the requirements of the new act and include: (1) the assumption by the State regulatory authority of the cost associated with water and core sampling analysis operators; (2) the elimination of a coal exploration permit process; (3) making certain permit application requirements optional; (4) giving the State flexibility in setting the permit fees; (5) generally reducing the amount of information required in the application and (6) limiting notice requirements and permitting informal procedures rather than formal hearing on bond release.

61 The following is a summary of major modifications of H.R. 2 included in the committee amendment:

#### MAJOR MODIFICATIONS - COMMITTEE REPORTED BILL COMPARED TO H.R. 2 AS INTRODUCED

#### 61 TITLE I - STATEMENT OF FINDINGS AND POLICY

61 Section 101(d) and (g) - Findings

61 The committee amendment recognizes the urgent need for minimum national environmental protection standards in light of the pending increases in coal production to meet national energy needs and in order to eliminate competitive advantages or disadvantages caused by possible production cost savings due to inadequate environmental protection standards.

61 TITLE II - OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

61 Section 201(b) - Creation of Office

61 The committee amendment increases the Secretary's administrative flexibility by authorizing the use when appropriate of employees of the Department or other Federal agencies to carry out purposes of the Office. This allows the multiple use of skilled manpower.

61 TITLE III - STATE MINING AND MINERAL RESOURCES AND RESEARCH INSTITUTES

61 The committee amendment includes no significant change in this title from H.R. 2.

61 TITLE IV - ABANDONED MINE RECLAMATION

61 Section 401(b), (e-g), and (h) - Reclamation fund

61 The committee amendment sets aside 10 percent of the reclamation fee in the first year and the period for which the fee is imposed by law, for hydrologic planning and core drilling assistance on behalf of the small mine operator. It sets a limit of \$10 million for such assistance.

62 Subsection (e-g) provide requirements for the reporting of quarterly coal production, penalties for misreporting and requirements of collection of the reclamation fees.

62 Subsection (h) was modified by the committee to make discretionary the reservation of up to 50 percent of the reclamation fee collected in any State to be expended in that State, through an approved State reclamation program, for mined land reclamation. Nonreserved funds are to be expended by the Secretary for reclamation on the basis of need.

62 Section 404 - State reclamation programs

62 The committee amendment establishes a new authority for States to develop their own mine reclamation program which identify priority areas for reclamation based on criteria in section 402. Project proposals to carry out this program

are to be submitted to the Secretary annually after approval of the State reclamation program and the State program for regulating coal surface mine operations.

62 Section 406(a) and (b) - Acquisition and reclamation of abandoned and unreclaimed mined lands

62 The committee amendment in subsection (a) provided a broad range of options to the Secretary in acquisition of interests in lands in order to enhance and expedite reclamation projects rather than limiting such acquisition to "fee simple."

62 The committee also deleted the authority to construct public facilities necessary to support housing for miners (subsection (b)) and substituted authority for construction of a more limited range of facilities only as part of mined land reclamation which creates public outdoor recreation areas.

#### 62 TITLE V - CONTROL OF ENVIRONMENTAL IMPACTS OF SURFACE COAL MINING

62 Section 502(b) and (c). Interim standards

62 A number of amendments to section 501 were adopted by the committee to establish a mechanism to expedite the issuance of regulations covering the so-called interim period after enactment of the act but prior to the implementation of a full State or Federal surface mining program under the act.

62 Under subsection (a), the Secretary of the Interior is to issue interim regulations within 90 days following the date of enactment. In order to avoid any procedural delay in the issuance of the interim regulations, subsection (a) waives any requirement under the National Environmental Policy Act of 1969 to prepare an environmental impact statement.

62 Subsection (b) gives the Secretary up to 1 year to promulgate regulations to implement the full regulatory program including technical requirements, permit processor, and procedures for submission of State programs.

63 Section 502(b) and (c). Interim standards

63 Subsection (b) (and (c) were modified by the committee to accomplish two changes: (1) To require existing operations to comply with the interim standards within 9 months after enactment (H.R. 2 required existing operations to comply within 1 year after enactment); and (2) to include the blasting provisions within the interim standards and incorporate the modified mountaintop removal provision of section 515 (see discussion of section 515(b)).

63 H.R. 2 gives the Secretary of Interior only a limited enforcement role during the interim period (a step back from previous bills which required

regular Federal inspection).

63 Section 502(f)(2). Notice to State

63 Under H.R. 2, Federal inspection is to be ordered only when there is reason to believe the act is being violated. The committee further modified subparagraph (f)(2) to require that the Secretary to give notice to the State regulatory agency prior to any Federal inspection during the interim period.

63 Section 502(f). Trained personnel

63 At the suggestion of State industry groups, the committee amended the bill to require that Federal inspectors in the interim period be trained in the techniques of surface coal mining.

63 Section 503(a). Non-Federal land

63 This subsection was amended to make it clear that a State normally has jurisdiction over surface mining on non-Federal lands under the act unless the State enters into an agreement with the Secretary to exercise jurisdiction over Federal coal pursuant to sections 521 and 523 of the act.

63 Section 504(a)(5). Designations of Federal lands

63 H.R. 2 establishes a process for designating lands unsuitable for surface coal mining. Pursuant to a series of amendments to clarify the role of the States and the Secretary under the act, this section was amended to establish clearly that only the Secretary of the Interior shall designate Federal lands as unsuitable for mining.

63 Section 504(a). Time limit on submission of State programs

63 Consistent with the other modifications of the bill, to facilitate the process of State compliance, the committee modified this section to give each State up to 34 months to submit and receive approval of a State program (an increase from 30 months under H.R. 2).

63 Section 506(b). Extension and transferability of permit term

63 The committee approved a number of changes in H.R. 2 to enhance security of tenure in a permit issued under the act. For example, subsection (b) now authorizes the issuance of a permit for a time period longer than the 5 years authorized by H.R. 2 (where necessary for the lead-time financing of the operation). Related modifications are discussed immediately below.

63 Section 506(c). Extension of due diligence requirement

63 H.R. 2 required the termination of a permit if mining has not commenced with 3 years unless the operation is to supply coal to a synthetic fuel facility. Under the committee amendment, termination may be avoided if the

regulatory authority finds that commencement of operations were delayed by litigation. Moreover, the subsection was modified to provide that where a mine is to supply coal to a specific major electric generating facility, the time period requirement is satisfied at the commencement of the construction of the generating facility itself.

#### 64 Section 506(d). Renewal of permit procedure

64 The committee made a number of changes to the bill's provisions regarding renewal of permits for the same area already under permit. Under the committee amendments, the mandatory public hearing provision of H.R. 2 is eliminated so that a hearing is necessary only when requested by a person having an interest in the matter. Moreover, the committee amendment clearly places the burden on opponents to the issuance of a permit renewal to demonstrate that the permittee is not in compliance with the act.

#### 64 Section 506(d) (1) (E). Limitation on information required on permit renewal

64 The committee amendment adds the language "and necessary to carry out the purposes of this act" limits the type of information that may be requested by the regulatory authority on a permit renewal.

#### 64 Section 507(b) (11). Application requirements

64 Inclusion of the term "probable" with respect to the determination of the hydrologic consequences of mining, clarifies the intent of this planning standard.

64 Critics of the H.R. 2 provision indicated that it might force operators into a long period of monitoring prior to all mine applications. While in some instances this may be needed, a clarifying amendment indicated that the determination is to be a judgment based on existing as well as any necessary new data. With respect to small mine operators, other provisions specify that such data can be developed by a third party and supported by moneys from the reclamation fund. (Section 507(c)).

#### 64 Section 507(c). State regulatory authority analysis of core samples

64 H.R. 2 provides for assistance to smaller operators in the performance of required core samples and hydrologic impact analysis. As modified, only operators who mine less than 100,000 tons annually total from all operations (H.R. 2 sets the limit at 250,000 tons) will be eligible to have the State pay

for their analysis. In addition, the committee amendment designates that such work will be performed by a qualified public or private laboratory with the costs assumed by the regulatory authority.

64 Section 507(f). Certification of insurance - explosives

64 The committee amendment inserts the phrase "including use of explosives" in this section to clarify the intent that insurance is to be obtained to cover all damages including damages resulting from the use of explosives.

64 Section 508(a)(2)(C). Land productivity

64 Pursuant to a number of modifications adopted by the committee to protect prime agricultural lands, this new subparagraph was inserted to require that the reclamation plan include an indication of land productivity prior to mining.

65 Section 508(a). Deletion of reclamation planning requirement regarding air and water quality laws

65 The committee eliminated section (a)(6) that would have required that applicant to indicate the "steps to be taken" to comply with other environmental laws.

65 Section 509(a). Amount of bond

65 H.R. 2 and the committee amendment both set forth procedures for determining the amount of a performance bond to cover the costs of reclamation. H.R. 2 required that the level of coverage be based upon two independent estimates. The committee eliminated this requirement and substituted various factors to be considered in setting the amount of bond.

65 Section 510(a). Modification of permits

65 The committee amendment to H.R. 2 provides that in addition to the authority to grant or deny an application, the regulatory authority may "require modification" of the application. This allows the regulatory authority to require that the applicant make changes in the plan during review of the application. Such a process more fairly represents what actually happens and provides more flexibility.

65 Section 510(a). Burden on renewal

65 Consistent with a number of modifications to section 505 designed to assure security of tenure of permit, the committee amendment deletes the words "or renewal" in subsection (a) to make it clear that the applicant does not have the burden of demonstrating compliance upon renewal of a permit for the same

area already under permit. Rather, consistent with other provisions of the act, the permit carries with it the right of renewal for the same area if the operation is in compliance with the law.

65 Section 510(b)(3). Hydrologic impacts

65 Under H.R. 2, prior to approval of a permit application, the regulatory authority is to make an assessment of the cumulative hydrologic impact of all mining in the area of concern. The committee amendment clarifies the test to be applied to this review. The words "significant irreparable offsite" damage have been deleted in favor of language that specifies that the mine is to be designed to prevent damage to the hydrologic balance outside the permit area.

65 Section 510(b)(5). Alluvial valley floor modification

65 H.R. 2 and the committee amendment contain a prohibition on mining of alluvial valley floors - areas of agricultural significance in the Western United States - in certain circumstances. In addition to adding clarifying language in subsection (A), the committee amendment incorporates the test that operations off alluvial valley floors but affect water systems that supply such valley floors should "not materially damage" the supply systems. The phrase "not adversely affect" was deleted in order to avoid a possible interpretation that any operation off an alluvial valley floor may have some adverse effect on the water system that supplies an alluvial valley floor.

66 The committee amendment also contains an expanded "grandfather" clause exempting certain operations from the alluvial valley floor prohibition. Under the amendment, the prohibition shall not affect operations engaged in the commercial production of coal in the year preceding enactment, operations for which the Secretary determines there were substantial legal and financial commitments made prior to January 4, 1977, or operations subject to an approved State permit to operate within the alluvial valley floor prior to January 4, 1977.

66 Section 510(c). Application requirement

66 Under the committee amendment, the applicant is to supply information regarding previous violations of environmental laws for a period of 5 years prior to the date of application. (As opposed to the original text of H.R. 2 which required this information for only 1 year.)

66 Section 510(b)(6). Surface owner consent over privately owned coal

66 The committee amendment includes a new condition for permit approval designed to assure that coal rights which have been severed from the surface estates will not be surface mined unless the parties to the severance, or the

surface owner or his assignee, contemplated that the coal would be extracted by surface mining methods.

66 Section 511(a)(2). Deletion of requirement for permit revision on proposed modified land use

66 Under the committee amendment and H.R. 2, the operator must apply for revision of a permit when there is to be significant alteration in the reclamation plan. The specific requirement for a permit revision prior to modification of proposed future land use was deleted as unnecessary.

66 Section 511(c). Notice and hearing requirements on permit revision

66 The committee modification of subsection (c) requires notice and hearing only when a major revision is proposed.

66 Section 512(d). Coal exploration on Federal lands

66 New subsection (d) of the committee amendment specifies that exploration on Federal lands is to be governed by the Coal Leasing Act Amendments of 1975.

66 Section 513. Hearing requirements

66 A number of modifications have been made to the public notice and hearing section. These changes include establishing a test of standing consistent with other provisions of the bill, clarification that the applicant is entitled to request a hearing prior to the issuance of the permit, allowing the regulatory authority to refuse a hearing if the objections filed are frivolous, deletion of the requirement that the regulatory authority issue a preliminary proposal on the permit application and establishing an informal conference procedure.

66 Section 514(a). Extension of period for action on permit

66 Under the committee amendment, the regulatory authority is required to act on the permit application within 60 days of the close of the hearing. As opposed to 30 days as provided by H.R. 2.

67 Section 515. Environmental protection standards

67 A number of amendments to section 515 were adopted by the committee primarily to either clarify particular standards or to strengthen provisions where recent information so indicated.

67 A new subsection 515(b)(7) was adopted which specifies certain standards concerning soil preservation and reconstruction by horizons. These standards apply only to the highly productive prime agricultural lands which have been and are being used for agricultural production. The standards are designed to

assure full reclamation of the natural productivity of these lands.

67 The committee amended subsection 515(b) (10) to require the cleaning and removal of siltation ponds in order to prevent the necessity for continued maintenance of such structures after reclamation is complete.

67 The committee added a new subsection 515(b) (11) pertaining to the disposal of surplus spoil which for instance is that spoil, due to expansion, not necessary for the return of the site to its approximate original contour. Specific standards, with respect to site selection, controlled placement, compaction, drainage, configuration and engineering design are included in this subsection.

67 The committee increased the flexibility of the standard controlling the coincidence of surface and underground mining operations by providing that such operations are jointly approved by regulatory authorities concerned with surface mines and the health and safety of underground miners (section 515(b) (12)).

67 The committee amendment includes more comprehensive requirements concerning notice to persons prior to blasting and maintenance of blasting records (section 515(b) (15)).

67 The committee modified subsection 515(b) (17) by stipulating that access roads could be left as part of reclamation to approximate original contour in conformity with the change in section 701(2).

67 The committee amendment to subsection 515(c) removed the variance procedure for mountaintop mining operations, reduced the economic, land development and other tests required as justification for such an operation and broadened the applicable postmining land use to include all types of agriculture. The subsection specifies that a permit is required, and this is the same permit required under sections 507 and 508 and the same hearing and other procedures apply.

67 The committee amendment deletes the discretionary capability of mine operators on steep slopes to place the spoil from the first short or initial block cut on the downslope immediately below the bench. Surplus spoil is to be disposed of as required in section 515(b) (11) as discussed above.

67 Section 516. Surface effects of underground coal mining operations

67 The committee amendment modifies the concern with potential subsidence impacts to those surface land uses which could be materially damaged. Both existing and reasonably foreseeable land uses are so protected.

67 Section 517(c). Inspection and rotation of inspectors

67 The committee amendment adds flexibility to the inspection procedure of H.R. 2 allowing a partial mining inspection (a complete inspection is required only every calendar quarter), eliminating duplicative language regarding availability of reports and deleting the requirement that the regulatory authority establish a system to rotate inspectors.

68 Section 518(a). Level of penalties

68 H.R. 2 provides that the size of the operator's business may be considered in determining the level of a penalty for a violation of the act. The committee amendment deletes this consideration.

68 Section 518(d). Prepayment of penalty

68 This modification provides that the penalty assessed under the Act shall be prepaid prior to review of the penalty assessment. Upon the successful opposition to the penalty, the money is repaid with interest.

68 Section 518(e). Penalties from bond

68 The committee amendment provides in addition to authorizing the Attorney General to bring an action to collect civil penalties imposed under the act, the Secretary may take the amount of the penalty from the performance bond posted under the act.

68 Section 519(a). Notice on bond release

68 The committee amendment deletes the requirement that notice on bond release occur on 5 successive days. Under the committee amendment, notice is to be given once a week for 3 successive weeks.

68 Section 520(a). Limitation on citizen suits against an operator

68 The predecessor to H.R. 2 was amended in the last Congress to provide that a citizen plaintiff could not collaterally attack a permit issued under the act through a suit against a permittee for a violation of the act itself. Under the earlier amendment, suits against the permittee could only be brought for violations of rules, regulations, orders or permits issued under the act but not for a violation of the act itself. Although this was the intent of the earlier version, there was a possible interpretation of subsection(a)(1) that the term "any person" might be construed to allow a suit against an operator for a violation of the act.

68 The committee amendment modifies the operative language to prevent this possibility.

68 Section 520(a). Federal jurisdiction

68 Consistent with the Clean Air Act and other Federal laws, language is included in the committee amendment to establish that the district courts have jurisdiction over suits brought under the act without regard to the amount in controversy or citizenship of the parties.

68 Section 520(b). Notice under oath

68 The committee amendment deletes the requirement that notice to relevant authorities prior to commencement of an action be given under oath.

68 Section 520(d). Attorney's fees

68 The committee amendment authorizes the award of attorney's and expert witness fees to any party to the litigation.

69 Section 520(f). Federal jurisdiction over tort claim

69 The committee amendment deletes subsection (f) of H.R. 2 which established jurisdiction in the Federal courts over action for damages and allowed the awarding of attorney's fees in such cases.

69 Section 521(a)(2). Abatement of violation

69 Although H.R. 2 allows the regulatory authority to order the cessation of a violation that may cause imminent danger to health or safety or the environment, the authority to order the abatement of the violation is not clear. Language inserted in this paragraph is intended to remedy this problem. Similar language is included in section 521(a)(3).

69 Section 521(a)(4). Continuing violations

69 H.R. 2 included authority to issue an order to show cause why the permit should not be revoked in the presence of evidence of willfull or unwarranted violations. The committee amendment modifies with provision so that a cessation order shall be issued upon the finding of three serious violations within a 90-day period.

69 Section 522(a)(6). The designation of "grandfather"

69 Both H.R. 2 and the committee amendment require implementation of a system for designated areas unsuitable for surface coal mining. H.R. 2 "grandfather" existing operations and those for which there were substantial legal and financial commitments prior to September 1, 1974. The applicability of the grandfather to operations where there has been a substantial legal and financial commitment is updated to January 4, 1977 in the committee amendment.

69 Section 522(e). Mining in national forests

69 The committee amendment includes an exception to H.R. 2's prohibition of coal strip mining in national forests. Under the committee amendment, surface coal mining operations may be permitted on national forests lands without significant forest cover west of the 100th meridian if the Secretary determines there are not other specified values incompatible with surface mining and the Secretary of Agriculture determines that surface mining is in compliance with certain specified laws. Surface operations and impacts incident to an underground coal mine are permitted. Surface mining is prohibited within the boundaries of the Custer National Forest.

69 Section 523(c). Federal coal exploration

69 H.R. 2's requirement for a Federal coal exploration program is deleted in the committee amendment as this matter is now covered by the Coal Leasing Act amendments.

69 Section 523(c). Cooperative agreements with the States

69 The committee amendment provides that the Secretary can enter into cooperative agreements with the States to allow the States to enforce the act's requirements over Federal lands or Federal coal provided that the Secretary retains his responsibility to approve or disapprove individual plans and to designate Federal lands unsuitable for mining.

70 Section 526. Judicial review

70 The committee amendment avoids the possible ambiguity of H.R. 2 establishing judicial review in the "appropriate U.S. Court of Appeals". Under the committee amendment, the Secretary's actions national in scope (such as promulgation of general regulations) will be subject to review in the U.S. Court of Appeals for the District of Columbia while actions relating to a particular State's program are appealable to the U.S. Court of Appeals in Circuit in which the State is located.

70 Section 527 - Special bituminous coal mines

70 The committee amendment includes a modification (sec. 527(b)) to possibly allow new mines on properties adjacent to those mines qualifying for the special provisions which may be prescribed under this section.

70 The amendment made the issuance of such special provisions discretionary on the part of the Secretary or regulatory authority. It also requires the Secretary to change the special provisions pertaining to new mines to meet the

full environmental protection purposes of this act if the State weakens its present laws with respect to such mines. These safeguards parallel a similar provision in section 529 pertaining to anthracite mines and are added in order to assure that existing State laws, regulations and decisions are not undercut by the amendment.

70 TITLE VI - DESIGNATION OF LANDS UNSUITABLE FOR NON-COAL MINING

70 No substantial changes.

70 TITLE VII - ADMINISTRATIVE AND MISCELLANEOUS PROVISIONS

70 Section 701(2). "Approximate original contour"

70 The definition of "approximate original contour" is modified in the committee amendment to establish clearly that the concept includes the terrace shaping of the spoil and leaving access roads.

70 Section 702(8). "Expectation of Death or Serious Injury"

70 The committee amendment includes new language in the definition of "imminent danger to the health or safety of the public" to establish a test of reasonable expectation of death or serious injury which is to be applied in the enforcement scheme.

70 Section 704. Harassment of Inspectors

70 This new language makes it a criminal violation to unlawfully resist or impede the performance by the Secretary or his agents in carrying out this act.

70 Section 705. Grants to States

70 The committee amendment authorizes a permanent Federal costsharing program with the State for regulating surface coal mining operations. Such cost-sharing is not to exceed 50 percent of annual program costs depending on the availability of funds and secretarial action. This cost-sharing provision replaced a phased Federal effort declining over 4 years.

71 Section 711. Experimental Practices

71 A number of witnesses indicated that superior land uses would be obtained in contour mining by leaving a highwall and a bench. A small number of specific examples were listed to support this contention. The committee amendment includes modifications of this section to provide for limited exceptions from approximate original contour standard on a case-by-case basis. The Secretary is to approve

each exception.

71 Section 712 - Authorization of Appropriations

71 The committee amendment provides a stipulated level of authorization for the first 3 years and is open-ended thereafter.

71 Section 714. Surface Owner Protection

71 Both H.R. 2 and the committee amendment require that the consent of a certain class of owner of private surface grant their consent to surface mining prior to the leasing of federally owned coal beneath privately owned surface. The committee amendment rewrites this section and deletes H.R. 2's limitations on the amount of compensation that can be paid to obtain such consent.

71 Section 717(a). Authorization for Hydrological Soil Analysis for Small Operations

71 The committee amendment limits the authorization to \$1 0 million as opposed to \$40 million authorized by H.R. 2.

NEED

71 COAL AND OTHER ENERGY RESOURCES

71 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 throughout this century. In 1974, coal contributed only 18 percent of the Nation's energy supply, while petroleum and natural gas combined to produce approximately 76 percent of demand. Hydropower supplied a further 4 percent and nuclear power 2 percent.

71 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 future. 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. As supplies of natural gas and petroleum diminish and their prices escalate, the demand for coal can be expected to increase. Coal will be depended upon to fill a larger and larger proportion of the Nation's energy needs through the year 2000.

71 According to the Bureau of Mines, coal production in 1975 amounted to 654.6 million tons and estimated production for 1976 was more than 671 million tons (tables 1 and 2). Total U.S. consumption was 556 million tons in 1975, while 66 million tons were exported (table 3).

\*3\*  
 TABLE  
 1. -  
 TOTAL  
 U.S.  
 COAL  
 PRODUCTION  
 AND  
 PERCENTAGE  
 BY  
 SURFACE  
 AND  
 MINING

	Total tonnage coal produced (in million short tons)	Percentage produced by surface mining
Year:		
1976	671	55.9
1975	654	55.2
1974	603	54.0
1973	591	49.0
1972	595	48.9
1971	552	50.0
1970	603	43.8
1969	561	43.8
1968	545	36.9
1967	553	36.9
1966	534	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

72 n1 Estimated figures.

72 Source: Bureau of Mines.

\*7\*TABLE 2.  
 - COAL  
 PRODUCTION  
 BY STATE  
 AND BY TYPE  
 OF MINING  
 \*7\*[In

thousands of short tons] State  types	1975 (actual)		1976 (estimated)			All	
	Underground	Surface n1	All types		Undergroun d	All	
			n2			Surface n1	n2
Alabama	7,614	15,029	22,644	7,835	13,555	21,390	
Alaska		766	766		706	706	
Arizona		6,986	6,986		10,242	10,242	
Arkansas		488	488		623	623	
Colorado	3,446	4,773	8,219	3,309	6,119	9,428	
Georgia		74	74		75	75	
Illinois	31,875	27,661	59,537	31,071	26,874	57,944	
Indiana	188	24,936	25,124	432	23,932	24,364	
Iowa	363	259	622	291	289	580	
Kansas		479	479		732	732	
Kentucky:							
Eastern	40,628	46,628	87,257	43,470	45,915	89,385	
Western	25,004	31,353	56,356	24,594	26,221	50,815	
Total							
Kentucky	65,632	77,981	143,613	68,064	72,136	140,200	
Maryland	104	2,502	2,606	234	2,510	2,744	
Missouri		5,638	5,638		5,771	5,771	
Montana		22,054	22,054		26,106	26,106	
New Mexico	764	8,021	8,785	843	8,941	9,784	
North							
Dakota		8,515	8,515		11,199	11,199	
Ohio	15,455	31,315	46,770	16,621	29,872	46,493	
Oklahoma		2,872	2,872		2,952	2,952	
Pennsylvania:							
Anthracite	641	5,562	6,203	600	5,600	6,200	
Bituminous	44,631	39,507	84,137	43,083	40,346	83,429	
Total							
Pennsylvania	45,272	45,069	90,340	43,683	45,946	89,629	
Tennessee	3,806	4,400	8,206	4,373	3,882	8,255	
Texas		11,002	11,002		14,215	14,215	
Utah	6,961		6,961	7,880		7,880	
Virginia	23,181	12,328	35,510	24,620	13,286	37,906	
Washington	13	3,730	3,743		4,087	4,087	
West							
Virginia	88,357	20,926	109,283	86,400	20,621	107,021	
Wyoming	436	23,369	23,804	514	30,360	30,874	
Grand total							
n1	293,467	361,173	654,640	296,170	375,030	671,200	

72 n1 Auger production included in surface because most strip and auger operators report combined production for the 2 types of mining.

72 n2 Data may not add to totals shown because of independent rounding.

73

TABLE 3. -

Annual U.S.  
consumption of  
bituminous  
coal, 1963-76  
\*2\*  
In  
thous  
ands  
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	556,301
	597,000
1976	n1

73 n1 Estimated figures.

73 Source: Bureau of Mines.

#### 73 DISTURBED LANDS

73 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.

73 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. 4 and

5.) The fact that many of these deposits are extremely thick, as compared with those of the Eastern and Midwestern 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.

73 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.

73 "The present concerns about energy, combined with the knowledge about our huge coal reserves make it quite likely that the annual rate of land disturbance will be even greater," the report concludes. (See table No. 6.)

74

\*6\*TABLE 4. -  
SUMMARY OF  
ESTIMATED  
RESERVES OF  
STRIPPABLE  
BITUMINOUS  
COAL IN THE  
UNITED STATES

Region and State (feet:feet)	Remaining strippable reserves	Available strippable reserves	Minimum coal bed thickness (inches)	Maximum overburden thickness (feet)	Economic stripping ratio
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	343	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			

74 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.

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

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

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

75

\*6\*TABLE 5. -  
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 Coal bed 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	22,028	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			

75 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.

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

75 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.

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

76

\*3\*TABLE 6. - 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 Hampshire		
	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

76 Source: U.S. Soil Conservation Service.

#### 76 SURFACE MINING METHODS AND TECHNIQUES

76 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.

77 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 down-hill 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. Traditional Appalachian contour mine is shown in Figure 1. Mountaintop mining is another practice occurring on the steep topography of the Appalachian Mountains.

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. Often the overburden is dumped 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.

77 In recent years, some mountaintop removal operations have caused serious

environmental problems in the Appalachian area. The key cause of these problems

has been the "valley" fill or "head-of-hollow" fill techniques utilized to dispose of excess spoil material. Valley fills require complex engineering to

insure stability of the fill and sound drainage control. Mountaintop removal operations which maintain virtually all the spoil material on the mountaintop avoid such complexities. While design of such operations is site-specific, in

areas which have previously been contour mined, it is quite feasible to keep all

the excess spoil on the mountaintop. This has the added advantage of achieving

reclamation of a previously mined and in many cases unreclaimed abandoned area.

77 Area mining occurs on flat or rolling countryside, 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 can result 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.

77 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 terms "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.

79 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 draglines, wheel excavators and power shovels are preferred (Big Muskie, the world's largest dragline, based near Cumberland, Ohio, weighs 27 million pounds and is capable of moving 325 tons of rock at a time). Overburden removed is also usually the limiting operation in production of coal from surface mines by virtue of the characteristics of the equipment (swing time for shovels or draglines, etc.) and the relative volume of material being handled. 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.

79 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.

79 Both regarding and revegetation must be integrated into the total mining plan of the operator. Some of the most serious offsite 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 on stable spoil areas. In order to achieve this, performance standards relating to environmental protection must be carried on concurrently with the mining operations, except under special circumstances.

79 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 semistationary 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.

79 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.

80 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 offsite effects which threaten downstream areas. The basic concept embodying this principle is returning the mining site to its approximate original contour.

80 Approximate original contour is equally valid when applied to midwestern and western coal surface mining, inasmuch as the concept also 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.

80 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.

#### 80 TIMELINESS OF FEDERAL REGULATIONS

80 Both the Energy Supply and Environmental Coordination Act of 1974 and the Energy Policy and Conservation Act of 1975 have mandated, where possible, the conversion of electric power generating plants to the use of coal. The Federal Energy Administration's conversion program required by these two laws is complemented by the work of the Energy Research and Development Administration

created in the 93d Congress, the ERDA budget for fiscal year 1977 included \$4  
05

million for coal research and development. The Department of Interior has continued its coal programs in both the Bureau of Mines and the U.S.

Geological

Survey and requested \$1 01 million in fiscal year 1977. A large portion of these funds finance 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 that currently have difficulty locating adequate sources of low-sulfur coal conforming to the requirements of Federal air quality standards.

80 These Federal programs signal a widespread commitment to the development and utilization of coal in the Nation's energy future. In addition, the increasing curtailments of natural gas and dependence upon imported oil can be expected to increase the pressure to convert to the use of coal for boiler fuel. The coal industry has responded to this renewed interest with major increases in prices (see table No. 7). The cost of coal used in the generation of electricity has more than doubled from 1973 to 1976, while quantities delivered have increased only 20 percent. These events belie the claim that fluctuations in demand for coal and concomitant price uncertainties make the cost of reclaiming surface mined land economically unacceptable.

#### 81 RESEARCH AND TRAINED TECHNICIANS

81 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 United States, 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.

81 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 nonrenewable resources in the United States; the failure of the United States 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.

\*5\*TABLE 7. -  
COST OF COAL  
VERSUS OTHER  
HYDROCARBON  
ENERGY  
RESOURCES AS  
USED IN THE  
GENERATION OF  
ELECTRICITY,  
OCTOBER  
1973-OCTOBER  
1975

			Average price	Coal prices
as			(cents per	a percentage
of	Quantity	Percent of	million Btu's)	the cost of
	delivered	total Btu's		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
October 1976:				
Coal (thousand tons)	40,100	64.7	86.9	
Oil (thousand barrels)	38,400	17.6	201.1	43.0
Gas (million cubic feet)	233,100	17.7	109.9	79.0

81 Source: Federal Power Commission.

\*6\*TABLE 8. -  
 ESTIMATED  
 INCREMENTAL  
 PRODUCTION  
 COSTS FOR  
 VARIOUS  
 RECLAMATION  
 COSTS

per acre	Costs of reclamation, cents/ton				
	Calculated production per acre	\$1,000 per mined acre	\$2,000 per mined acre	\$3,000 per mined acre	\$3,000 mined
	n1				
Appalachia region:					
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	66,000	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

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

82 n2 Montana entry changed to reflect mining of subbituminous coal in Powder River Basin.

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

82 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.

82 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.

82 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.

82 DATA ON COAL RESERVES AND LEASES

82 Tables presenting following data have been included at the conclusion of this section of the report: Total coal reserves (see table No. 9); Federal coal leases (see table No. 10). Indian coal leases (see table No. 11).

83

\*8\*TABLE  
9. -  
TOTAL  
ESTIMATED  
REMAINING  
MEASURED  
AND  
INDICATED  
COAL  
RESERVES  
OF THE  
UNITED  
STATES AS  
OF JAN.  
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anthracit  
e, and  
semianthr  
acite,  
and 5 ft  
or more  
thick for  
subbitumi  
nous and  
lignite  
beds -  
Million  
tons]  
State

Remaining measured and indicated reserves

State	Remaining measured and indicated reserves					Total - All ranks		
	Measured indicated percent total	Bituminou s	Subbitumi nous	Lignite	Anthracit e semianthr acite	Total	more than 14 in and 3,000 ft overburde n	and as of
Alabama		1,731	0	n(2)	0	1,731	13,444	12.9
Alaska		667	5,345	n(3)	n(4)	6,012	130,087	4.6
Arkansas		313	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	(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
Oklahoma		1,583	0	0	0	1,583	3,195	49.5
Oregon		n(6)	n(6)	0	0	n(6)	332	0
Pennsylva 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
Washington							
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(5)	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

83 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 inches in bed thickness for bituminous and anthracite and 5 ft or more for subbituminous and lignite.

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

83 n3 Small reserves of lignite included with subbituminous reserved.

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

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

83 n6 Data not available to make estimate.

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

\*3\*TABLE 10. - 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	87,103.56
Oregon	3	5,403.18
Utah	194	266,632.49
Washington	2	521.09
Wyoming	89	199,701.04
Total	524	776,756.20

83 Source: U.S. Geological Survey.



West clearly exists since it is not now known what the long-term effect of area mining will be and whether successful revegetation can be achieved.

84 Moreover, the necessity to include regulation of the surface effects of underground coal mining is also apparent to the committee. The Buffalo Creek disaster, in which over 125 people were killed, resulted from the failure of an impoundment constructed from waste from an underground mine. 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.

85 Surface mining of minerals other than coal also present 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. H.R. 2, however does contain 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.

#### 85 FLEXIBILITY

85 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, and establishment of viable vegetative cover 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.

85 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. 2 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.

#### 85 STATE AND FEDERAL LAND PROGRAMS

85 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 18 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. Section 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. Section 503(b).

86 Within 6 months after submission of the State program, the Secretary of Interior must either approve or disapprove it. Section 503(b). In case of disapproval, the State may resubmit its program within 60 days. The Secretary has another 60 days to approve or disapprove the resubmitted State program. Section 503(c).

86 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. Section 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 6 months. Section 504(e). There is no limit placed on the number of times a State may resubmit its State plan under these circumstances.

86 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. Section 504(a). Operators are required to obtain permits 8 months after approval of a State program of implementation of a Federal program. Section 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.

86 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.

86 Except where mining is prohibited under section 522 on 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 6 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 6 months after enactment of this act.

86 The Secretary may enter into an agreement with a State for State regulation of operations on Federal lands under the criteria set out in section 523(c).

86 The committee amendment 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.

87 Assistance to the States for implementing interim programs is provided on

a nonmatching basis (section 712(a)). Additional assistance to the States in developing, administering, and enforcing their State programs has been provided on a matching basis, 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 712(b)) beginning at \$20 million for the first fiscal year and increasing to \$30 million for the next 2 years and such funds as necessary for each fiscal year thereafter are to be available to the Secretary for these and administrative purposes.

87 STATE MINING AND MINERAL RESEARCH INSTITUTES

87 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.

87 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	
		1970	year 1980
1985			
	Metallurgical engineers	900	1,900
	2,700		
	Mining engineers	700	1,400
	2,200		
	Petroleum engineers	5,600	7,300
	9,600		

87 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	
		year	

	1974	1975	1976
1977			
Metallurgical engineers	269	314	285
327			
Mining engineers	388	329	351
412			
Petroleum engineers	395	381	398
547			

88 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 industrywide 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.

88 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 5 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.

88 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 2 years, employing at least four fulltime 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.

88 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."

88 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 6 years. These moneys are to be available by application to the Secretary.

#### 88 CITIZEN PARTICIPATION

88 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 other 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 citizens 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.

89 Major citizen participation provisions are as follows:

#### 89 Regulatory programs

89 (a) Regulations - Ninety days following enactment, the Secretary is to promulgate regulations for the act's interim program after holding at least one public hearing. (Section 501) Within 1 year after enactment the Secretary is to issue regulations covering the full regulatory program and a public hearing must also be held on these regulations as proposed. [Section 501(b)]

89 (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)

#### 89 Permit process

89 (a) Permit approval or denial - Under H.R. 2 prior to submitting an application for a mining permit, the applicant must give notice of intention to submit such application through newspaper advertisements and H.R. 2 required that a hearing be held upon the filing of objections to the application. (Section 513) Under the committee amendment, the regulatory authority may establish an informal conference procedure and a hearing is not required if the objections to the permit are frivolous.

89 (b) Bond release - A public hearing on a proposed bond release is authorized by section 519 but the regulatory authority may establish an informal conference procedure without prejudice to the rights of the objectors.

#### 89 Enforcement

89 (a) During the interim program, upon 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 inspection during the inspection. Under the committee amendment, notice must be given the State prior to such an inspection (section 502(f)).

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

#### 89 Section 520 - Citizen Suits

89 This section permits any person having an interest which is or may be adversely affected to commence a civil action in a U.S. 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. This section does not affect any rights including the right to bring suit or remedies that the person bringing the suit may have under any other law. It is the intent of the committee that the phrase "any person having an interest which is or may be adversely affected" shall be construed to be coterminous with the broadest standing requirements enunciated by the U.S.

Supreme Court.

90 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, order, or permits issued by the Secretary, may bring an action for damages in U.S. district court.

90 Citizen 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 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.

90 The court in issuing any final order may award litigation costs (including reasonable attorneys and expert witness fees) to any party whenever appropriate. This provision is intended to allow the courts to provide the traditional remedy of reasonable counsel fee awards to private citizens who go to court to insure that the act's requirements are being met. The provision will not deter citizens acting as private attorneys general from bringing faith actions to insure the bill is being enforced by the prospect of having to pay their opponent's counsel fees should they lose. It is the committee's intention that this section be construed consistently with the history of similar Federal statutes providing for award of attorneys' fees in citizen suit actions. See Senate Report No. 414, 92d Congress, 2d session, 1972 United States Code Congressional and Administration News 3747 (Water Pollution Control Act Amendments of 1972); Senate Report No. 451, 92d Congress, 2d session, 1972 United States Code Congressional and Administration News 4249-50 (Marine Protection, Research and Sanctuaries Act of 1972).

90 Thus, it is the Committee's intention that this provision be construed consistently with the general principle that an award may be made to a defendant only if the plaintiff has instituted the action solely "to harass or embarrass" the defendant. *United States Steel Corp. v. United States*, 519 F.2d 354, 364, (3d Cir. 1975). If the plaintiff is "motivated by malice and vindictiveness" then the court may award counsel fees to the prevailing defendant. *Carrion v. Yeshiva University*, 535 F.2d 722 (2d Cir. 1976). Thus, if the action is not brought in bad faith, such fees should not be allowed. See *Wright v. Stone Container Corp.*, 524 F.2d 1058 (8th Cir. 1975); see also, *Richardson v. Hotel Corp. of America*, 332 F.Supp. 519 (E.D.La. 1971); affixed without published opinion, 468 F.2d 951 (5th Cir. 1972). This standard will not deter plaintiffs

from seeking relief under these statutes, and yet will prevent their being used for clearly unwarranted harassment purposes.

91 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.

#### ELEMENTS OF MINE REGULATION PROGRAM

##### 91 PERMIT SYSTEM

91 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, thus judgment has often traditionally reflected 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 508 and the criteria for assessing the merits of the application in section 510.

91 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, developmental, 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 offsite residents 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 operational and 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.

91 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.

91 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.

91 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. Postmining 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.

92 If mining is proposed on highly productive prime agricultural lands (prime, unique, and other farmlands as defined by the U.S. Department of Agriculture, Soil Conservation Service, Land Inventory, and Monitoring Memorandum - 3), soil and productivity surveys are required for such lands affected by the mining operation. Since special reclamation requirements pertaining to soil reconstruction, and productivity are stipulated, the application and reclamation plan will have to set forth specific measures to achieve these standards.

92 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.

92 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 or damage 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)).

92 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 off-site impacts to the hydrologic balance of the area affected as well as performing an 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.

92 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.

93 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.

93 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.

93 The Secretary is required to review the basic environmental protection standards of the act and to make those necessary adjustments in the regulations reflecting the inherent difference between surface and underground operations. The Mine Enforcement Safety Administration is to concur in the issuance of such regulations in order to assure full coordination between the Office and MESA and the protection of the health and safety of miners, both on and off the mine site.

93 LAND USE CONSIDERATIONS

93 With few exceptions, surface coal mining operation 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. 2.

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 premining condition, and that such condition will not contribute to environmental deterioration and is consistent with the surrounding landscape.

93 Obviously, the principal performance standards (regarding 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 postmining 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. 2 that will assure the greatest possible minimization of the undesirable consequences of surface mining.

94 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 premining 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 postmining 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.

94 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 land 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.

94 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.

94 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."

95 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 powerplants, 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."

95 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.

95 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 (except in those circumstances set forth in Sec. 522(c) of the committee amendment) or in other special circumstances, that is within 100 feet of public roads, 300 feet of public buildings or churches, or 100 feet of a cemetery.

95 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.

96 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.

96 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 in the early 1970's 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 environment impacts of surface mining is severely limited." (Mathematica, page -.)

96 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 coequal 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.

96 The following is a discussion of the key environmental performance standards of H.R. 2.

96 Return to approximate original contour

96 H.R. 2 requires that the mine site be regraded to the approximate original contour. Moreover, the regrading standard of H.R. 2 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. 2 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.

97 As defined in the bill, approximate original contour means:

97 That surface configuration achieved by backfilling and grading of the mine area so that the reclaimed area, including any terracing or access roads, closely resembles the general surface configuration of the land prior to mining and blends into and complements the draining pattern of the surrounding terrain, with all highwalls and spoil piles eliminated \* \* \*.

97 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 two dimensions of elevation and configuration.

97 CONTOUR MINING

97 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.

97 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 proximate elevation. The swell property of the materials removed (overburden) from the mine site during mining assures this condition with present stripping ratios.

97 Reclamation to the approximate original contour in steep slope mountain contour mines is being accomplished by a number of different mining operators in

several Appalachian States. The committee inspected several such sites, characterized as representative of a broad range of mining practices and operations in such States. Figures 2 and 3 shows how mining and reclamation to the approximate original contour is being carried out in West Virginia. Similarly, Figure 4 shows a site in Pennsylvania which the committee visited on two occasions (January, 1974 and March, 1977). These sites are stable and surface erosion has been successfully controlled through establishing adequate revegetation. In one case, Figure 3, the access roads serve as a barrier to spoil placement being placed or sliding downslope below the mining bench. In the other, Figure 4, the access roads serve a drainage control measure by breaking up the long reclaimed slope. This type of reclamation is possible under a number of different mining approaches such as the "block-cut", "truck or scraper haul back" or variations on such approaches. The basic geometry of the contour mountain mining operation is such that the original points on the landscape, both above and below the mining operation remain thus becoming reference points for regrading.

98 [See Original]

#### 101 MOUNTAINTOP MINING

101 Mountaintop mining is that type of steep slope operation which removes the entire upper strata of the mountain on which the operation is being conducted. This type of mining approach has been increasing in popularity over the past several years as the economics of mining have changed allowing greater or larger stripping ratios (Fig. 5). Mountaintop mining also produces a massive amount of spoil to be handled and stabilized in a very difficult environment of steep slopes and high rainfall. Some approaches have been developed which keep virtually all of the spoil on the mountaintop and most recently have been described in the December 1976, issue of Coal Age. Retention of spoil on the mountaintop bench has advantages over placement of such spoil in valleys and hollows. However, such placement off the mountaintop does offer the possibility of improved land uses through the creation of significantly expanded areas of flat land. H.R. 2 provides some specific standards with respect to the disposal of surplus spoil off the mine bench (sec. 515(b)(11)). Surplus spoil disposal areas must be carefully engineered to avoid instability, drainage control problems, and erosion. Recent field studies for the Environmental Protection Agency have identified problems with some approaches to the disposal of spoil in mountain valleys or hollows. The consultants to EPA concluded that the ultimate stability of spoil disposal technologies being used in the valleys and hollows

of several Appalachian States are unknown. \* Given the size and the complexity of the engineering involved for the disposal areas, specific standards such as the following should be considered:

101 Carefully place durable rock drains through the complete length of the proposed fill area. Shales should be avoided in the construction of such drains because of the danger of weathering of the shales leading to blockage of the drain.

101 Drains must be placed running from all seeps or springs in the fill area to the toe of the fill.

101 Sediment ponds should be placed below the toe of each fill to catch all drainage.

101 Excess spoil material should be placed and compacted in lifts or stair step-like benches insuring that particle alinement will tend to be perpendicular to the typical failure plane. End or side dumping off the upper benches should not be used either to create the bench drain or to handle excess spoil after the drain is constructed.

101 Lifts should be contoured so that all drainage flows off the fill to rip-rapped drainage ways constructed in undisturbed material on either side of the fill.

101 Rock cores from the drainage system should not protrude above the fill mass because they may contribute to erosion of the fill face if the surface of the core becomes silted at the bench-core interface. This malfunction of the water diversion system could cause water to pond on the bench, then flow down the fill face.

101 Woody vegetation removed from the mine or hollow fill area should not be placed in the fill mass because it would endanger the stability of the fill.

101 \* Environmental Assessment of Surface Mining Methods: Head-of-Hollow Full and Mountaintop Removal, interim report. Skelly and Log, consultants, Environmental Protection Agency, Cincinnati, Ohio, March 1977, draft report.

102 [See Original]

103 It should be noted that although the committee amendment groups coal waste disposal and excess spoil placement in the same subsection these disposal

processes should be substantially separate due to different particle and moisture characteristics of the mine wastes.

103 In addition to the above guidelines for spoil area disposal construction, consideration should be given to requiring more extensive monitoring and inspections of such operations, particularly during the period of drain construction. Where such fills will exceed 1 million cubic yards in volume, additional precautions for inspection are a necessity.

103 With careful engineering and particular care taken in the construction of such fills, it should be possible to provide safe, stable spoil storage areas which may have improved land uses.

### 103 AREA TYPE MINING

103 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.

103 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).

103 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 6. 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.

103 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).

103 The first condition is illustrated schematically in Figure 6. 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 percent 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 50 feet of fill material so that it blends into the surrounding environment. This can be accomplished by regarding 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 highways would be pushed down and blended into the slope between the original elevation and the depressed topography of the regarded spoil at the bottom of the mining site.

104 [See Original]

105 H.R. 2 provides treatment for the second special condition, illustrated schematically in figure 6, 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 it 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.

105 These types of operations hold the potential of substantially and permanently disrupting the hydrology of an area. A projection of reconstruction of surface drainage from one such operation is contained in a recent USGS report, "Land and Natural Resource Information and Some Potential Environmental Effects of Surface Mining of Coal in the Gillette area of Wyoming" (Circular 743). This projection clearly shows that reestablishment of through drainage will not automatically occur with this type of reclamation and thus adjustments

to site selection may be required.

#### 105 PRIME AGRICULTURAL LANDS

105 Prime agricultural lands are those available for growing crops which have the soil quality, growing season, and moisture supply needed to produce sustained high yields economically when treated and managed according to modern farming methods. Such lands can be farmed intensively with minimum adverse environmental impacts, lower energy and economic inputs, and higher yields than nonprime lands. To qualify as prime agricultural land, land must meet specific criteria established in 1975 by the Soil Conservation Service (mentioned above) for moisture supply, water table, flooding, soil temperature, permeability, acidity, alkalinity, salinity, stoniness, and erosion hazard. The basic information needed to classify lands as prime or nonprime lands is contained in soil surveys which are available on over 60 percent of the Nation.

105 In 1975, the Soil Conservation Service conducted a potential cropland study that included a survey of the Nation's prime agricultural lands. From that study, it is estimated that the Nation has 384 million acres that meet the criteria for prime lands and that have not been converted permanently to other uses. Two-hundred and fifty million acres are currently cropped, but of the remainder, 86 million are in ownerships, parcel sizes, or locations that make it doubtful if they will ever be farmed. There is about 24 million acres that could be converted to cropland very easily. Another 15 million acres have high potential for conservation, but have some development problems. Most of these 48 million acres (134 minus 86) are currently used for pasture or range.

106 The same study indicated that the Nation's prime lands are being converted to other uses at the rate of about 1 million acres annually. Urban and builtup development takes most of this land, as many types of development are drawn to the good soils and topography that characterize prime farmland. Recognizing that mining is only a temporary use of the land, it appeared especially important to require restoration of their productivity levels as part of the mining and reclamation process. These standards are covered in section 515 and 519 of the committee amendment.

#### 106 REVEGETATION

106 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.

106 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.

106 In recognition of such factors, H.R. 2 sets forth the following criteria:

106 (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 selfregeneration;

106 (2) The reestablished plant species should have the same seasonal characteristics of growth and productivity as the original in order that more permanent long-term agricultural and fish and wildlife activities can be sustained;

106 (3) 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

106 (4) 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 postmining 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 premining background levels.

106 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.

107 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 premining planning as a prerequisite to success:

107 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.)

107 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)

107 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)

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

107 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.

108 In any event, revegetation of mine sites in arid and semiarid 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:

108 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.

108 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.

108 With the introduction of irrigation techniques, the time period required for reclamation in arid and semiarid areas decrease 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.

108 The differential time limits for revegetation responsibility of H.R. 2 is based on the average annual precipitation isopleth demarcating the coal fields in the arid and semiarid 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 semiarid areas and such regions in humid areas.

109 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 semiarid 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.

109 The time limit set for revegetation responsibility in the more humid areas (over 26 inches of precipitation) was set at 5 years. This provides sufficient time for the revegetation to prove establishment and regeneration. For instance, "on the average, 4 years elapsed - after mining - before mine sites are adequately and totally reclaimed in accordance with (Kentucky) regulations (Mathematica, page I-54).

109 The committee recognizes that in some areas and under some conditions, intensive commercial agricultural activity such as row crop cultivation are suitable, postmining land uses. In those instance where long-term intensive agricultural activities are approved as a postmining land use, the period of vegetation 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.

109 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.

#### ELEMENTS OF A MINE REGULATION PROGRAM

##### MINING IMPACTS ON HYDROLOGIC BALANCE

109 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 between the recharge and discharge of water to and from that system. Some of the measurable indicators or 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 runoff 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.

110 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.

110 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

dewatered. 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.

110 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 semiarid areas and of effects of mining in humid areas.

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

110 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.

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

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

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

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

111 EPA: Alluvial Valley Floors in East-Central Montana and Their Relation to Strippable Coal; Jack Schmidt; Environmental Protection Agency; Denver, Colo., January 1977.

111 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).

111 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 nonmined sub-basins cease flowing." (Tradewater, page 60).

111 In arid and semiarid settings, mining alters drainage patterns which can "result in a decrease in storm runoff 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 aggregated features of Western streams, which can result in a loss of water to both the surrounding lands and downstream areas (Cheyenne, page 168).

111 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.

111 In Appalachian mountain mining areas, the dissolved solid content of streams has been measured and found to be 12 times greater than that in nonmined 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 1,400 tons per square mile - a pollution load increase of 126 times that of unmined areas (Beaver Creek, page C-2).

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

111 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.

111 In some arid and semiarid 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 99% of the time) and there is adequate capacity for dilution (Decker, page 12).

112 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.

112 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 1,000 times greater than yields from nonmined 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).

112 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.

112 While the processes of sedimentation in the arid and semiarid 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 semiarid coal areas since the erosional balance of stream valleys is more fragile.

112 Substantial surface mining in the arid and semiarid 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 (for example, 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 in further 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.

112 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).

113 The purpose of the hydrologic balance provisions of H.R. 2 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.

113 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.

113 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.

#### 113 APPLICATION FOR MINING

113 H.R. 2 requires that the operator make a determination of the probable 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.

113 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.

#### 113 PERMIT APPROVAL AND DENIAL

113 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.

113 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 -

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

114 (2) lands that the regulatory authority finds that any interruption, discontinuation or prevention of farming will be of such small acreage as to be on negligible impact on the agricultural or livestock production within the affected alluvial valley floor; or

114 (3) operations which in the year preceding enactment of this act (a) were located within or adjacent to alluvial valley floors and produced coal in commercial quantities, and (b) had obtained specific permit approval prior to January 4, 1977 by the State regulatory authority to conduct surface coal mining operations within said alluvial valley floors, or (c) for which substantial financial and legal commitments as determined by the Secretary had been made prior to January 4, 1977.

#### 114 ENVIRONMENTAL STANDARDS

114 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.

114 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.

114 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.

114 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 Co. This mine is located in the Hanaford Green drainage, south of Centralia, Wash. The general geographic characteristics of this area are common to other coal areas. Precipitation averages 45 to 50 inches annually, winter stream flows reach 500 cfs, and summer stream flows can be as low as 2 cfs, background turbidity of natural streamflows during the rainy season is 25-25 Jackson Turbidity Units (JTU's), the terrain is a rolling topography with steep slopes, and the overburden is of a fine-grained and highly erodible 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.

115 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 two-stage 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 (25-25 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

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

115 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.

115 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.

115 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.

115 After regrading 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 regrading standard of approximate original contour allows for the surficial shaping of the regraded 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.

116 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 watercourse 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 insure compliance with applicable local, State, or Federal water quality requirements.

116 Avoidance of channel deepening and enlargement is also required for those operations requiring discharge of water. This is particularly important in the arid and semiarid 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 semiarid 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.

116 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 and recharge potential of the site. It is anticipated that in those mining operations which singularly or in combination would mine 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.

#### 116 ALLUVIAL VALLEY FLOORS

116 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. (Fig. 7.) In

117 [See Original]

117 FIGURE 7. - Caballo Creek, Campbell County, Wyo., as seen looking downstream to the storage silos of the Belle Ayr Mine. In the foreground, tall grasses grow in the flood plain, and hay is harvested in the middle distance from a low terrace of the alluvial valley floor. Mining is advancing into this area and has resulted in 5 feet of lowering of the alluvial aquifer, as observed at the well in the left foreground. This picture is one of a series presented to the Committee during hearings showing characteristics of alluvial valley floors in the west.

117 Photo by H. E. Malde, Aug. 5, 1976.

118 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:

118 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.

118 H.R. 2 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 land 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 vegetation 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.

118 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.

118 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. 2 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 intergral 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.

119 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 then transferred on to 42 separate 7 1/3 minute SUGS 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.

119 Similarly, a reconnaissance study of alluvial valley floors in east central Montana sponsored by the Environmental Protection Agency (EPA found that small percentages of strippable coal underlie the valley floors and extensive coal reserves underlie upland areas and small tributary streams. Valley floors serve important role in the local economy and are the most productive lands of the region since they are primarily high-quality sources of range forests and also provide for harvestable hay crops. The study showed that of the total estimated 7.6 billion metric tons coal reserve, only 131 to 195 million metric tons are located under alluvial valley floors and all related alluvial deposits representing only 2 and 3 percent of the coal reserves of the area

respectively. (EPA: table 3, 5, and 6.)

120 As is discussed in the introduction to this report, this work has been supplemented by additional analysis by the USGS 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.

#### 120 MONITORING HYDROLOGIC IMPACTS

120 H.R. 2 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.

120 Monitoring of mining and reclamation operations which transects a recharge area for a spring, well or other source of water used for domestic, agricultural or commercial or which otherwise may affect offsite ground or surface water flow is an exemplary type of operation where such activities should take place.

120 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.

#### 120 STEEP SLOPE MINING

120 Surface coal mining on steep slopes requires special environmental protection provisions since such operations present special environmental

hazards. The provisions of H.R. 2 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.

121 Based on available landside and mining operation data, the committee defined steep slopes as those slopes of 20 degrees or less with the recognition that it might be desirable for regulatory authorities to include lesser slopes based on specific geologic conditions, climate and other factors.

121 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 (1975) 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:

121 [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.

121 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, more than one-third of major violations including, for instance: exceeding bench width, operating off permit area, dumping excessive material over the outslope, and lack of drainage controls.

122

TABLE 7. - Percentage of official State inspections in which 1 or more violations found and recorded in eastern Kentucky strip mine operations, 1971

Mining method:

Conventional contour	43
50	
Par	
all	
el	
slo	
pe	
fil	
Slope reduction	1
34	
Head of hollow fill	49
Pit storage of spoil	41

Mountaintop removal

47

Mountain auger

42

122 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.

122 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 placement of spoil may be necessary in locations other than the mine workings and thus identified some environmental safeguards pertaining to surplus spoil disposal. Such spoil areas are those discussed under mountaintop mining.

122 It should be noted that other options are available to the operator for the disposal of surplus spoil from such operations 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 minesites 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.

#### 122 ECONOMICS AND PRACTICALITY

122 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, N.J.) and Ford, Bacon & Davis (New York, N.Y.). 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 coalfields since regional applicability was one

of the purposes of the study.

122 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:

123 [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 mountaintops 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 outcrops, and exposed highwall degrade esthetic values immediately following mining, at least.

123 The study concludes that:

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

123 This conclusion is expanded in the text:

123 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).

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

123 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.

123 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.

124 These conclusions are further substantiated by recently completed work in Campbell County, Tenn., 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 onsite 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. (Cong.Rec., Dec. 18, 1974, S. 22069.)

#### 124 MOUNTAINTOP MINING

124 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 coalfields, 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.

124 The mining application process and environmental standards allow the regrading and spoil placement requirements for mountaintop mining in order to achieve postmining land uses including industrial, commercial, agricultural, residential, or public facility (including recreational facilities) development. The bill provides that such proposed uses of land must be reasonable and capable of being met with respect to public and private investments if any are required. 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 and the initial guidelines are provided in section 515(b) (11). 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.

124 The committee felt that these planning and fill placement requirements were reasonable since:

124 (1) The utility of a flat landsite on a mountaintop for developed uses 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.

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

#### ELEMENTS OF A MINE REGULATION PROGRAM

##### 125 SURFACE DISPOSAL OF MINE WASTES FROM PROCESSING PLANTS

125 With respect to surface disposal of mine wastes in dry wastebanks (not in embankments or impoundments), H.R. 2 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.

125 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.

125 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. 2 gives the Army Corps of Engineers a role in determining the standards for construction, modification and abandonment of these impoundments.

125 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.

125 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, et cetera, 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.

#### 125 SURFACE IMPACTS OF UNDERGROUND MINES

125 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.

126 Subsidence control. Underground coal mining across the country has resulted in creating large areas of land which are subject to surface

subsidence. The areas range from intensively developed cities such as Wilkes-Barre and Scranton, Pa., and Rock Springs, Wyo., 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 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:

126 (1) leaving sufficient original mineral for support;

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

126 (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.

126 (4) Backstowing or returning mine wastes underground to provide some measure of direct roof support and shoring up pillars left for support provided that such operations are consistent with assuring the health and safety of miners.

126 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.

127 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 eight 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 percent of the sources, yet produce 88 percent of acid drainage. Surface mines produce the rest. However, active underground mines are proportionately the greatest pollution source since they represent only 5 percent of all mines, yet produce 19 percent overall acid drainage.

127 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, section 516(b)(9), are intended to meet the problem of continuing pollutional discharges after mining has ceased.

#### 127 SPECIAL BITUMINOUS COAL MINES

127 For some special and very narrowly defined mining situations occurring West of the 100th meridian west longitude, the committee provided discretionary authority 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 might be applicable to other adjacent mines which have the same unusual characteristics of the "big pit" at Kemmerer.

127 This 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.

127 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 except as provided in the act (sec. 527(b)). However the application of these provisions to new mines is carefully constrained in order to prevent undercutting existing State law, regulations or decision. If such existing factors are weakened, thus the Secretary is directed to issue additional regulations to reestablish the environmental protection standard. This applies even in those same settings where existing pits be determined eligible for the adjustments addressed here in section 527. In other words, only specific pits, not entire operations which may cover thousands of acres, are eligible under section 527.

#### 128 COAL ACCESS AND HAUL ROADS

128 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 may be 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.

128 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 postmining intensive land-use development since they provide a reasonable basis for the postmining maintenance and use. In such instances, a measure of assurance as to their continuing maintenance is required as part of the mining application.

128 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. ENFORCEMENT

128 H.R. 2 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.

#### 129 INSPECTIONS AND ENFORCEMENT: FEDERAL-STATE RELATIONSHIP

129 Efficient enforcement is central to the success for the surface mining control program contemplated by H.R. 2. 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.

129 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.

129 Under the committee amendment, partial inspections must occur on an irregular basis averaging not less than one inspection per month. One complete

inspection must occur each calendar quarter. 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.

129 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.

129 I. Cessation order (section 512(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 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. Under the committee amendment, where a cessation order will not completely abate the hazardous condition, the inspector is required to order the operator to correct the situation. 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.

130 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.

130 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 521(a)(2) to violations of the specific reclamation standards or the permit. Instead any condition or practice giving rise to imminent danger or environmental harm is sufficient to invoke the authority.

130 II. Notice of violation (section 521(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 90 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.

130 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.

130 III. Show cause order (section 521(a)(4)). - Under the Committee Amendment where a Federal inspector finds three serious violations within 90 days of each other, he is to issue a cessation order. Upon the issuance of three cessation orders, an order to show cause why the permit shall not be suspended or revoked shall issue. Further action on the show cause order is subject to the provisions of section 525(d).

130 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.

130 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.

#### 130 ADMINISTRATIVE REVIEW

130 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.

131 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 60 days following the completion of the hearing as to whether or not to suspend or revoke the permit.

131 Section 525(e) provides for the award of costs, including attorneys' and expert witness fees, in the discretion of the Secretary. This section gives the Secretary authority to award attorneys' fees to compensate participants in the administrative process. The subsection does not require that the proceedings result in the finding of a violation nor does the fact that the Government was a party in an adjudicatory proceeding, or had caused the proceeding to be initiated prevent an award under the terms of the subsection. It is the committee's intention that this subsection not be interpreted or applied in a manner that would discourage good faith actions on the part of interested citizens.

#### 131 PENALTIES

131 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. Section 518(i) 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.

#### 131 ROLE OF THE SECRETARY OF THE INTERIOR

131 The administration and enforcement of all Federal provisions contained in the act are the responsibility of the Secretary of the Interior.

132 More specifically, in title II an Office of Surface Mining Reclamation and Enforcement is created within the Department of the 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.

132 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.

132 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 provide to the Secretary by any individual - and to insure 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.

132 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.

132 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 deposited 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.

132 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.

132 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.

#### 133 DESIGNATION OF NONCOAL MINE LANDS

133 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. 2, 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.

133 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(4), 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 private owned surface.

133 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.

133 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.

#### 133 INDIAN LANDS PROGRAM

133 The committee approved, without amendment, the Indian Lands Section of H.R. 2 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 710 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.

#### 134 REHABILITATION OF ABANDONED MINE LANDS

134 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.

134 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.

134 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.

134 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 ruining the domestic water supplies. The widespread use of cheap and powerful explosives to loosen and break 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 wells.

134 Contour surface mining has created thousands of miles of unstable outcrops 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.

135 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 and later the large thermal plants for the generation of electricity. The cost of rehabilitation is estimated at \$7

billion to \$10 billion.

135 In all, it is estimated that 1 1/2 million 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.

135 Estimates of program costs for correcting these problems have been made by several Federal agencies during the past 4 years total nearly \$10 billion and are summarized as follows:

*2*Cost estimates	
Environmental impact:	Millions
1. Stabilization, reshaping and revegetation of strip mined lands	\$2,040
2. Controlilng 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	2 220
4. Control of subsidence under urbanized areas	1,000
5. Extinguishment of underground and outcrop mine fires	50
Total	9,910

135 These estimates provide a basis for identifying the order of magnitude of funds required to correct these problems.

135 In 1974 the Corps of Engineers developed a program to rehabilitate a small area, Cabin Creek, W.Va. Cabin Creek is a short 10-mile tributary to the Kanawha River near Charleston, W.Va. The corps has designed a program for basic rehabilitation which provides for:

135 One, erosion and sediment control by stabilization of strip mines and coal refuse banks;

135 Two, flood control needed due to sediment-filled streams through clearing stream channels; and

135 Three, 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

135 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.

135 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 coalfields.

136 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.

#### 136 ABANDONED MINE RECLAMATION PROGRAM

136 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.

136 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.

136 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.

#### 136 RECLAMATION FEE AND FUND

136 The committee decided to establish a fund for a period of 15 years based on a reclamation fee in order to assure the availability of moneys for program purposes. The release of moneys 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.

136 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 cents 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 3 years after imposing a fee of 30 cents 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.

137 Several principal considerations form the basis for the title IV reclamation fee:

137 First, to set the fee at such a level that it is not a burden on the industry;

137 Second, to provide at the same time sufficient funds for meeting program objectives within a reasonable timeframe; and

137 Third, to structure the fee so it would not exert an inflationary influence in the economy.

137 A differential fee was established, at 35 cents per ton for surface mined coal and 15 cents 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 cents 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 cents, 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.

137 It is estimated that the reclamation fee adopted by the committee would yield approximately \$140- \$1 60 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 cents per kWh of electricity. The consumer is utilizing 250 kWh per month, this represents an increase of 4 cents per month on his utility bill. The committee does not consider this small increase a burden on current coal consumers or inflationary in nature.

#### 137 RURAL LANDS PROGRAM

137 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 moneys accruing to the fund in any 1 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.

137 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.

138 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.

138 Thus, the higher the expected post-mining income flow, the smaller the Federal cost share. It would 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.

138 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 soil conservation districts since these local organizations are the grass roots counterpart of the Soil Conservation Service and its members in many instances will be doing the actual reclamation work.

138 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.

138 DEPARTMENT OF THE INTERIOR PROGRAM

138 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.

138 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.

138 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 in those instances when the reclamation results in significant increases in the property value. In making such a determination of "significant in property value", the Secretary shall compare the value of the land in its unreclaimed condition to that estimated value after reclamation. 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 principal 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 esthetic impacts. The Secretary of Interior has in some instances under the Appalachian reclamation program - pursuant to section 205, Public Law 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.

139 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.

139 Specific provision is also made for the Secretary of Interior to transfer such reclaimed lands that are located within or adjacent to the boundaries of national forests and other Federal preserves to the managing Federal agency. This should help in the overmanagement of such resources.

139 In addition, the Secretary of Interior is authorized to include in reclamation projects resulting in public outdoor recreation facilities such ancillary facilities - access roads, boat ramps, small dams, water and

sanitation - required for the use of the public.

#### 139 STATE RECLAMATION PROGRAM

139 States are authorized to develop mined land reclamation program for eligible lands and submit them to the Secretary for approval. The Secretary is authorized to fund reclamation projects under approved State programs by making grants to the State. In developing State programs certain criteria must be met including full reflection of the program criteria in title 4.

#### 139 COOPERATION WITH OTHER FEDERAL AGENCIES

139 The Secretary is authorized to make grants to other Federal agencies to carry out the reclamation program. Committee hearings identified the need to reclaim lands upstream of major water resource investment in order to help preserve their useful life and function. Such reclamation projects should rank high on the scale of needs to be met through this program. In addition, the Secretary may want to consider further multiple use of the reclamation program by coordinating and supporting efforts to train manpower in land and resource conservation work which would involve the reclamation of mined lands.

#### 140 ELIGIBLE LANDS

140 Eligible lands for reclamation program activities as stipulated in section 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.

#### COMMITTEE ACTION

##### 140 LEGISLATIVE HISTORY

140 As has been discussed in this report, H.R. 2 is based on the previously passed-but-vetoed strip mining bills of the 93d and the 94th Congresses. The legislative history of H.R. 2 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, 93d Congress - 2d Session (December 5, 1974); H.R. 9725, the Surface Mining Control and Reclamation Act of 1976, Report No. 94-896, 94th Congress - 1st Session and H.R. 13950, the Surface Mining Control and Reclamation Act of 1976, Report No. 94-1445, 94th Congress, 2d Session.

##### 140 HISTORY OF S. 425 IN THE 93RD CONGRESS

140 Hearings:

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

140 Serial No. 93-11.

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

140 Committee action:

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

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

140 Floor ction:

140 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.

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

140 Conference: Conference - after 18 meetings - agreed Dec. 3, 1974. H.Rept. 93-1522.

140 Action on conference report:

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

140 Passed House Dec. 13, 1974.

140 Passed Senate Dec. 16, 1974.

140 Presidential action: S. 425 vetoed Dec. 30, 1974.

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

141 Committee action:

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

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

141 Floor action:

141 House - Floor debate March 14, 17, and 18, 1975, passed on March 18, 1975.

141 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.

141 Conference:

141 Conference report filed the House May 2, 1975. No. 94-189.

141 Senate agreed to conference report May 5, 1975.

141 House agreed to conference report May 7, 1975.

141 Presidential action: H.R. 25 vetoed May 20, 1975.

141 House sustained veto June 10, 1975.

141 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.

141 HISTORY OF H.R. 13950 IN THE 94TH CONGRESS

141 Committee action:

141 House - Reported H.R. 13950 August 31, 1976. H.Rept. 94-1445.

141 RELATION OF H.R. 2 TO OTHER LAWS

141 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.

141 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.

141 The implementation of this act, though, has been directed at the protection of the miner while on the site of the mining operation.

141 In several instances, H.R. 2 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 minesite. 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 that act.

141 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. 2 with those under the Coal Mine Health and Safety Act of 1969.

141 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.

142 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 insure 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 insure 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 insure 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.

142 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.

142 CONGRESSIONAL BUDGET OFFICE, U.S. CONGRESS, Washington, D.C., April 20, 1977.

142 Hon. MORRIS K. UDALL, Chairman, Committee on Interior and Insular Affairs, U.S. House of Representatives, Washington, D.C.

142 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. 2, the Surface Mining Control and Reclamation Act of 1977.

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

142 Sincerely,

142 ALICE M. RIVLIN, Director.

142 CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

142 APRIL 20, 1977.

142 1. Bill number: H.R. 2.

142 2. Bill title: Surface Mining Control and Reclamation Act of 1977.

143 3. Status of bill: As reported by the House Committee on Interior and Insular Affairs.

143 4. 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 authorize some funding of State Mining and Mineral Resources and Research Institutes. In addition, an Abandoned Mine Reclamation Fund would be established and initially funded. Finally, the bill would authorize funds to stimulate and support research and demonstration efforts in coal mining technology and funds for specified indepth studies of mining conditions and techniques. This is an authorization bill which requires appropriations action.

143 5. Cost estimate:

in millions of dollars]		Fiscal year -		
1981	1977 1982	1978	1979	1990
Authorization level		96.8	110.5	
115.0				
108.5	112.1			
Estimated net costs:				
Added costs	2.0	170.6	221.9	
270.9				
328.6	347.3			
Less additional revenue		313.0	226.0	
240.0				
250.0	270.0			
Estimated net cost	2.0	-142.4	-4.1	
30.9				
78.6	77.3			

143 The costs of this bill fall within function 300.

143 6. Basis of Estimate: Section 301, State institute grants. - This section would authorize appropriations to assist participating states in the support of mining and mineral resources research institutions. Authorization levels were estimated based on the assumption that twenty-five states would

qualify. The costs (i.e., outlays) from each year's authorization were spread over two years, using a spendout 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.

Fiscal year 1978:	Millions
Authorization	\$5.0
Costs	3.4
Fiscal year 1979:	
Authorization	7.5
Costs	6.7
Fiscal year 1980:	
Authorization	10.0
Costs	9.2
Fiscal year 1981:	
Authorization	10.0
Costs	10.0
Fiscal year 1982:	
Authorization	10.0
Costs	10.0

143 Section 302, Research Funds. - This section would authorize grants to research institutions to encourage and fund research and demonstration projects. The authorization levels are specified in the bill, and outlays were projected using historical disbursement rates of similar programs in water research and technology.

144

Fiscal year 1978:	millions
Authorization	\$1 5.0
Costs	6.8
Fiscal year 1979:	
Authorization	17.0
Costs	11.4
Fiscal year 1980:	
Authorization	19.0
Costs	15.8
Fiscal year 1981:	
Authorization	21.0
Costs	19.1
Fiscal year 1982:	
Authorization	23.0
Costs	21.1

144 Section 306, Printing and Publishing. - The annual authorization level for printing and publishing expenses is specified in the bill at \$1 million per year, and funds are expected to be spent entirely in the year appropriated.

144 Section 307, Cataloging Center. - It is estimated that the Cataloging Center would cost approximately \$750,000 in its first year of operation, and about \$5 00,000 a year thereafter, increased annually for inflation.

144 Section 309, Advisory Committee. - It is estimated that pay and expenses for the advisory committee will total approximately \$5,000 per year.

144 Title IV, Abandoned Mine Reclamation Fund. - The primary revenue source assumed for the Abandoned Mine Reclamation Fund is the reclamation fee levied on coal production of 35~ per ton of surface coal and 15~ per ton of underground coal. Lignite fees were assumed to be 25~ per ton. While these reclamation fees will accrue in fiscal year 1977, the actual collection will begin in fiscal year 1978. Other possible sources of revenue are not likely to be of significance in the five-year time frame of this cost estimate - these sources are the sale, lease or rental of reclaimed land, and user charges collected for land usage. It should be noted, though, that the Federal government may eventually sell the reclaimed land acquired under Title IV at not less than fair market value.

144 The disbursement of the funds collected is specified under certain sections of Title IV. For this estimate, twenty percent of the fund is assumed to be transferred to the Department of Agriculture for the rural lands program. This transfer will most likely take place immediately, since the necessary infrastructure to carry out such a program already exists at the Department of Agriculture. The fund is also intended to provide assistance to small mine operations in their permit application process in an amount not to exceed \$1 0 mililon each fiscal year. In addition, fifty percent of the funds collected in each state are assumed to be reserved for expenditure in that state. Because of the time required for the development and approval of state plans, funds for this purpose are assumed to be appropriated beginning in fiscal year 1980. The remaining funds are assumed to be used for administration and collection costs (beginning in fiscal year 1978), and the acquisition and reclamation programs specified in Section 406 (beginning in fiscal year 1978). In addition, there would be an estimated \$1 million in administrative costs in fiscal year 1977 to initiate the process of collecting the reclamation fees.

145 It should be noted that the Bureau of Mines has estimated the total cost of reclaiming mined areas at over \$2 4 billion. This figure includes costs for

reclamation of abandoned lands, subsidence, waste banks, waste bank fires, mine fires and acid mine drainage. A lower figure is the estimated cost of \$2 .3 billion for reclaiming abandoned mines alone. Therefore, while the fund is projected to show a net income during the initial years of the program, costs are likely to exceed income in later years.

\*7\*[In millions of dollars]

	Fiscal year -				
	1977	1978	1979	1980	1981
1982					
Title IV:					
Estimated revenues		313	226	240	250
270					
Estimated costs:					
Small mine permitting assistance		10	10	10	10
10					
Transferred to Department of Agriculture (sec. 405)		63	45	48	50
54					
Reserved for State of origin (secs. 404 and 407)				50	106
113					
Acquisition and reclamation (sec. 406)		25	53	57	60
63					
Administration and collection	1	3	3	4	4
4					
Estimated net cost, title IV	1	-212	-115	-71	-20
26					

145 Section 708, 709, Studies. - These sections would authorize the Secretary of the Interior through the Council on Environmental Quality to contract with the National Academy of Sciences for studies of mining techniques in Alaska and of current mining technology. A total of \$7 50,000 would be authorized for these studies, and outlays were projected using historical disbursement rates based on similar planning and development programs.

145 Section 712(a) Initial Regulatory Procedures. - This section would authorize funds for salaries and operating expenses of the Office of Surface Mining Reclamation and Enforcement for the initial regulatory period. The authorization level is stated in the bill, and outlays were projected using historical rates for administrative costs. It is estimated that there will be approximately \$1 million in administrative costs in FY 1977 to initiate the program and promulgate the regulations.

Fiscal year 1977:	Millions
Authorization	0.
Costs	\$1.0
Fiscal year 1978:	
Authorization	10.0
Costs	9.0
Fiscal year 1979:	
Authorization	10.0

Costs	10.0
Fiscal year 1980:	
Authorization	10.0
Costs	10.0
Fiscal year 1981:	
Authorization	0.0
Costs	1.0
Fiscal year 1982:	
Authorization	0.
Costs	0.

146 Section 712(b). - Section 712(b) limits the funds to be appropriated for Section 507(c), the small mine permitting assistance, to \$1 0 million per fiscal year. (This cost is shown above, under funds from the Abandoned Mine Reclamation Fund.) However, Section 507(c) requires that the regulatory authority assume the cost of hydroelectric assessments and core sample analysis for mine operators producing under 100,000 tons a year. The number of mine operators that qualify for this assistance is not known at this time. However, an estimate can be made by using Bureau of Mines data of mines producing under 100,000 tons a year and estimating the percent of such mines that are not part of a larger subsidiary corporation. The number of mines producing under 100,000 tons a year was estimated to be 5,094, which includes all strip, underground and auger mines in 1975 according to the Bureau of Mines. The percent of these mines not jointly owned is assumed to be 40 percent. Using \$2 8,500 as the average cost for performing these hydrologic assessment and core sampling gives an estimate of \$58 million. The range of this estimate could vary from \$4 3 million to \$7 3 million, depending on the percent of jointly owned mines. In any case, it is unlikely that the \$1 0 million authorized will be sufficient to cover the costs incurred under Section 507(c).

146 Section 712(c), Grants to the States. - This section would provide funds for assistance to states in developing, administering and enforcing state programs for four fiscal years. These Federal funds must be matched on a 50-50 basis with state funds. The authorization level is specified in the bill through FY 1980, and the FY 1981

and 1982 levels were estimated based on the FY 1980 amount adjusted for inflation. Outlays were projected using an historical disbursement rate for similar programs.

Fiscal year 1978:	
Authorization	\$20.0
Costs	18.0
Fiscal year 1979:	
Authorization	30.0
Costs	30.0
Fiscal year 1980:	
Authorization	30.0
Costs	30.0
Fiscal year 1981:	
Authorization	31.5
Costs	31.5
Fiscal year 1982:	
Authorization	33.3
Costs	33.1

146 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.

147

Fiscal year 1978:	Millions
Authorization	\$35.0
Costs	21.0
Fiscal year 1979:	
Authorization	35.0
Costs	31.5
Fiscal year 1980:	
Authorization	35.0
Costs	35.0
Fiscal year 1981:	
Authorization	35.0
Costs	35.0
Fiscal year 1982:	
Authorization	35.0
Costs	35.0

147 Revenue Loss. - The reclamation fees, \$. 35/ton of surface mined coal and \$. 15/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 FY 1978, increasing to less than \$400,000 in FY 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.

147 7. Estimate comparison: None.

147 8. Previous CBO estimate: On August 13, 1976, CBO prepared a cost estimate for a similar bill in the 94th Congress, H.R. 13950.

147 9. Estimate prepared by: Leslie Wilson.

147 10. Estimate approved by:

147 ROBERT A. SUNSHINE, (For James L. Blum, Assistant Director for Budget Analysis).

#### 147 INFLATION IMPACT

147 Pursuant to clause 2(1)(4), Rule XI, of the House of Representatives, the committee estimates that enactment of H.R. 2 will have virtually no inflationary impact on the American economy. During the 94th Congress, the Library of Congress prepared an analysis of possible inflationary impacts of surface mining legislation. This study concluded that the Federal expenditures authorized under surface mining and reclamation legislation, even if all expenditures are assumed to have an inflationary effect, would cause a 0.0026-percent upward trend per year, which is an insignificant amount.

148 The Library of Congress study addressed H.R. 25, legislation passed by the Congress in May 1975, and the findings of this analysis are still relevant. The price of coal has risen 36 percent in the intervening period, while the reclamation fee has remained constant; therefore, the potential inflationary effect of the legislation has become even less than originally estimated.

148 The Library of Congress analysis discussed the two economic considerations that could be influenced by a reclamation fee: The fiscal burden on the Federal budget of such a program and the cost of reclamation to both the

producers of coal and the consumers. The report estimated that the public spending for the reclamation programs could vary from \$80 million to \$1 80 million, a minute proportion of the Federal budget. The report stressed that the great increases in the cost of living experienced in the last decade have not been caused by the addition of such small financial obligations, but by large and unplanned for expansions of the Federal Government's responsibilities.

The report stated that even if measuring the fiscal impact of any proposed expenditures by the Government's ability to pay for a program out of current revenues, a reclamation program is simply too small to affect the fiscal standing of the Federal Government.

148 The Library of Congress study then analyzed the costs of reclamation to both producers and consumers of coal. These costs arise from the reclamation fund fee and expenditures associated with meeting reclamation standards and establishing the necessary regulatory machinery, including performance bonds that are refundable upon satisfactory compliance with the standards. Although these costs cannot be precisely quantified, they can be measured against coal prices now and projected prices. The Library's examination showed reclamation costs to be small when compared with market prices that have "registered dramatic gains that are mainly unrelated to increased costs, reclamation or otherwise." Inflation occurs when a price increase is so substantial and so sudden that it cannot be offset by adjustments in other portions of the market. The inflation caused by the rise in the price of petroleum and agricultural products are good recent examples of this. Increases in the prices of one commodity are often mitigated by decreases in others. For example, prices were stable in the 1950's and early 1960's, even though the price of coal fluctuated greatly - by amounts much greater than will be caused by reclamation costs associated with surface mining legislation.

148 Since the committee has begun work on surface mining legislation, a disequilibrium has developed in the energy markets. Because of the tremendous rise in the price of petroleum, prices now bear very little relation to cost and normal profit levels. In a situation in which prices are not established by costs, increased costs, such as those associated with reclamation, are not expected to affect price.

148 Updating the price data used by the Library of Congress analysis, the committee found varying estimates for the incremental costs of reclamation. Estimates range from 30 cents per ton to 85 cents per ton, depending upon how efficiently changes in operating procedures are made. The 85 cents figure assumes that mining operations will continue as they are done now, with reclamation work performed at the completion of mining. The 30 cents figure assumes that changes will be made in operating methods to coordinate mining and reclamation activities to thereby minimize the cost. As with the development of

other new techniques, costs can be assumed to decrease as reclamation work becomes more efficient and as operators become familiar with new methods.

149 The Library of Congress analysis concluded that even using overgenerous estimates of reclamation costs, the price of reclamation is small. If one adds the 35-cent-a-ton reclamation fee to an 85-cent-per-ton reclamation cost, the reclamation cost of \$1.20 is only 6 percent of the spot price of \$2 1.49 for 1976. The Library study concluded that the price of coal is not expected to be increased by this amount because coal prices are more reflective of the unusual situation in the energy markets than of small changes in production costs.

#### CHANGES IN EXISTING LAW

149 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:

149 Section 1114, Title 18, United States Code

149 @ 1114. Protection of officers and employees of the United States

149 Whoever kills any judge of the United States, any U.S. attorney, and assistant U.S. attorney, or any U.S. 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 of the Bureau of Narcotics and Dangerous Drugs, any officer or enlisted man of the Coast Guard, any officer or employee of any U.S. 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).

#### COMMITTEE RECOMMENDATION

150 The Committee on Interior and Insular Affairs recommends the enactment of H.R. 2 as amended. The motion ordering the bill reported favorably was adopted by a rollcall vote April 19, 1977, with 33 votes cast for and 9 votes cast against.

#### 150 DEPARTMENTAL REPORTS

150 Reports from the Department of the Interior dated February 4, 1977 and April 5, 1977, Department of Justice dated February 10, 1977 and the Executive Office of the President dated February 15, 1977 are set forth as follows:

150 U.S. DEPARTMENT OF THE INTERIOR, OFFICE OF THE SECRETARY, Washington, D.C., February 4, 1977.

150 Hon. MORRIS K. UDALL, Chairman, Committee on Interior and Insular Affairs, House of Representatives, Washington, D.C.

150 DEAR MR. CHAIRMAN: This responds to your request for the views of this Department concerning H.R. 2, the Surface Mining Control and Reclamation Act of 1977.

150 We strongly support enactment of this measure. A new law to control surface mining of coal and provide for reclamation of mined lands is badly needed and the legislation your committee has before it is well conceived to meet that need. Its expeditious passage is a high priority of President Carter.

150 H.R. 2 would provide for a cooperative surface coal mining regulatory program with responsibility for implementation being shared between the States and the Secretary of the Interior. Strong reclamation performance standards and permit requirements would assure that both State and Federal mined land would be fully reclaimed and that the environment would be protected. On the other hand, under mechanisms provided by the bill, the production of needed coal could continue under national standards in a reasonable manner. Public participation in decisions about surface coal mining would be provided for. Full development of needed information would be required or encouraged to serve as a basis for effective and reasonable regulation of surface mining operations. Through H.R. 2's bonding and enforcement provisions, actual compliance with the standards and requirements would be assured.

151 In addition to the reclamation regulatory program, the bill provides for reclamation of lands already damaged by past mining. Financed in H.R. 2 through a fee levied against coal, the bill provides both for reclamation of rural lands through the Department of Agriculture and for acquisition and reclamation of abandoned and unreclaimed mined lands and for alleviation of problems related to mining, including community impacts of coal development. H.R. 2 would also establish mining and mineral institutes and sets forth provisions for the designation of lands unsuitable for noncoal mining.

151 The effects of inadequately controlled surface coal mining are well known. Among them are destruction or diminution of the utility of land, erosion and land slide, flooding, water pollution, destruction of fish, and wildlife habitat, loss of natural beauty, property damage, health, and safety hazards, and adverse social impacts.

151 Increasingly in the future, the Nation's energy needs will depend on coal mining. Current trends indicate that more and more of this mining will be

by surface methods. Federal and other western lands will be called on to supply coal, in many instances for the first time. Against this background, the need for legislation such as H.R. 2 is urgent.

151 In developing and carrying out an effective and efficient surface coal mining control and reclamation law, the Department will work closely with the Congress. President Carter has indicated that he would have signed the surface mining legislation, H.R. 25, passed by the last Congress, but vetoed. The President is prepared to approve similar legislation and has directed the Secretary to work with Congress in resolving remaining major issues and developing whatever changes in introduced bills may appear advisable to improve them.

151 Protection of surface owners of land where the Federal Government owns and proposes to lease coal was a particularly difficult issue for the last Congress. Section 714 of H.R. 2 incorporates the surface owner consent provision finally developed and included in the vetoed bill. That provision afforded a right to consent to specified individuals and limited the amount that such individuals could obtain if they consent. The amount specified has three components to be determined by appointed appraisers: (1) the fair market value of the surface estate; (2) certain specified losses and damages; and (3) an additional reasonable amount limited to the lesser of item 2 losses or \$1 00 per acre. If this provision is adopted, the language of item (1) should be clarified so that it would apply to the fair market value of the surface estate - based on its use for agricultural purposes and exclusive of the value of minerals or the right to consent under this section. Clarified in this way, a provision of this type is preferable to a provision which would prohibit surface mining of Federal coal where the surface is owned by a non-Federal party.

152 To limit the administrative and financial burden which might otherwise be placed on small mine operators, we support modifications of the vetoed bill which have been incorporated in H.R. 2, including:

152 Directing the regulatory authority to undertake the development of some of the information required to obtain a mining permit.

152 Financing this work in part from the reclamation fee collected pursuant to section 401(d).

152 Permitting reduced application fees.

152 Omission of certain permit application data as determined by the regulatory authority and in some instances requiring less data.

152 Modifying the bond release administrative provisions by limiting the scope of the notice to be given and providing an informal procedure for release.

152 A related matter concerns the schedule provided by the bill for implementation of the program. H.R. 2 would apply performance standards to new mines beginning 6 months after enactment and to existing mines beginning after 1 year. In addition, application for permanent, permits would be made only after a State or Federal program is approved. The regulatory authority's determination whether to issue a permit could not be delayed longer than 6 months after application is made - but not longer than 38 months after enactment of the bill. Trying the permanent permit application procedure to approval of a State or Federal program in this fashion is administratively preferable to requiring permit applications 20 months after enactment, whether or not a program has been approved. These modifications of the vetoed bill appear desirable to reduce any disruption which might otherwise have occurred. We also support H.R. 2's provisions for Federal backup inspections where there is an indication of specific need - that is, when the Secretary receives information giving reason to believe that there are violations of the act's requirements. Under the bill, the enforcement of reclamation requirements is principally intended to be a State responsibility. A full program of regular Federal inspections might weaken those incentives and encourage States to withdraw from the regulatory program.

152 In addition, the administration would like to work further with the Congress to determine whether the provisions of section 405 relating to secondary impacts of mining are best suited to meeting problems posed by abandoned lands. We particularly question whether providing funding for developments in energy impacted areas is appropriate in the light of legislation passed at the end of the last Congress relating to the State share of revenue from federally owned minerals and payments in lieu of taxes. It is important that resources of the abandoned land reclamation program be directed to matters of highest priority and that past environmental damage be remedied effectively and expeditiously. To this end, consideration of the requirement that 50 percent of the fees collected for the fund be initially allocated to the State from which they are derived may warrant modification to assure greater flexibility in directing resources to areas of greatest need.

153 An important purpose of this legislation is to protect fish, wildlife, and other ecological values. In developing and implementing this program, we

intend to assure that these values are appropriately recognized.

153 The provisions of title III for State mining and mineral resources and research institutes need to be carefully examined since there are other more effective ways of developing needed manpower and knowledge. We recommend that this matter be separately considered and not included in surface mining legislation.

153 We believe that administration of provisions of H.R. 2 relating to judicial matters may also be improved. With respect to citizen suits seeking to compel the Secretary or a regulatory authority to perform any act or duty under the act which is not discretionary, it may be appropriate to specify that the citizen suit provision shall constitute the exclusive remedy to assure that the Secretary or regulatory authority will receive 60-days notice except for situations involving an imminent threat to the health or safety of the plaintiff or immediately affecting a legal interest of the plaintiff. This will allow the Secretary opportunity to remedy any failure that may in fact exist without the necessity for suit. In addition, a provision of the Clean Air Act similar to section 526(a) (1) of H.R. 2 has been the subject of much needless litigation concerning the specification of the appropriate U.S. court of appeals. We recommend that this be clarified by providing that review of actions relating to State programs or Federal programs for a State shall be by the court of appeals for the circuit in which the State is located. Review of orders or decisions of national scope under section 526(a) (2) should be in the U.S. Court of Appeals for the District of Columbia.

153 Finally, we recommend that section 523 be amended to provide for the application of State programs to Federal lands. This should be carried out by agreement between the States and the Secretary of the Interior. The Interior Department has concluded similar agreements with several States during the past year. To accomplish this, H.R. 2 should provide that States with cooperative agreements will be permitted to retain their regulatory function, with appropriate modification, prior to the approval of a State program, that the Department will retain its statutory duty to receive and approve mining plans and that the designation of lands unsuitable for mining will continue to be an Interior responsibility. It should also be specified that the States choice will be subject to departmental review and approval as are other aspects of the program.

153 This administration is firmly committed to the prompt enactment of good surface mining control and reclamation legislation. We are prepared to work

closely with the Congress, both with respect to the modifications outlined above and to other improvements that may appear advisable as the Congress acts on the measure. More importantly we will continue that close relationship in implementing an effective program. The harm left in the wake of past surface mining must be ended promptly. Enactment of legislation such as H.R. 2 in the near future is a high priority both of President Carter's energy policy and his environmental policy.

154 The Office of Management and Budget has advised that enactment of legislation conforming to the views set forth above would be in accord with the program of the President and it has no objection to the presentation of this report.

154 Sincerely,

154 CECIL D. ANDRUS, Secretary.

154 U.S. DEPARTMENT OF THE INTERIOR, OFFICE OF THE SECRETARY,  
Washington,  
D.C., April 5, 1977.

154 Hon. MORRIS K. UDALL,

154 Chairman, Committee on Interior and Insular Affairs, House of Representatives, Washington, D.C.

154 DEAR MR. CHAIRMAN: This letter supplements the administration's views set forth in our letter of February 4, 1977, on H.R. 2, the "Surface Mining Control and Reclamation Act of 1977."

154 We strongly support your efforts to provide sound strip mine legislation. H.R. 2 provides a framework for administering a comprehensive, workable, surface mining and reclamation program. We would like to present our views and to offer some amendments in addition to those previously sent which we believe will strengthen the bill. Our comments will be addressed in part to the committee print of April 1, 1977, showing amendment proposed by the Subcommittee on Energy and the Environment.

154 TITLE II - OFFICE OF SURFACE MINING AND RECLAMATION

154 This administration strongly supports the creation of an independent office within the Department of the Interior. In anticipation of passage of the strip mine bill, the Department has begun to work toward smooth implementation of the bill's provisions and to establish the new office. To allow for the best overall management arrangements, however, we recommend that the statute not

require the office to report directly to the Secretary and that it be clearly authorized to use the personnel of other agencies to carry out the program.

#### 154 TITLE III - STATE MINING AND MINERAL RESOURCES AND RESEARCH INSTITUTES

154 Although we recognize the need to support efforts to develop mining expertise and to increase the number of persons trained to perform work required by H.R. 2, other more efficient ways of accomplishing these goals should be pursued. We strongly recommend that title III be omitted from this legislation and separately considered, as stated in our February 4, 1977, letter.

#### 154 TITLE IV - ABANDONED MINE RECLAMATION

154 We support provisions to establish State managed abandoned land programs. We recommend that until a State's full regulatory program is approved, allocation of its 50 percent share of funds not be made and that there be no funding of any State abandoned land program. Until such approval is given, the Secretary should also have authority to withhold expenditures for the Federal abandoned land program for a State under section 406. This would encourage the States to obtain approval for a strong State regulatory program rather than allowing a Federal program to be established for that State. The Secretary should not be prevented, however, from expending unearmarked funds within a State where there was not an approved regulatory program; thus in cases where reclamation work would be urgently needed it could be accomplished.

155 In order to assure that reclamation is accomplished on abandoned lands as quickly as possible, section 406 should be changed to insure that the first two objectives of the fund specified in section 402, the protection of public health and safety and the prevention of continued environmental harm, be accomplished before money could be spent on public facilities, except for emergency situations.

155 The program under section 405, "Reclamation of Rural Lands," should be preserved. This program will benefit many communities by assuring that the expertise of the Department of Agriculture in reclaiming disturbed lands is put to good use.

155 Allocating the reclamation fee money in slightly different proportions would provide increased money for areas where there are the most severely disturbed lands. We recommend providing financial assistance for obtaining hydrological data for permit applications of miners producing under 100,000 tons per year, but doing so on a cost-sharing basis with the operator providing 25 percent of the amount necessary for data and analysis. The reclamation fee money would provide the other 75 percent. Additionally we recommend adding a provision for cost recovery in cases where a permit application is not made

after the hydrological data financed from the fund have been collected and analyzed.

155 We also are of the view that the 50-percent share reserved for expenditure in the State or Indian lands where collected should be determined after 10 percent is allocated for hydrological studies and 20 percent for the rural lands program. This would provide further funds for States having the largest amount of abandoned coal mined lands. Funds reserved to the State or Indian land where collected should be available also for noncoal mine reclamation.

155 TITLE V - CONTROL OF THE ENVIRONMENTAL IMPACTS OF COAL SURFACE MINING

155 We support a time table for implementing the performance standards which provides that Interior regulations are to be issued 3 months after enactment; new mines must comply 6 months after enactment and existing mines must comply 9 months after enactment. The permanent regulatory program regulations must be promulgated within 1 year after enactment. This timetable is contingent, however, upon express provision that no environmental impact statement be required for the interim program regulations. For consistency, the Federal and Indian lands program should also be slated for implementation 1 year after enactment.

156 Although the Department does not foresee having to intervene in State regulatory programs often, the bill currently provides no method of intervention in cases where the State program may be faltering in only one or two areas short of State program revocation. In these instances the Department needs the authority to review selected permits. We recommend adding a provision which would permit limited intervention without withdrawing approval of a State regulatory program.

156 Large mining operations often need several years to get mining equipment and other ancillary requirements in place. The regulatory authority needs to evaluate the proposed mining operation before site development begins, but at the same time must be in a position to give the mine operator a permit for a time period adequate for developing a site and obtaining financing. We recommend that the time of the first permit be not more than 5 years after the first removal of overburden and that removal of overburden must begin within 6 years after issuance of the permit. If, however, overburden removal does not begin within 3 years after issuance, 1 year prior to scheduled overburden removal the regulatory authority should be required to obtain such information as is necessary to determine whether modifications of the permit pursuant to section 511(c) or otherwise are needed.

156 The administration supports strong protection for surface owners; surface owner consent should be required for the entire area covered by a permit application. For Federal lands this consent should be written, given before

leasing, and available only to the limited class of persons specified in H.R. 25 in the 94th Congress. We also recommend that with regard to the compensation formula provided therein, that fair market value be defined to exclude the value of the coal resource, as mentioned in our earlier report. We also believe that in all cases a permit applicant should demonstrate the legal right to enter and mine all portions of the area covered by the application.

156 Alluvial valley floors will require strong protection if these important areas are to maintain their hydrological integrity and usefulness for farming and range use. In view of this, we believe section 510(b)(5) should be revised so as not to exempt undeveloped range lands or small areas where mining would have a negligible impact on agricultural or livestock production. Because information about effects of mining in alluvial valley floors is relatively embryonic and the administrative determination of where these exemptions would apply may be particularly difficult, it appears preferable to clearly exclude mining from the alluvial valley floor without land use exception. The administration supports grandfathering only those mines which are located in alluvial valley floors and in commercial production, as specified in our February 4, 1977, letter.

156 Section 522 relating to the designation of areas unsuitable for surface coal mining, contains a grandfather exemption to be granted for those operations which have "substantial legal and financial commitments." We believe the term should be further defined or eliminated from the statute. The grandfather clause as written could undermine the integrity of the designation process and be subject to abuse.

157 We continue to support H.R. 2's designation of national forests as unsuitable for mining. We would also favor authorizing the Secretary to designate critical areas adjacent to the mandatory designation areas under section 522 in order to protect the integrity of these areas. In the case of Federal lands in critical adjacent areas, designation as unsuitable would be mandatory. In the case of private or State lands in the critical areas, the Federal Government would petition the State to designate these areas as unsuitable for strip mining, and further, there would be required consultation between the State and the Secretary for any permit within the critical adjacent area.

157 Prime agricultural lands have recently become the subject of considerable attention. The loss of such agricultural areas as a source of future food production is of as much concern as the possible loss of coal production resulting from prohibiting mining of these lands. We therefore favor an amendment to require restoration of soil productivity for prime agricultural

lands. In addition, we recommend a 5-year moratorium on surface mining in prime farmlands in order to provide an opportunity to determine the ability to restore the productivity of these valuable lands. An appropriate grandfather exception would also be provided. An amendment for prime agricultural lands protection will be furnished shortly.

157 Several concerns for essential features of the performance standards set forth in section 515 of the bill deserve emphasis.

157 We strongly support the principle of return to approximate original contour. We believe this concept as defined in section 701(2) properly embraces use of terracing as an appropriate reclamation technique, whether or not expressly referred to. Such terracing must, however, be for drainage purposes only and designed for the best overall environmental results. Highwalls cannot be permitted under any circumstances.

157 With respect to siltation structures, we are concerned that maintenance responsibility continue as long as such structures present the possibility of harm. We therefore support the committee print amendment of the original H.R. 2 which strengthens @ 515(b)(10)(C).

157 We would oppose deleting safety protections provided by the bill. Blasting limitations are particularly important but further information is needed to ascertain whether additional measures beyond those provided in @ 515(b)(15) are needed. We believe a study of blasting requirements should be undertaken.

157 H.R. 2 allowed a variance from specified performance standards for mountaintop mining where certain post-mining land uses will obtain and section 515(c)(2) of the committee print modifies this in several respects. The most critical feature of mountaintop mining relates to spoil placement. Mountaintop mining which retains spoil on top of the mountain does not require special treatment. Serious problems are presented, however, by operations using head-of-the-hollow or valley fill. For such operations, it is uncertain whether spoil can be placed in an environmentally sound manner. Some evidence exists that technology, in which spoil is placed in lifts to create a series of stair stepbenches and french rock drains are used may provide satisfactory protection. In any event, we believe that placement of spoil on the downslope should be limited to the minimum and that strong spoil placement standards are needed to insure that there will be no offsite damages.

158 We support provisions to strengthen the administrative, judicial, and enforcement provisions of the bill. Among these are provisions relating to

citizen suits and we support elimination of the amount-in-controversy and diversity of citizenship requirements of these provisions. We also believe that attorney's fees should be awarded in the discretion of the court against any party. For administrative proceedings, discretionar award of attorney's fees is appropriate against a losing party - not the United States. In addition, for the permanent enforcement program, we favor a requirement of monthly partial inspections and full inspections once each quarter. We will further review the need for further improvement and updating of the administrative, judicial, and enforcement provisions.

158 Enactment of this legislation will correct a major deficiency in our overall policy of environmental protection. Benefits will directly follow its enactment for protection and enhancement of water quality, fish and wildlife values, and for improved land use, among others.

158 We attach suggested amendments to deal with the problems outlined and certain other matters, including those contained in our February 4, 1977, letter to the committee on H.R. 2.

158 Early passage of strong surface mining legislation remains among the highest priorities of this administration. We will be prepared to work with the committee to achieve this goal.

158 The Office of Management and Budget has advised that enactment of legislation conforming to the views set forth above would be in accord with the program of the President and it has no objection to the presentation of this report.

158 Sincerely,

158 CECIL D. ANDRUS, Secretary.

158 Enclosure.

158 DEPARTMENT OF INTERIOR PROPOSED AMENDMENTS TO H.R. 2

158 (References to Committee Print - April 1, 1977)

158 Amend section 201(b) by omitting on lines 16 and 17, page 9, "who shall report directly to the Secretary".

158 Comment. - This amendment allows the Secretary more flexibility in the placement of the Office of Surface Mining Reclamation and Enforcement within the Department of Interior. The committee print incorporates a desirable amendment of the original H.R. 2 which specifically allows the Secretary to use

appropriate officials of the Department to administer provisions of the act, and will be extremely helpful in eliminating duplication of functions. The Geological Survey, for example, has to inspect leaseholds on matters pertaining to royalty collection and conservation of resources. A lack of ability to use these personnel for reclamation inspections would be inefficient and unnecessarily costly.

158 Amend section 201(c)(1) by adding after "administer" on page 10, line 8, ", and coordinate with other grant-in-aid programs,".

159 Comment. - The Department has existing grant-in-aid programs that have similar purposes to those in title V. This amendment requires coordination of the new authority with existing programs.

159 Amend section 406 by adding at end after line 11, page 44: (c) With respect to each State, no funds shall be spent pursuant to this section for purposes other than those specified in section 402(a) and (b), or for emergency situations, until the purposes specified in section 402(a) and (b) are accomplished.

159 Amend section 503 by adding after line 15, page 55, a subsection (e) which provides: "If the Secretary determines that permits are or may be issued under a State program in violation of the act or regulations or determines that an application pending under that State program may adversely affect any lands described in @ 522(e)(1), (2) or (3) and gives notice to the State, the Secretary may require the State to modify or disapprove any permit within 30 days of issuance by the State regulatory. The authority to require modification shall end when the Secretary determines that permits are being properly issued pursuant to the State program or that no application pending under the State program will adversely affect any lands described in @ 522(e)(1), (2) or (3) and gives notice to the State."

159 Comment. - This amendment allows the Secretary to intervene in the permitwriting process under a State program on a limited basis. Without such authority, in the unusual circumstance that a particular State does not correct errors in the implementation of its program, the Secretary's only remedy appears to be to act under section 521(b) in effect to revoke his approval of the entire State program and assume its operation. The amendment's more flexible approach will allow efficient monitoring of State implementation of approved plans

without providing for routine permit-by-permit review by the Secretary or others  
unwarranted and unnecessary duplication of the State's efforts.

159 Amend section 506(b) at page 60, line 25 by inserting after the word "years" the following: "of mining as measured by the first removal of overburden".

159 Amend section 506(c) at page 61, line 16 by striking the word "three" and substituting the word "six".

159 Comment. - These two amendments provide for a longer period after obtaining a permit for actual mining to commence in order to allow orderly prepermit development without forcing the operator to choose between development or risk of forfeiting a permit for lack of production. Once mining commences, as measured by the removal of overburden, the permit runs for only 5 years. Since mining must have begun during the first permit period, the grace period of up to 6 years could never apply to subsequent permits at the same mine.

159 Amend section 507(b) (12) by adding after "including" on page 68, line 25, "long-term climatological cycles,".

159 Comment. - This amendment clarifies that information on both long-and short-term climatological factors may be required to decide proper reclamation procedures.

159 13. Amend section 507(b) (13) by changing "1:24000" on page 68, line 7 to read "1:25000".

159 Comment. - The Geological Survey advises that new maps will be on this smaller scale.

160 Amend section 508(a) by adding a new paragraph (4) on page 73, line 19, and renumbering the following paragraph to read:

160 '(4) A detailed description of steps taken to minimize adverse impacts on or enhance renewable natural resources and of consultation with State and Federal agencies, including fish and wildlife agencies, concerned with environmental impacts of the proposed mining operation, and a statement discussing the recommendations, if any, of these agencies."

160 Comment. - This amendment clarifies the role of other related agencies, in the permit process, including in particular, those concerned with fish, wildlife, and related environmental values.

160 Amend section 512 on page 83, line 18, by striking the words "which

substantially disturb the natural land surface".

160 Amend page 84, line 1, after the word "reclamation" by inserting: "in accordance with the performance standards in section 515 of this act".

160 Amend page 84, after line 13, by inserting the following subsection and relettering the next subparagraph (e).

160 "(d) No operator shall remove more than 250 tons of coal pursuant to an exploration permit without the specific written approval of the regulatory authority."

160 Comment. - This amendment strengthens the environmental controls on explorations.

160 Amend section 515(b)(14). On page 98, line 11, by striking the words "treated or" and inserting: "buried and compacted or otherwise".

160 Amend page 98, lines 12 and 13, by striking the words "or sustained combustion" and inserting: "and that contingency plans are developed to prevent sustained combustion".

160 Comment. - These amendments clarify the requirement of burying toxic material and strengthen the control of mine fires.

160 Amend section 515(b)(19) by adding after "area" on page 100, line 10, "and capable, where appropriate, of supporting a diverse fauna native to the area of the land to be affected."

160 Comment. - This change will help insure that adequate consideration is given to wildlife needs in the formulation of vegetation requirements.

160 Amend section 515(c)(1), page 101, lines 13 through 16, to provide as follows: "Each State program may and each Federal program shall include procedures pursuant to which the regulatory authority may permit variances (A) when all the spoil is to be retained on the mined area, without regard to the purposes of subsection (3) and (B) when any of the overburden is to be permanently placed off the mined area, for the purposes set forth in paragraph (3) of this subsection."

160 Amend section 515(c)(2) by striking everything after the word "applicant" on page 101, line 17 through the word "the" on line 18 and inserting the following: "under paragraph (1)(A) of this subsection meets the requirements of paragraph (4) of this subsection and where an applicant under paragraph (1)(B) of this subsection meets the requirements of paragraphs (3) and (4) of this subsection a variance from the amend line 7, page 102, and line 20, page 103, by changing "permit" to "variance".

161 Amend section 515(c)(4) to insert new paragraphs (E) and (F) after line 4, page 104, as follows and redesignate the existing paragraph (E) as (G):

161 (E) The least spoil possible be placed off the mined area

161 (F) All excess spoil material not retained on the mountaintop be placed in a valley fill utilizing french rock drains constructed through the complete height of the fill to insure maximum drainage control unless the operator demonstrates that more advanced techniques achieving an equal or higher level of drainage control are feasible;

161 Comment. - These amendments allow mountaintop removal that retains the spoil on the mined area without the requirement of special land use variance. Such mining still has to comply with the special environmental standards. The amendment retains the special land use variance if valley fill is to be used with mountaintop removal. It also adds the requirement that as much of the spoil as possible be retained on the mountaintop and that the valley fill be constructed with the most advanced drainage techniques.

161 Amend section 516(b) by adding a new paragraph 10, on page 110, line 1, and by renumbering the succeeding paragraphs: "(10) Avoid adverse impacts of the projects on fish and wildlife."

161 Comment. - This amendment strengthens consideration of wildlife values.

161 Amend section 516(b)(1) on page 107, line 12, after the word "continuous" by inserting: "or conventional".

161 Comment. - This amendment clarifies the apparent intent of the Committee.

161 Amend section 517(b)(2) on page 112, line 14 by inserting after the word "site" the following: "or which transect a recharge area for a spring, well or other source of water used for domestic, agricultural, or commercial uses or which otherwise is likely to affect offsite ground or surface water flow."

161 Also inserting on page 113, line 4, after the word "validity", the following: "and shall be continued until final bond release occurs."

161 Comment. - This amendment strengthens the monitoring requirements of the act to cover the other major circumstances in which a mine may affect offsite water flows. Especially as surface mining becomes deeper and deeper with more efficient technology and rising coal prices, surface mines are likely to have a

greater impact on ground and surface water flow on and offsite. Monitoring can give the operator, regulator and affected water user warning of impending problems.

161 Amend section 522(a)(3)(B) by adding after "natural system," on page 134, line 12, "including fish and wildlife habitat".

161 Comment. - This chapter insures proper consideration of fish and wildlife values in the process of designating lands unsuitable for mining.

161 Amend section 522(b) by adding after "section." on page 136, line 17, "Prior to designating Federal lands unsuitable for mining, the Secretary shall consult with the appropriate State and local agencies.

161 Comment. - This requirement is added to recognize the substantial interest of the States in the designation process.

162 Add at end of section 522(e) after line 19, page 139: The Secretary may designate critical areas adjacent to areas specified in subparagraph (1) to protect the integrity of such areas.

162 (1) In the case of Federal lands in critical adjacent areas such designation by the Secretary shall be mandatory.

162 (2) In the case of non-Federal lands in critical adjacent areas, designation by the Secretary shall constitute a petition to the regulatory authority under section 522(a) of this act and further there shall be required consultation between the regulatory authority and Secretary for any permit application within the critical adjacent area.

162 Amend section 523, page 139, line 20, through page 142, line 2, as follows:

#### 162 FEDERAL LANDS

162 SEC. 523. (a)(1) No later than 1 year after the date of enactment of this act, the Secretary shall promulgate and implement a Federal lands program which shall be applicable to all surface coal mining and reclamation operations taking place pursuant to any Federal law on any Federal lands: Except as provided in section 710, the provisions of this act shall not be applicable to Indian lands. The Federal lands program shall, at a minimum, incorporate all of the requirements of this act and shall take into consideration the diverse physical, climatological, and other unique characteristics of the Federal lands in question. Except as otherwise provided in this section, the promulgation of a Federal lands program gives the Secretary exclusive jurisdiction over the regulation of reclamation of Federal lands disturbed by surface coal mining.

162 (2) Until the Secretary promulgates a Federal lands program all surface coal mine operations on Federal lands shall comply with Federal and State laws and regulations in effect on the effective date of this act, as modified by the requirements of section 502(a)-(d) of this title.

162 (3) If the Governor of a State, with a cooperative agreement in effect on the date of enactment of this act, notifies the Secretary not later than 30 days from that date that it elects to regulate surface mining on Federal lands as allowed by section 523(d), the Federal lands program shall not apply to that State prior to the expiration of the period for submission and approval of a State program in sections 503 and 504. Prior to that time, the Secretary shall regulate reclamation of Federal lands through a cooperative agreement with the State if the cooperative agreement is modified to reflect the interim requirements of the act.

162 (b) Where the State program does not cover Federal lands the Secretary may enter into agreements with a State or with a number of States to provide for a joint Federal-State program covering a permit or permits for surface coal mining and reclamation operations on land areas which contain lands within any State and Federal lands which are interspersed or checkerboarded and which should, for conservation administrative purposes, be regulated as a single management unit. To implement a joint Federal-State program the Secretary may enter into agreements with the States, may delegate authority to the States, or may accept a delegation of authority from the States for the purpose of avoiding duality of administration of a single permit for surface coal mining and reclamation operations.

163 (c) (1) Under the procedures in section 503, a State may elect to regulate reclamation Federal lands. The approval of the State's election shall supersede the Federal lands program except the Secretary shall retain the duty to approve or disapprove all permits on Federal lands issued under the approved State program, to consent to the release of bonds for permits on Federal lands and to designate Federal lands unsuitable for mining. The Secretary shall approve this election if the State meets all of the requirements of section 503 and shows that the State law has a procedure:

163 (A) To obtain the consent of the Secretary prior to approving a permit for Federal lands;

163 (B) To obtain the consent of the Secretary prior to the release of a bond for permits on Federal lands;

163 (C) To coordinate the permit approval process with the Secretary's designation of lands unsuitable for mining.

163 Comment. - These revisions to section 523 are intended to maximize State regulation of mining on Federal lands while preserving the Secretary of the Interior's leasing authority and his duty to protect the public interest. The major changes from the committee print are that (1) the "election" of State is subject to review and approval as are other aspects of the State program; (2) the Secretary clearly retains his statutory duty to approve operation and reclamation plans as required by section 6 of the Federal Coal Leasing Amendments Act of 1976, 90 Stat. 1087; and (3) consistent with the Secretary's sole power to decide where to grant Federal coal leases, the power to designate lands unsuitable for mining is retained as an exclusive Federal function. The amendment also delays, in certain circumstances, the time when a Federal lands program could apply to a State that has elected to regulate Federal lands. The amendment prevents unnecessary changes in the applicable regulations that would be disadvantageous for both the regulators and the regulated industry.

163 DEPARTMENT OF JUSTICE, Washington, D.C., February 10, 1977.

163 Hon. MORRIS K. UDALL, Chairman, Committee on Interior and Insular Affairs, House of Representatives, Washington, D.C.

163 DEAR MR. CHAIRMAN: The Department of Justice desires to take this opportunity to express its views on H.R. 2 and S. 7, bills 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.

163 The proposed bills would authorize the Secretary of the Interior to regulate all phases of surface mining and reclamation including, inter alia, site clearing and preparation, blasting, erosion control, maintenance of water and air quality, backfilling and grading, and site closing.

163 In order to improve the regulatory program which would be authorized by these bills, it may be useful to harmonize the requirements which affects surface mining operations. One area where there would be substantial overlapping of authority is the regulation of water pollution. Under the

Federal Water Pollution Control Act Amendments of 1972, discharges from point sources, which includes discernible pipes, ditches, and channels, are to be abated by application of best practicable control technology currently available by July 1, 1977, and by application of best available technology economically achievable by July 1, 1983. More stringent limitations may be imposed to meet water quality standards. The Federal Water Pollution Control Act also directs the Administrator to study nonpoint sources of pollution including surface mining operations, and to inform the States and Federal agencies of processes and procedures for controlling same. Section 304(e), 33 U.S.C.@ 1314(e). Also, the Administrator has promulgated effluent limitations guidelines for the Coal Mining Point Source Category. 41 Federal Register 19831-40 (May 13, 1976). An additional provision in the Federal Water Pollution Control Act which may affect surface mining operations is section 404, 33 U.S.C. 1344(a), which authorizes the Secretary of the Army to issue permits for the discharge of dredged or fill material into the navigable waters of the United States. The term "navigable waters" is broadly defined in regulations promulgated by the Secretary. 40 Federal Register 31320 et seq. (July 25, 1975).

164 One means of harmonizing these bills with the aforementioned statutory authority would be to add a provision that compliance with a permit issued pursuant to a State or Federal program under the surface-mining law shall be deemed compliance with the Federal Water Pollution Control Act. Alternatively, the bills could be amended to require the Secretary of the Interior to include in surface-mining permits conditions required by the Administrator of the Environmental Protection Agency and Secretary of the Army acting pursuant to their regulatory authority. See 16 U.S.C. @ 804.

164 We suggest that the bills make clear that the powers to be exercised by the Secretary or State authority in diverting streams, to the extent that they may be applied to physical changes in the courses of navigable waters, are to be subject to the approval of the Secretary of the Army, acting through the Chief of Engineers, in conformity with the provisions of section 10 of the River and Harbor Act of 1899 (33 U.S.C. 403).

164 Additionally, consideration should be given to excluding from the requirements of NEPA certain of the environmental protective provisions of the bills, such as, for example, the promulgation of environmental protection standards pursuant to section 501 of H.R. 2 or the issuance of permits for new or existing operations pursuant to a Federal program. Precedent for such an exclusion is provided by section 511 of the Federal Water Pollution Control Act. 33 U.S.C.@ 1371(c) (1).

164 Moreover, the citizen suit and judicial review provisions should be modified in certain respects. Section 520(e) of H.R. 2 and section 420(e) of S.

7, the so-called citizen suit provision, should be changed to read as follows:

164 (e) Nothing in this section shall restrict any right which any person (or class of persons) may have under this or any statute or common law to seek enforcement of any of the provisions of this act and the regulations thereunder, or to seek any other relief, except that this section shall be the sole basis of jurisdiction for suits under subsection (a) (2) of this section and failure to comply with the notice requirement of subsection (b) (2) shall require dismissal of the action.

#### 165 ERRATA SHEET

#### 165 H.R. 2

165 1. Page 5, line 9 should read: by surface and underground mining, on which little

165 2. Page 7, line 13 should read: for public participation in the development, revision,

165 3. Page 15, line 9 should read: tion; the extraction, processing, development, and production of

165 4. Page 29, line 5 should read: degradation and the conservation of land and water

165 5. Page 39, lines 3 and 4 should read: such lands and facilities thereon and any remaining moneys shall be deposited in the fund.

165 6. Page 61, line 19 should read: name and address of any person owning, of record or

165 7. Page 70, line 12 should read: (12) a detailed description of the measures to be

165 8. Page 101, line 11 should read: (1) adopt measures consistent with known tech-

#### 165 S. 7

165 1. Page 7, line 11 should read: for public participation in the development, revision.

165 2. Page 7, line 22 should read: (1) wherever necessary, exercise the full reach of

165 3. Page 8, line 24 should read: of 1969 (83 Stat. 742) shall be transferred to the Office.

165 This change is in accordance with the recommendation of the Administrative Conference of the United States for amendments to the Clean Air Act and the Federal Water Pollution Control Act, both of which contain citizen suit provisions. 41 Federal Register 56767 (Dec. 30, 1976). The effect of the proposed modification would be to make the above-mentioned sections the exclusive jurisdictional base for suits seeking to compel the Secretary to perform mandatory duties.

165 The first sentences of section 526(a)(1) of H.R. 2 and section 426(a)(1) of S. 7, both of which deal with judicial review of agency action, should be changed to read as follows:

165 Any action of the Secretary to approve or disapprove a State program or to prepare or promulgate a Federal program pursuant to this act shall be subject to judicial review only by the U.S. Court of Appeals for the circuit which contains the State whose programs is at issue; any action by the Secretary promulgating standards pursuant to sections 501, 515(e), 516 and 523 [401, 415(e), 416 and 423 in S. 7] shall be subject to judicial review only in the U.S. Court of Appeals for the District of Columbia. A petition for review of such action shall be filed in the appropriate court of appeals within 60 days from the date of such action, or after such date if the petition is based solely on grounds arising after the 60th day. Any such application may be made by any person who participated in the administrative proceedings and who is aggrieved by the action of the Secretary.

166 These changes are again in accordance with the recommendations of the Administrative Conference, supra, and will resolve confusion over which circuit court is "appropriate," as well as provide for judicial review of standards of national applicability in the Court of Appeals for the District of Columbia Circuit only.

166 The Department further recommends that the technical changes on the attached errata sheet be made.

166 Whether this legislation should be enacted involves policy considerations as to which the Department of Justice defers to the Secretary of the Interior.

166 The Office of Management and Budget has advised that there is no objection to the submission of this report from the standpoint of the Administration's program.

166 Sincerely, HUGH M. DURHAM, Legislative Counsel.

166 THE WHITE HOUSE, Washington, February 15, 1977.

166 Hon. MORRIS K. UDALL, Chairman, Committee on Interior and Insular Affairs, House of Representatives, Washington, D.C.

166 DEAR MR. CHAIRMAN: From the perspective of energy policy, I should like to express the position of the administration regarding the strip mining legislation before you. We urge expeditious passage of the legislation which your committee has so effectively developed.

166 This Nation cannot expect to increase its reliance on coal unless the mining and burning can be done in a healthful and environmentally sound manner. The passage of clear and effective strip mining legislation is therefore a prerequisite to greater use of coal as part of a sound energy policy.

166 Negative arguments have characterized the strip mining debate for too long. Adequate safeguards of the land are not in conflict with a policy of expanded coal production. The Nation's coal resource is quite large and the portion of that resource made unavailable by this legislation is extremely well - less than 1 percent of the resources base and no more than 5 percent of total reserves. The modest costs of reclamation should not noticeably inflate fuel prices. It is money well spent in terms of benefits to the Nation. And, with expanded deep mining and more intensive reclamation efforts, more, not fewer, jobs will result.

166 Years of controversy over this legislation have increased the uncertainties facing the coal industry and the prospects for relying on more coal in this country. One particular reason I am eager to see the bill pass is, finally to create a sense of certainty about the rules by which coal strip mining can take place.

166 Fortunately, the great abundance of coal in this country allows us to declare certain areas off limits to strip mining because of their greater value for competing purposes. Protection of alluvial valley floors in the West, and prime agricultural land should be considered on the basis of the most valuable use of those lands to the Nation. It is wise planning to utilize land that is more productive for agriculture for that purpose.

167 In conclusion, let me emphasize that the energy agencies, and the Department of the Interior, and the Environmental Protection Agency see eye to eye on this legislation. Last year's arguments about this bill need not be reargued. I support your efforts to pass an effective bill, so that we can get about the business of developing a rational coal policy based on safeguarding the land from the abuses of strip mining.

167 Sincerely, JAMES R. SCHLESINGER, Assistant to the President.

#### SECTION-BY-SECTION ANALYSIS TITLE I. - FINDINGS AND PURPOSES

167 This section sets out congressional findings and purposes of the act.

167 Briefly the title recognizes that coal has a role in meeting national energy requirements. A range of mining technologies are available for coal extraction. These technologies have differing impacts on the environment and other economic activities. Technology is available to reclaim some of these impacts, and regulatory efforts should be focused at the State level.

167 The purposes of the act are to establish minimum national standards for regulating surface coal mining reclamation and surface impacts of underground mines; and to encourage States to regulate mining in accord with such standards and to establish a program for the reclamation of previously mined lands.

#### SECTION-BY-SECTION ANALYSIS TITLE II. - OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

167 This title establishes a separate office within the Department of Interior for carrying out the purposes of this act. The director of the office is to be appointed by the President, with the advice and consent of the Senate.

167 A number of specific activities of the office are identified including administering the regulatory and reclamation programs authorized by the act, implementing various research activities and making grants and providing technical assistance to States. Conflict of interest requirements pertaining to Federal employees of the office or performing any function or duty under the act are specified.

#### SECTION-BY-SECTION ANALYSIS TITLE III. - STATE MINING AND MINERAL RESOURCES AND RESEARCH INSTITUTES

167 Section 301. - Authorization of funds for institutes

167 This section authorizes \$200,000, \$3 00,000, and \$400,000 for the first 3 years respectively, and \$4 00,000 per year thereafter for grants to mineral resources research institutes. These funds must be matched at least on a dollar-for-dollar basis by non-Federal funds. The eligibility for each State will be based on several criteria including the existence of a division or department within a public college or university which is conducting a program of substantial instruction and research in mining or mineral extraction and which must have been in existence for at least 2 years prior to having receiving funds under this program.

168 Section 302. - Research funds to institutes

168 This section authorizes \$15 million for the first fiscal year and increasing by \$2 million per year for 6 years thereafter for grants to institutes in carrying out projects of industrywide application which could not otherwise be undertaken.

168 Section 303. - Funding criteria

168 This section requires that each institute designated eligible for funds must have first a plan including its curriculum, policies, and procedures to insure that the purposes of this title are implemented.

168 Section 304. - Duties of the Secretary

168 This section vests in the Secretary of Interior the responsibility for administering the grant program under this title and requires an annual report from the Secretary to Congress summarizing the success of the work performed under this program and the relative progress of each State in carrying out its institutes' program.

168 Section 305. - Autonomy

168 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.

168 Section 306. - Miscellaneous provisions

168 This section instructs the Secretary of Interior to cooperate with other Federal agencies and institutions in order to avoid duplication of research efforts and to broaden research and demonstration programs in the mineral resource field. Research findings and subsequent patents resulting from works supported by this program must be made public. However, existing rights of patent owners are to be protected.

168 Section 307. - Center for Cataloging

168 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 research and which will be open to the public.

168 Section 308. - Interagency cooperation

168 This section authorizes the President to clarify agency responsibilities and to foster interagency coordination in mining and mineral research.

168 Section 309. - Advisory Committee

168 This section provides for the appointment of an Advisory Committee on Mining and Mineral Research by the Secretary of Interior.

169 Specific membership is prescribed. The committee will advise the Secretary with respect to the selection of institutes for eligibility of basis grants, and the structuring and the research programs developed under this title.

SECTION-BY-SECTION ANALYSIS TITLE IV. - ABANDONED MINE RECLAMATION FUND

169 Section 401. - Abandoned Mine Reclamation Fund

169 This section establishes an abandoned reclamation fund to be administered by the Secretary of Interior. The principal source of revenues for the fund are a reclamation fee of 35 cents per ton of coal produced by surface mining and 15 cents per ton of coal produced by underground mining. The reclamation fee for lignite coal is 5 percent of the value of the coal at the mine or 35 cents per ton, which ever is less.

169 The reclamation fund is to be used for the reclamation of lands mined prior to the date of enactment and programs can be carried out by the Secretary of Interior, the Secretary of Agriculture, or directly by the States through approved State reclamation programs. Funds are also available for the determination of the hydrologic consequences of proposed mining and some geologic investigations for small operators as required under section 507(c).

169 Section 402. - Objectives of fund

169 Objectives for the reclamation program include the protection of health or safety of the public; protection of the environment from continued degradation and conservation of land and water resources; the protection or enhancement of public facilities as part of reclamation of land and water conservation projects; the improvement of lands and waters to a suitable condition useful in economic social development; and research and demonstration relating to the development of surface mining reclamation and water quality control program methods.

169 Section 403. - Eligible lands

169 Only lands which were mined for coal or affected by such mining and left in an adequate reclamation condition prior to the enactment of this act are eligible for expenditures under the fund. There are limited exceptions pertaining to the reclamation of noncoal mined lands in conjunction with section 406.

169 Section 404. - State reclamation programs

169 This section authorizes the States to develop programs for reclaiming eligible lands. Each State program must meet the objectives of this title and be approved by the Secretary of Interior. Under an approved program, States can submit on an annual basis those reclamation projects to be implemented. The funding of projects is contingent upon the Federal approval of a regulatory program for coal surface mining operations.

169 Section 405. - Reclamation of rural lands

169 This section establishes a program to provide small rural landowners technical and financial resources to reclaim lands affected by coal surface mining operations. This program is administered by the Secretary of Agriculture and the reclamation is to be accomplished according to a mutually agreed upon plan through contract with the landowner to accomplish land stabilization and conservation work. A limit of up to 120 acres of land per owner exists and the Federal share of such reclamation is not to exceed 80 percent of the cost unless the Secretary finds a greater share is justified to enhance offsite water quality, esthetics, or other benefits. Up to one-fifth of the money available in the Abandoned Mine Reclamation Fund during any 1 year would be available to the Secretary of Agriculture for purposes of this section.

170 Section 406. - Acquisition and reclamation of abandoned and unreclaimed mined lands

170 This section establishes a program administered by the Secretary of Interior for the reclamation of eligible lands. Four basic steps are required under this program: land identification, acquisition of the land or an appropriate interest therein, land reclamation, and postreclamation has improved the market value of the land.

170 Reclamation can be carried on either private or public lands, however, if work is done on private lands, the Secretary is directed to establish a lien on the property after reclamation to the extent that reclamation has improved the market value of the land.

170 This section also authorizes the Secretary to construct public facilities which are a necessary part of a reclamation project or program for land conservation or outdoor recreation. For instance, access roads, small impoundments, parking areas, and sanitary facilities would be eligible for funding if necessary to support the use of the public park or recreation area established on reclaimed lands.

170 Section 407. - Filling voids and sealing tunnels

170 This section authorizes the Secretary to fill voids, seal tunnels, shafts, and entryways and reclaim surface impact of underground or surface mines if requested by a Governor and if the Secretary determines that such action is necessary to prevent hazards to public health, or safety, or degradation to the environment. Projects under this section are not limited to coal mine impacts.

170 Section 408. - Fund report

170 This section requires the Secretary to make an annual report to Congress on reclamation activities supported by the fund along with recommendations as to future uses of the fund.

170 Section 409. - Transfer of funds

170 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 TITLE V. - CONTROL OF THE ENVIRONMENTAL IMPACTS OF SURFACE MINING

170 Section 501. - Environmental protection standards

170 Under this section the Secretary is required to issue regulations covering the interim environmental performance standards by 90 days after the date of enactment. For the purposes of these regulations, the requirements of the National Environmental Policy Act of 1969 - 42 U.S.C. 4332 - to issue an environmental impact statement are waived but the regulations shall not be issued until the Secretary complies with notice and hearing requirements and receive the concurrence of the Administrator of the Environmental Protection Agency with respect to air and water standards. Under subsection (b) of the section, the Secretary is to promulgate regulations addressing the full regulatory program under the act.

171 Section 502. - Initial regulatory procedures

171 This section imposes the standards and procedures to be followed during the interim period prior to the adoption of a full State or Federal regulatory program. Six months after enactment all new mines and 9 months after enactment existing mines shall comply with the interim reclamation standards - addressing postmining land use, regrading requirements, topsoil separation, hydrologic requirements, waste disposal, waste piles, blasting, revegetation, steep slope mining, and mountaintop removal. This section also makes provision for

enforcement during the interim period, citizen involvement and application for a permit in compliance with the full regulatory program.

171 Section 503. - State program

171 Eighteen months after date of enactment, each State wishes to assume jurisdiction over coal surface mining in its boundaries is required to submit its State program to the Secretary under this section. The requirements for a State program are set out in this section as are the procedures the Secretary is to follow for approval. Under this section, a State has 60 days for resubmittal of a disapproved State program and regulatory procedures to be followed in the case of an injunction against a program are set out in subsection (d).

171 Section 504. - Federal programs

171 Under this section, the Secretary shall prepare and implement a Federal program for regulation of surface coal mining if the State either fails to submit a program, fails to receive approval of a State, or fails to implement, enforce, or maintain an approved State program. In addition to the 18 months provided for submission of a State program in section 503, this section provides that an additional 6 months may be granted by the Secretary if an act of the State legislature is necessary to formulate a State program. Secretarial authority to enforce a portion of a State is provided in subsection (b) and procedures to review existing permits where there has been a change in jurisdiction of an ongoing program are set out in subparagraph (d)(f). A State which has not received approval of a State program may file for approval of a program anytime after the implementation of a Federal program under subsection (e).

171 Section 505. - State laws

171 Under this section, State laws which provide for more stringent environmental regulations of surface coal mining, or which are not inconsistent with the provisions of the act shall not be construed as having been superseded by the provisions of this act.

172 Section 506. - Permit

172 Eight months after approval of a State program of implementation of a Federal program, all operators must have received a permit issued in compliance with the act under the requirements of this section. Permits issued under the act shall normally be for a period of 5 years but the permit term may be

extended upon a finding that such an extension is necessary for the operator to obtain necessary financing. The permit shall terminate within 3 years if the coal surface mining operation has not commenced within that period except that the section provides that this period may be extended if necessary because of litigation or some other circumstance beyond the control of the permittee. In addition, the section provides that where the coal is to supply either a synthetic fuel or specific electric generating facility, commencement of the operation shall be deemed to have occurred at the time of the commencement of construction of the synthetic fuel or generating facility. The section also sets forth procedures for renewal of existing permits.

#### 172 Section 507. - Application requirements

172 This section sets out the requirements for an application for a permit to operate a surface coal mine under the act. The specific application requirements include adequate identification of the applicant, historical information regarding the applicant, information demonstrating compliance with act's notice requirements, description and anticipated timing of the proposed operation, certain hydrologic data, sufficient maps of the proposed operation, and results of test borings where required. The section sets forth the requirements for filing of the application and other requirements regarding the certification of insurance.

#### 172 Section 508. - Reclamation requirements

172 As part of a permit application, this section requires that the applicant also submit a reclamation plan which describes in detail the proposed mining and reclamation operation and how the environmental protection standard are going to be achieved.

#### 172 Section 509. - Performance bond

172 This section prescribes the requirements for obtaining a performance bond covering the area to be mined within the term of the permit. In addition to setting forth the bond requirements, the section provides that the Secretary may approve an alternative system to bonding as a part of a State program.

#### 172 Section 510. - Permit approval or denial

172 This section sets out the standards by which any permit application is to be approved or disapproved. Placing the burden on the applicant to demonstrate compliance with the act, the regulatory authority must find, among other things, that the requirements of the act have been complied with, the operation is designed to prevent damage to the hydrologic balance outside the

permit area, the area to be mined is not with an area excluded from mining under the act, the proposed operation will not interrupt, discontinue or prevent farming on alluvial valley floors - subject to certain exceptions - nor materially damage the quantity or quality of water in water systems that supply such floors - subject to a grandfather provision - and that the applicant is satisfactorily meeting the requirements of certain other environmental regulations.

#### 173 Section 511. - Revision of permit

173 Procedures for revision of permits are set forth in this section. During the term of a permit, a revision may be obtained under these procedures.

#### 173 Section 512. - Coal exploration

173 This section prescribes the procedures and standards to apply to coal exploration. No permit is required, but exploration is to be performed subject to regulations designed to provide notice to the regulatory authority and compliance with environmental standards set out for surface mine operations. In order to limit the size of such operations, no more than 250 tons can be produced under such an operation.

#### 173 Section 513. - Public notice and public hearing

173 The public notice and hearing requirements applicable to the permit approval or denial process are set forth in this section. Public notice, standing requirements, informal hearing procedures, and other requirements are detailed.

#### 173 Section 514. - Decisions of regulatory authority and appeal

173 Under this section, the regulatory authority is required to issue its finding on a permit application within 60 days after a public hearing. If no public hearing is held, this section directs that the regulatory authority is to issue its decision within a reasonable time. The section allows an aggrieved party to apply for a rehearing or to appeal to a court of jurisdiction under section 526 of the act.

#### 173 Section 515. - Environmental protection performance standards

173 This section contains specific performance standards for surface coal mine operations. The standards recognize that mining is a temporary use of land and must fit into the pre- and post-mining activities of the site and surrounding area as well as those uses of the surrounding lands during mining. While the legislative provisions cover a wide range of environmental standards, the major provisions are highlighted here.

173 One: The operator is required to regrade the site to its approximate original contour; a configuration which closely resembles the general surface configuration of the land prior to mining and which blends into the surrounding lands. Highwalls are to be eliminated and regraded slopes are to be shaped in order to assure mass stability and to control surface erosion. The configuration of the reclaimed mine site is to match that approved in the mining plan and thus can be suitably shaped for a wide range of post-mining land uses.

173 Two: The operator is to preserve and reuse topsoil from the mine site. If prime agricultural lands are mined, specific provisions for reconstituting the critical soil zones are included in the bill.

173 Three: The operator is to establish on the regraded the diverse vegetation cover native to the area capable of self-regeneration. Seasonal characteristics of the vegetation growth and yield are to be recognized. The operator assumes the responsibility for successful revegetation for 5 years after the last year of augment and seeding, fertilizing, irrigation or other work to assure adequate survival and plant density, except in those regions having an annual average precipitation of 26 inches or less where the operator's period of responsibility is 10 years.

174 Four: The operator is required to minimize disturbances to the hydrologic balance on the mine site and in associated off-site areas by avoiding toxic mine drainage, preventing off-site flows of suspended solids using the best available technology, restoring recharge capabilities of the mined area, preserving essential hydrologic functions of alluvial valley floors, and avoiding channel deepening and enlargement in operations having a water discharge.

174 Five: Water impoundments are allowed as part of the mine reclamation provided that: the size of the impoundment including the quantity of water sustained is adequate for intended purposes, the safety of dam construction is compatible with accepted Government standards, the quality of water will be suitable on a permanent basis for its intended use and discharges will not be polluttional, and final grading of any embankments or lands surrounding the impoundment will provide adequate safety and access for purposed water users.

174 Six: Provisions for the permanent disposal of surplus spoil in areas other than the mine workings are included in this section. Standards to assure the stability of spoil mass as well as to control surface erosion are prescribed for surplus soil from all types of mining operations: mountaintop, contour, haul back, et cetera. Mine processing wastes are also covered and surface disposal should reflect differences in material particle characteristics and water content.

174 Seven: Specific provisions covering blasting are also included.

Emphasis is directed to providing adequate notice to local governments and individuals to the proposed blasting program and this includes the use of newspapers, the mails, and immediate notice to individuals in the surrounding area prior to any blast. Records of the nature and type of blasting including technical details are required to be maintained for a period of 3 years and open for public inspection. Performance standards for blasting are stipulated so as to prevent injury to persons, damage to public and private property, adverse impacts on underground mines, and change in the availability of ground or surface water.

174 Eight: Specific provisions pertaining to the coincident operation of both surface and underground mines are included and require the approval of specific operations by the regulatory authorities governing the underground mine, health and safety as well as surface mining reclamation.

174 Nine: Certain general planning requirements for mountaintop mining operations are specified. However, approval of such an operation does not require additional tests with respect to post-mining land uses with respect to other types of surface mining operations.

174 Ten: A specific set of environmental standards pertaining to contour mining on steep slopes - any slope above 20 degrees or less if stipulated by the regulatory authority - and include: the prohibition of placing spoil or other mining debris on the downslope below the bench or mining cut, the backfilling of the highwall or returning the site to its approximate original contour - including terracing and leaving access roads if desired - and the capability of grading downward the top of the highwall if it facilitates compliance with the environmental protection standards.

175 Section 516. - Surface effects of underground coal mining operations

175 The surface impacts of underground coal mining operations are often intermingled with environmental impacts of strip mining. Further, a uniform set of environmental protection standards for surface impacts of underground mines are not existent. This section includes those minimum environmental standards for underground mining operations that will provide a similar level of protection as the standards in this act for strip mines.

175 Specific provisions relate to protection of surface land uses from subsidence hazards, protection of surface waters from mine discharges, and drainage from mine waste piles. Implementation of these provisions require coordination with the Mine Enforcement Safety Administration.

175 Section 517. - Inspections and monitoring

175 This section requires the Secretary to inspect surface coal mine operations and establishes environmental monitoring procedures. Under an approved program, the regulatory authority shall require certain recordkeeping and reporting by surface coal mine operations permitted under the act. The section also requires certain monitoring procedures to be followed by operators whose operations remove or disturb strata that served as aquifers which significantly insure the hydrologic balance of water used in the mining area. This section also requires a regular system of inspection and sets forth restrictions on the financial interests any employee of the regulatory authority may have in coal operations.

#### 175 Section 518. - Penalties

175 This section sets forth the penalty scheme to be applied under the act and the procedures to be followed in the imposition of penalties. Under this section, any violation may lead to a civil penalty but if a violation leads to a cessation order, the penalty is mandatory. Each day of a continuing violation may be deemed a separate violation for purposes of penalty assessment. Upon the notice of a violation the person charged with the penalty is given 30 days to pay the penalty in full or, if the person wishes to contest the amount of penalty or the fact of the violation, the amount of the penalty is to be forwarded to the Secretary for placement in an escrow account pending appeal. Provision is also made for recovery of penalty in a civil action brought by the Attorney General or, at the discretion of the Secretary, the amount of the penalty may be recovered from the performance bond posted under the act. There is a condition of approval in a State program, the civil and criminal provisions of the State program are required to be, at a minimum, no less stringent than those set forth in this section.

#### 175 Section 519. - Release of performance bonds or deposits

175 This section sets forth procedures for release of performance bonds. Revisions made for notice and opportunity for a hearing on bond release. The section contemplates three levels of bond release called: (1)

176 60 percent of the bond will be released upon the completion of back fine, regarding and establishment of drainage control; (2) after establishment of revegetation, an additional amount may be released subject to the reservation of that amount necessary to reestablish vegetation for the period of responsibility set by section 515; (3) upon full completion of reclamation the remaining of the remaining portion of the bond is to be released. The section also sets forth a procedure for an informal conference in lieu of a formal hearing on bond release.

176 Section 520. - Citizen suits

176 This section sets forth the standing and procedural rules to be applied to suits brought under the act. Suits may be brought against the United States or other government municipalities for violation of the act or rules, regulations or permits issued thereunder, or against any person who is alleged to be in violation of any rule, regulation, order or permit issued under the act. Cost of litigation and attorney fees may be awarded by the court.

176 Section 521. - Enforcement

176 Procedures to be followed by the Secretary in the enforcement of the act are set out in section 521. In order to obtain approval of a State program, subsection (d) of section 521 requires that the State's enforcement mechanism be no less stringent than those of section 521 applicable to the Secretary. Under subsection (a), the Secretary is required to order a Federal inspection if he has reason to believe the act is being violated - after giving the State regulatory authority 10 days to respond. A scheme requiring the cessation of operations where serious hazards to health or safety or the environment is included in section 521 in addition to procedures to be followed for other violations. Requirements for the contents of notices and orders under the act, for secretarial enforcement of a State program, and judicial procedures are also set forth.

176 Section 522. - Designated areas unsuitable for surface coal mining

176 Under this section, a State must include a process for designating areas unsuitable for all or certain surface coal mining in order to receive approval of its program. The designation of an area is required if it is established that the land cannot be reclaimed under the requirements of the act. All other designations are discretionary with regulatory authority. The Secretary is directed to conduct a review of Federal lands under the designation criteria of this section and provision is made for petitioning the regulatory authority to invoke the designation process. Certain statutory designations are also included in this section including lands within boundaries of national forest - subject to certain conditions - and other areas set out in the section.

176 Section 523. - Federal lands

176 This section requires the Secretary to promulgate a Federal lands program no later than 6 months after the date of enactment of the act. All the

requirements of the act are to be incorporated into this regulatory program and imposed on existing operations. This section also grants the Secretary authority to enter into a cooperative agreement with a State for State regulation of coal surface mining operations on Federal lands provided that the Secretary retains the authority to approve or disapprove mining plans and to designate Federal lands as unsuitable for surface coal mining.

177 Section 524. - Public agencies, public utilities, and public cooperations

177 This section provides that municipalities of the Federal, State or local governments, including any publicly owned utility or publicly owned corporation, must comply with the provisions of title V.

177 Section 525. - Review by the Secretary

177 Under this section, a permittee issued a notice order pursuant to the enforcement provisions of the act, may petition the Secretary for review of such notice of order within 30 days. Procedures to be followed by the Secretary in such review are set forth in this section including the requirement that an investigation and findings be made. The Secretary is authorized to grant temporary relief in certain circumstances during the review.

177 Section 526. - Judicial review

177 Jurisdiction over review of the Secretary's action is established by this section. Secretarial actions to approve or disapprove a State program or implement a Federal program are subject to judicial review by the U.S. court of appeals for the circuit which contains this State whose program is at issue. Promulgation of regulations are reviewable by the U.S. Court of Appeals in the District of Columbia. All other orders or decisions of the Secretary are subject to review in the U.S. district court in the locality in which the surface coal mining operation is located. Procedural rules and the basis of review are also addressed in this section.

177 Section 527. - Special bituminous coal mines

177 This section authorizes the Secretary and the State regulatory authority to issue separate regulations for those special bituminous coal mines located in the West which meet various criteria. Such alternative regulations pertain only to the standards governing onsite handling of spoil, elimination of depressions, creation of impoundments and regrading to approximate original contour. Mines existing prior to January 1, 1972 are eligible for these special regulations

regardless of the subsequent evolution of State regulatory laws. New mines may be eligible under such regulations insofar as specific mine activities carried out pursuant to such regulations are not inconsistent with or undercut existing State laws and the Secretary is directed to change such regulations in order to assure this.

177 Section 528. - Surface mining operations not subject to this act

177 This section provides that the act shall not apply to the extraction of coal by a land owner for his own noncommercial use from land owned or leased by him or extraction of coal for commercial purposes where the surface mining operation affects 2 acres or less.

177 Section 529. - Anthracite coal mines

177 This section requires the Secretary to issue regulations for anthracite surface coal mines which are regulated by the State in which they are located. These regulations are to be issued in lieu of the requirements of sections 515 and 516. Sections 509 and 519 are to be applied under these regulations except for specified bond limits and period of revegetation responsibility. This section requires all other provisions of the act to apply to anthracite coal mines and requires the Secretary to report to Congress as to the effectiveness of State anthracite regulatory programs operating in conjunction with the act.

#### SECTION-BY-SECTION ANALYSIS TITLE VI. - DESIGNATION OF LANDS UNSUITABLE FOR NON-COAL MINING

178 Section 601. - Designation procedures

178 This section establishes a process by which the Secretary of the Interior may designate land as unsuitable for mining of minerals other than coal on Federal lands. The Secretary's authority is limited to such designations where the subject area consists of Federal lands of predominantly urban or suburban character used primarily for residential or related purposes - the mineral state of which remains in the public domain - or where mining operations on Federal land would have adverse impact on lands used primarily for residential or related purposes or where such operations could result in damage to important historical, cultural, scientific, or aesthetic values or natural systems. Under the procedures of this section provision is made for petition to the Secretary to invoke the designation process and the section requires that the impact of a designation be determined prior to any designation under the

section.

SECTION-BY-SECTION ANALYSIS TITLE VII. - ADMINISTRATIVE AND MISCELLANEOUS PROVISIONS

178 Section 701. - Definitions

178 This section sets forth the definition of 28 terms used in the act. Included in these definitions is that of the term "approximate original contour" and this definition makes certain that the term includes terracing or the construction of access roads.

178 Section 702. - Other Federal laws

178 This section establishes that nothing in this act shall be construed as superseding or amending certain specified Federal law including the Mining and Minerals Policy Act of 1970, the National Environmental Policy Act of 1969 and other laws dealing with health and safety and environmental protection.

178 Section 703. - Employee protection

178 This section provides that no person who institutes any proceedings against the act may be discharged or discriminated against because of such action. Procedures for review of a complaint filed under the section are set out and the Secretary is directed to review the economic and employment impacts of enforcement of the act.

178 Section 704. - Protection of program employees

178 This section amends the U.S. Criminal Code to make criminal the murder of an employee carrying out his duties under this act and also makes it a Federal crime to willfully resist or impede or interfere with the Secretary or his agents in the performance of this act.

178 Section 705. - Grants to States

178 This section establishes the Secretary's authority to make grants to States to carry out the responsibilities under this act. Such grants are not to exceed 50 percent of program costs. In addition, Secretary is authorized to cooperate with and assist the States in the development, administration, and enforcement of its program.

179 Section 706. - Annual report

179 The Secretary is to report annually to the President and the Congress concerning the activities carried out under this act.

179 Section 707. - Severability

179 This section provides that the avoiding of this act to any person or in any circumstance shall not affect the remainder of the act or its application to other persons or circumstances.

179 Section 708. - Alaskan surface coal mine studies

179 This section instructs the Secretary to suspend application of provisions of the act to surface coal mining operations in Alaska up to 3 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.

179 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 2 years from date of enactment, the Secretary is to report back to Congress with his recommendations.

179 Section 709. - Study of reclamation standards for surface mining of other minerals

179 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.

179 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.

179 Section 710. - Indian lands

179 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.

179 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 issues by the Secretary.

179 Seven hundred thousand dollars will be earmarked for assisting the Indian tribes to participate in the study.

180 Section 711. - Experimental practices

180 This section authorizes the regulatory authority, with the approval of the Secretary, to authorize departures from the environmental performance standards of the act. Such departures may be authorized if the experimental practice is at least, or potentially more, environmentally protective as are operations conducted in conformance with the act, approvals are not granted for areas larger, or number of operations greater than that necessary to determine the effectiveness of the experimental practice, and a public health or safety is not subjected to hazards greater than those permitted by the standards of the act.

180 Section 712. - Authorization of appropriations

180 This section authorizes appropriations to the Secretary in the following categories: (A) implementation and funding of sections 502, 523, 405(b)(3), \$10 million in the first fiscal year and \$10 million for each of the two succeeding fiscal years. (B) Commencing in first year, and for a period 15 fiscal years thereafter, for the purposes of funding section 507C, there authorized to be appropriated sums reserved from the abandoned mine reclamation fund and such other funds as are necessary to carry out the purposes of section 507C, \$10 million.

180 (C) For administrative and other purposes and the purpose of funding section 705, \$10 million for the first fiscal year is authorized, and for the two succeeding fiscal years, \$20 million and \$30 million.

180 Section 713. - Research and demonstration projects on alternative coal mining technologies

180 This section authorized 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.

180 Section 714. - Surface owner protection

180 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.

180 Surface owner is defined 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.

180 Section 715. - Federal lessee protection

180 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.

181 Section 716. - Alaska coal

181 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 meets the requirements of the act.

181 Section 717. - Water rights

181 This section specifies that no provision of the act shall be construed as affecting in anyway the right of any person to enforce or protect, under applicable State law, his interest in water resources affected by surface coal mining. In addition, this section requires the replacement of water supply affected by a surface coal mine operation.

181 Section 718. - Advance appropriations

181 This section provides that no authority to make payments under this act shall be affected except to such extent or such amount as are provided in advance in appropriations acts.

Additional, concurring, separate, and dissenting views

SANTINI

RUPPE, CLAUSEN, YOUNG, JOHNSON, LAGOMARSINO

LUJAN

MARRIOTT

BAUMAN, SEBELIUS, SYMMS, EDWARDS, RUDD, LUJAN

SUPP-VIEW: ADDITIONAL VIEWS ON H.R. 2 BY CONGRESSMAN JAMES D. SANTINI

I have previously gone on record in support of H.R. 2. I cannot continue in that support so long as Subsection (b) (3) of Section 601 in Title 6 remains. This Section presents several deficiencies in legislative process. Anyone of these deficiencies should serve as a sufficient reason for rejection of this Section:

1. Section 601(b) (3) is not germane to the overall objectives and purposes of H.R. 2. This Section represents a patchwork appendage. It's an indefensible legislative accommodation that has nothing to do with the principle thrust of this legislation - strip mining.

2. The language contained in this Section represents some of the most enticing tidbits for bureaucratic abuse ever written. The result of this Section is that the Secretary of Interior may determine that any Federal land area within any State is unsuitable for noncoal mining operations if it would result in "irreversible damage" to the "cultural," "scientific," or "esthetic values," or "natural systems" of more than local importance. This all-encompassing edict invites widesweeping rule and regulations abuse. It should be emblazoned upon the tombstone of the great unknown bureaucrat. Nowhere in the 180 pages of H.R. 2 is there any attempt to define the scope of application of these all encompassing words.

3. Section 204 of the recently passed "Federal Land Policy and Management Act of 1976" contains a complete system for making and reviewing mineral withdrawals of public lands. In H.R. 2, Section 601(6) (3) contributes nothing to the established policy, but instead creates contradiction and confusion.

4. There is not one scintilla of testimony or evidence to sustain the inclusion of this Section in this bill. There has never been an opportunity provided for public or legislative comment on this section. This Section is solely a product of spontaneous engraftment for individual member accommodations. In four years of legislative examination of strip mining legislation, not one word of testimony of documentary evidence can be found to support this Section.

5. This language represents a piecemeal patchwork attempt at both land use planning, and revision of the 1862 mining law. The bills, (H.R. 5806 and H.R. 5831), have already been referred to the Subcommittee. Both of these bills will offer a forum wherein the public lands and the mineral resource issue can be examined in depth. These are the appropriate vehicles for consideration of the legislative aberration that is contained in Subsection (b) (3) of Section 601.

A cursory examination of this section leads to the inescapable conclusion

that this is a lousy way to legislate. Inclusion of this Section H.R. 2 cannot be rationally defended. Any considered review will compel rejection of the section.

JAMES D. SANTINI.

183 CONCURRING VIEWS OF PHILIP E. RUPPE, DON H. CLAUSEN, DON YOUNG, JAMES P. JOHNSON AND ROBERT J. LAGOMARSINO

We, as minority members of the Committee on Interior and Insular Affairs, support the enactment of H.R. 2. The Committee has struggled for 5 years to develop surface coal mining legislation which would strike a reasonable balance between achieving our energy goals and enhancing the quality of our environment. The Committee has reported similar legislation four times in the last 3 years. While many of us have supported previous efforts to enact a surface mining bill, we believe H.R. 2 to be, on the balance, a more carefully drafted and a better reasoned product of intensive subcommittee and full committee consideration than its predecessors.

H.R. 2 contains many modifications, both major and minor, which will permit a more orderly implementation of the regulatory program and which should assuage the fears of those who have predicted massive production losses and increased unemployment resulting from the provisions of previous bills. We would like to outline for our colleagues those modifications which we feel are the most important.

#### MAJOR MODIFICATIONS CONTAINED IN H.R. 2

Sec. 501(a). Interim Regulations. - The Secretary of the Interior is directed to promulgate interim regulatory procedures for surface coal mining and reclamation operations within ninety days following the date of enactment. The issuance of these regulations has been deemed not to be a major Federal action within the meaning of section 102(2)(c) of the National Environmental Policy Act of 1969. These provisions insure that both State regulatory agencies and coal operators will receive detailed standards at an early date thereby removing much of the uncertainty surrounding the implementation of a major regulatory program. Publication of these interim standards will not be delayed by the time consuming environmental impact statement process.

Sec. 506. Permits. - A major criticism of previous bills was the inflexibility of not allowing permits to exceed a primary term of five years and requiring the permittee to commence operations within 3 years. H.R. 2 now provides that the primary term of a permit may exceed 5 years if a longer term is reasonably needed to allow the applicant to obtain necessary financing for equipment and the opening of the operation. Furthermore, the requirement to commence operations within three years has been modified to allow extensions of time for reasons of litigation or conditions beyond the control and without the fault of the permittee.

Sec. 510(b) (5). Alluvial Valley Floors. - Several major changes have been made to the section containing the so-called prohibition on mining on alluvial valley floors in the West. Controversy in previous bills centered on both the provision dealing with water systems that supply these valley floors and the grandfather clause which exempted some mines from the prohibition. Both of these provisions have been modified. Whereas in previous bills, a surface mining operation was not permitted to "adversely affect" the quantity or quality of water in surface or underground water systems that supply alluvial valley floors, the standard now states that the operation must not "materially damage" the quantity or quality of water in the water systems. We believe that this new standard better reflects the intent of the committee to protect the upland sources of water for alluvial valley floors but not to impose an absolute standard implied by the term "adversely affect". Prior bills exempted mines which were producing coal in commercial quantities from the provisions of the prohibition. H.R. 2 expands the grandfather clause protection to proposed mines which had obtained a specific state permit or for which substantial financial and legal commitments had been made prior to January 4, 1977. We believe the expansion of the grandfather clause constitutes one of the most important decisions made by the Committee during consideration of H.R. 2. This decision insures that many Western mines which have been on the drawing boards for a number of years and for which millions of dollars in exploration, land and mineral acquisition, and planning activities have been expended will be permitted to come on stream if all of the environmental standards of the bill can be met. It is important to note that no modification has been made to the tough environmental protection performance standard contained in section 515(b) (11) (F) which requires mine operators to preserve throughout the mining and reclamation process the essential hydrologic functions of alluvial valley floors.

Sec. 510(b) (6). Consent of Private Surface Owner to Mine Private Coal. - We are greatly troubled by the committee's adoption of an amendment to require the

permit applicant to submit the written consent of a private surface owner or a conveyance that expressly grants the right to extract coal by surface mining methods or evidence that establishes that the conveyance was intended to authorize surface mining in all cases where the private mineral estate has been severed from the private surface estate. While the intent of this amendment is to supersede the effect of prior state judicial interpretations of the broad form deed used in a number of Appalachian States, we believe the impact of the amendment will be much greater. This amendment appears to confer new property rights on some surface owners in all States and to impose a new concept of Federal property law in an area traditionally reserved to the States. We recommend that this provision be closely scrutinized for possible amendment or deletion on the floor.

Sec. 515(b)(7). Prime Agricultural Lands. - The Committee heard testimony from citizens and local officials of Illinois and Indiana requesting that special attention be given in the bill to the protection of prime agricultural lands. Working with officials of the Soil Conservation Service, the Committee added a number of provisions to H.R. 2 designed to insure the proper reconstruction of soil strata within those areas classified as prime agricultural lands. Prime agricultural lands have been defined in section 701 as those lands containing a number of soil characteristics and which historically have been used for intensive agricultural purposes and whose present agricultural use provides a significant contribution to the local economy of the area. Section 507(b)(16) requires a soil survey to be done for those lands which a reconnaissance inspection suggests may be of prime agricultural land classification. The environmental protection performance standards of section 515(b)(7) requires segregation, stockpiling if not utilized immediately, replacement, and regarding of the "A", "B", and "C" horizons of the natural soil. The "B" and "C" horizons can be mixed together if an equal or better root zone can be obtained. We believe that these environmental standards will adequately protect the resource which we are trying to conserve. The Carter Administration has recommended that a 5-year moratorium be placed on mining on prime agricultural lands until studies are conducted to learn if the soil can be returned to its original productivity. However, the Soil Conservation Service indicated during a briefing before the committee that it believed standards such as the committee adopted would restore the soil to the original productivity. Furthermore, data contained in the report of the Interagency Task Force on the Issue of a Moratorium or a Ban on Mining in Prime Agricultural Lands appears to

confirm the view that a moratorium is not justified.

Sec. 515(c). Mountaintop Removal. - The Committee deleted the variance procedure required for mountaintop removal and steep slope mining in previous bills. In its stead, the regulatory authority may grant a regular permit for operations using the mountaintop removal mining method if the applicant meets certain additional requirements. By making this modification, the committee has recognized the validity of mountaintop removal as an acceptable mining method. Standards for valley fill or head of the hollow fill are cross-referenced to section 515(b) (12).

Sec. 520. Citizen Suits. - After vigorous debate in both subcommittee and full committee, the committee retained an amendment authorizing courts to award costs of litigation including attorney and expert witness fees to any party. The committee also adopted an amendment striking section 520(f) which permitted any resident of the United States to bring an action for damages without regard for the amount in controversy in United States district court.

Sec. 714. Surface Owner Protection. - The provisions of section 714 apply where coal is owned by the Federal Government under land which is owned by a private rancher, farmer, or resident. This section has been a subject of controversy in every surface mining bill that the committee has reported. Previous bills have given the surface owner three choices: (1) the right to say "no" to surface mining on his land; (2) the right to sell his land; or (3) the right to avail himself of a complicated formula administered by the Secretary of the Interior to compensate the surface owner for costs and loss of income during the mining process. The surface owner was not permitted under penalty of a civil fine to negotiate directly with a coal operator. The committee decided that the formula arrangement was administratively too burdensome and that it was better public policy to allow ranchers and farmers to retain ownership of their land and still permit coal development through a lease arrangement. We believe that this modification will permit the Secretary of the Interior to formulate a more rational Federal coal leasing policy.

We believe the above modifications, with the exception of private surface owner consent over private coal, represent sound public policy decisions. These changes have been made in response to legitimate criticisms of previous bills. The basic concepts of the legislation have been retained.

#### CONCLUSION

There is still a tremendous need for a nationwide program to reduce the

environmental impacts of present and future surface coal mining and to 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.

President Carter in his energy address to the Congress has called for a 65-percent increase in coal production by 1985. This would require an annual production level of over 1 billion tons within 7 years. Much of this expansion will have to come from the West where the Federal Government effectively controls over 80 percent of the vast subbituminous and lignite reserves. 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. 2 performs the task fairly and equitably. It is not perfect legislation. It is susceptible to amendment on the floor. It is no longer 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. 2 represents a legislative work product that is much improved over previous efforts. We strongly urge its passage in the 95th Congress.

PHILIP E. RUPPE.

DON H. CLAUSEN.

DON YOUNG.

JAMES P. JOHNSON.

ROBERT J. LAGOMARSINO.

SKUBITZ

SEPARATE VIEWS OF REPRESENTATIVE JOE SKUBITZ

This bill has gone through many changes which have had a positive result. This bill although still not personally acceptable to me in some respects is a more tightly worded and intelligently written piece of legislation than any of its predecessors.

The sections of this bill which are still unacceptable to me, and I hope will be appropriately amended on the House Floor are:

1. Title IV should limit the use of the proposed reclamation fund to the reclamation of "orphan lands" occasioned by the coal mine industry. To attempt to cure the mistakes of other mining industries by taxing the coal industry, which tax everyone knows will be borne ultimately by the American consumer, is not only blatantly unfair and inappropriate but is not logical. I recommend that the Congress of the United States directly address this matter, and place the responsibility for reclamation on that industry which occasioned the desecration, and if necessary, the cost be passed on to the consumers of those products.

2. Also, in Title IV, Section 402(h) should be struck. As the bill now stands, this section is a remnant of an agreement previously reached between Congressmen from different sections of the country in a previous Congress. While the Committee action was intended in part to remedy my strong opposition to having 50 percent of the proceeds resulting from the per ton tax, provided for in Section 402(d), locked up for use in its state of origin, I perceive what has been done, in effect, goes so far as to restrict or limit the proceeds of the reclamation fund which can be used in any state.

One of the primary thrusts of this legislation, as it was originally conceived, was to provide a national reclamation fund to address orphan lands precipitated by the coal industry. To limit the amount to be expended in any one state is to do a serious injustice to those states whose major coal resources have been depleted. These states are now left only with the scarred lands to remind them of their once significant contribution to the nation at a time when we were involved in a world war.

Striking subsection 401(h) does not in any way impair the Secretary's authority to allocate funds for reclamation purposes under approved state programs or his ability to undertake such reclamation programs as he deems advisable. Striking this subsection allows this fund to become, once again, a national reclamation fund rather than a fund carved up and limited by sectional

interest. Striking section 401(h) will allow expeditious implementation of the programs envisioned in this act.

Furthermore, in view of President Carter's energy statement to the Congress, it was emphasized the need that coal production be accelerated on a greater scale than ever before. Because of President Ford's veto of a similar bill which also affected coal production and unemployment, I believe the wisest course now would be to delay consideration of this bill. This would give the new Ad Hoc Energy Committee ample time to determine the affect H.R. 2 will have on coal production as well as employment.

Members of the Ad Hoc Energy Committee who will be responsible for formulating the legislation to meet this country's energy needs may view this bill differently than Interior Secretary Andrus - whose environmental record is well established and recognized.

I make this suggestion with full knowledge of the General Accounting Office Report issued by the Comptroller General on April 15, 1977. With all due respect to the GAO's expertise in the field of accounting, I question their expertise in the field of mining and mining procedures.

Finally, I would like to commend the committee, and the chairman, for their fair minded and even handed approach throughout the processing of this piece of legislation.

JOE SKUBITZ.

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SEPARATE VIEWS BY MR. LUJAN

Much has been said about the problem presented by the language contained in Sec. 522(e) of H.R. 2, the "Surface Mining Control and Reclamation Act of 1977":

"(e) after the enactment of this Act and subject to valid existing rights no surface coal mining operation except those which exist on the date of enactment of this Act shall be permitted -

(2) on any lands within the boundaries of any national forests . . . "

As the Committee Report indicates, this section's limitation that the prohibition is "subject to valid existing rights" is not intended to open up national forest lands to strip mining when previous legal precedents have prohibited stripping." Naturally, the bill's language is also subject to the corollary that it is not intended to preclude mining where the owner of the mineral has the legal right to extract the coal by surface mining method.

Concerns in this area are not merely hypothetical. For example, in the establishment of the national forest system in many areas of the country, grantors sold land to the United States government for inclusion in a national forest, but reserve mineral rights for themselves and deeds of conveyance for which the United States was a party. The language of Sec. 522(e) itself, the thrust of the report discussion and common sense all dictate that the only logical interpretation of Sec. 522(e) is that enactment of this legislation does not disrupt the relationship between the owner of the coal and the Federal government.

I believe, therefore, that it would be contrary to the intention of the Act, and a misuse of the Act, for the Forest Service (or anyone else) to argue that the Surface Mining Control and Reclamation Act somehow modifies the relationship between the owner of the surface and subsurface rights. Clearly, alienation by sale, assignment, gift, or inheritance of the property right of the coal is not affected by the Act nor is the legal right to mine the coal in any way modified if such right existed prior to enactment of the Act.

MANUEL LUJAN, Jr.

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#### SEPARATE VIEWS FROM CONGRESSMAN DAN MARRIOTT CONCERNING H.R. 2

I do not support H.R. 2 and want to make it clear why I am not joining my colleagues in the dissenting views.

I voted to report H.R. 2 out of committee because further consideration by the full committee was getting us nowhere.

We considered H.R. 2 for a long time in subcommittee. Then during full committee consideration, it became apparent that there were still substantial disagreements and many amendments to be submitted on the Floor regardless of continued consideration by our committee. With this in mind, I felt it was in the interest of all parties to report this legislation out of committee so that issues in dispute and the numerous new amendments could be considered by the entire House of Representatives without undue delay.

This action should not be interpreted in any way to mean that I support this legislation. We need a national energy policy, and accelerated coal production is the cornerstone of that policy. This bill as reported out goes far beyond setting necessary national standards and in my opinion would seriously deter coal production and lessen our chances of energy independence by 1985.

Therefore, I am opposed to the bill in its present form.

DAN MARRIOTT.

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DISSENTING VIEWS

We strongly oppose the passage of H.R. 2, the "Surface Mining Control and Reclamation Act of 1977," as amended and reported by the Committee on Interior and Insular Affairs. Our opposition is grounded not in a lack of concern for environmental safeguards and preservation of the ecology, but because we know that this legislation will seriously impair the ability of our Nation to combat the continuing energy shortage which President Carter rightly has compared to a national crisis.

This bill contains essentially the same objectionable features as H.R. 25 of the 94th Congress which was vetoed by then President Ford, as well as H.R. 9725 and H.R. 13950 both of which were blocked in the Committee on Rules at the close of the 94th Congress.

Only hours before the report you are now reading was filed, and less than 48 hours after the bill was reported by the Committee on Interior and Insular Affairs, the President of the United States stood before the Congress on the evening of April 20, 1977, and called for courageous decisions which will solve the energy crisis. He called this "the greatest domestic challenge that our Nation will face in our lifetime." He asked us to join him in forging "a comprehensive national energy plan to cope with a crisis that otherwise could overwhelm us."

As a major recommendation of his energy policy, the President called upon America to turn to a new reliance on coal as a major energy resource, in preference to natural gas and oil. The President correctly stated: "Although coal now provides only 19 percent of our total energy needs, it makes up 90 percent of our energy reserves." He also called for an increase in the production of coal from the current level of 650 million tons a year to 1 billion tons a year, a two-thirds increase by 1985.

So why on earth do we have this unnecessary, bureaucratic bill before us? This misguided legislation tramples States' rights, destroys small business, invites endless litigation, increases Federal bureaucratic power many times over, increases consumer costs and lastly, will cause a major reduction - yes, a reduction - in our annual output of coal.

It is both ironic and irresponsible that this Congress would even consider this legislation in view of the tremendous increase in coal production called for by the President.

Are we "against" the environment? Hardly. We believe adequate State and Federal laws already exist to meet the major objectives this bill seeks. The

passage of the "Federal Coal Leasing Amendments Act of 1976" coupled with other laws such as the Clean Air Act, Federal Water Quality Act, Natural Environmental Policy Act, should be sufficient to allow coal development and at the same time protect environmental concerns. In addition, the Department of the Interior now has in effect tough and comprehensive coal leasing regulations which need only to be put into motion. Most importantly, 38 States have modified and strengthened their laws and regulations to cope with the increased emphasis on coal development by strip mining methods.

The major reasons stated by President Ford for vetoing H.R. 25 in the previous Congress remain valid today. There will be substantial losses in jobs (4,000 to 19,000), consumer utility prices will be driven up (average household \$34 to \$80 more per year), and hundreds of millions of tons of coal will never get out of the ground.

We realize that during the last 2 years Federal strip mining legislation has become an emotional issue susceptible to distortion on both sides. In an effort to answer the charge that both proponents and opponents were straying from the true facts, the Environmental Protection Agency (EPA) and the Council on Environmental Quality (CEQ) commissioned (at a cost of \$200,000) a complete analysis by experts of H.R. 2's predecessor legislation H.R. 13950, which in all essential respects was the same bill. The study was contracted to ICF, Inc. with the directive that the proposed Federal strip mining legislation be examined for its total impact on jobs, coal production, environmental problems, and related issues. Proponents of the legislation fully supported the EPA-CEQ study expecting it to prove their often repeated thesis that such legislation would mean no decrease in jobs or coal production. Those proponents have been strangely silent since the ICF, Inc. study was released on January 24, 1977. Requests to the Secretary of the Interior, Mr. Andrus, to give his views on the study have been ignored.

There is good reason for the silence by this bill's supporters. The ICF, Inc. study predicted an immediate 1978 coal production loss of 54 million tons in Appalachia alone assuming the increased reclamation costs the bill imposes. The expert report stated that the surface owner consent provision in the bill could totally and permanently remove from mining between 800,000 tons and 8 and a half billion tons of known coal reserves. At least 4,300 people will be put

out of their jobs, the report predicts, because of the provisions in the bill.

This last prediction may well have been the cause of a major reversal by the United Mine Workers Union. The UMW executive board voted unanimously against endorsing H.R. 2 and forwarded this resolution to the committee, a change in their past position.

In addition, Governors, legislators, and energy officials of many States opposed H.R. 2. We urge you to listen to their wisdom. For example: from the

Governor of Tennessee, Ray Blanton, "I vigorously oppose the imposition of any new Federal standards . . . or the creation of another Federal agency . . .";

from the Lieutenant Governor of Virginia, John M. Dalton, "I urge you to consider not what the States weren't doing 10 years ago, but what they are doing

now"; from State Senator Clifford B. Latherow in Illinois. "What's good for Wyoming in reclamation certainly would not work in Illinois"; and from the president of Montana's Western Environmental Trade Association, "To pass Federal

strip mine legislation would only create another bureaucratic nightmare without benefit to the environment or the people."

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These are only a few samples of the opposition expressed by witnesses and others representing a broad spectrum of concerns.

Members should realize that enormous additional losses in coal production could result from provisions of the bill that simply cannot be quantified. Examples of this are numerous throughout H.R. 2. For instance, there is no way

to quantify the losses that could result from the provision which allows the designation of large land areas as unsuitable for surface coal mining under conditions based on ambiguous factors such as where surface coal mining operations will -

affect fragile or historic land in which such operations could result in significant damage to important historic, cultural, scientific, and esthetic values and natural systems;

affect natural hazard lands in which such operations could substantially endanger life and property, such lands to include areas subject to frequent flooding and areas of unstable geology.

The surface owner consent provision of H.R. 2, which allows the land surface owner to withhold consent for surface mining of subsurface coal owned by the public, will result in huge losses.

Perhaps the most unpredictable possibility of disruption of coal production is contained in H.R. 2's citizen suit provisions based on the extremely loose criteria established for the basis of such suits. For example, the bill states

in part that ". . . any person having an interest which is or may be adversely affected may commence civil action . . . against the United States . . . which is alleged to be in violation of the provisions of this Act or . . . against any other person who is alleged to be in violation of any rule, regulation, or order or permit issued pursuant to this title . . ."

The recent history of environmental litigation makes safe the prediction that these citizen suit provisions could and will result in lengthy and costly legal delays that will inevitably discourage production of coal and drastically raise the price to consumers.

Additionally, significant losses could result from the litigation that will be necessary to resolve ambiguous features of the bill. This will be an open invitation for the courts to legislate. The ICF study realizes this problem, stating that "Imprecise and undefined terms create a high degree of uncertainty in predicting impacts, and could likely result in extensive litigation. A distinction can be made between flexibility and ambiguity. Flexibility refers to the ability of the regulators to make case-by-case decisions based upon clearly defined criteria. Ambiguity, on the other hand, refers to poorly defined criteria, which could result in judicial interpretation and regulatory inflexibility." Consider just a few of the imprecise terms of H.R. 2 which will inevitably lead to court decisions and interpretations; "underdeveloped range lands", "materially damage", "substantial financial and legal commitments", "underground water systems", "natural systems", "adversely affect", "imminent environmental harm", et cetera. It would seem that Congress would have learned the bitter lesson of imprecise legislation. Recall such undefined terms as the "nonsignificant deterioration" language of the Clean Air Act. Consider also what a Federal court has done to the scope and affect of section 404 of the Water Pollution Control Act, as a result of environmental litigation, expanding the jurisdiction of the Corps of Engineers far beyond any intent of Congress.

These examples demonstrate what can happen when a court feels compelled to apply either a more rigid or a more liberal interpretation of ambiguous language - interpretations that may be far more different than the Congress would have intended if the particular circumstances before the courts had been presented to the Congress. Especially in a time of energy crisis, we cannot afford to rely on the courts to thrash out these problems which should, in the first place, be resolved at the legislative, not the judicial, stage.

One aspect of this bill deserves special mention and condemnation. It is contained in the permit application section which will control the steps of every company wishing to begin, or in some cases expand, mining operations. This bill's procedures are a bureaucrat's dream and an energy-short citizen's nightmare.

The procedural requirements and the delays inherent in this bill reveal a near total disregard for the numerous difficulties inherent in a start-up regulatory program as complex as this one. Lengthy delays in the opening of new mines are almost a certainty. The shutdown of many existing mines is more than likely and witnesses so testified. Expansion of existing mines will be delayed. The inevitable result will be a significant drop in coal production in the immediate future. Beyond that lies more delays in the expansion of coal production. There is the distinct possibility that there will be no long-term future at all for the surface mining of coal if this bill is enacted. Some provisions of this bill seem purposely designed as a matter of policy to shut down mines, especially small mines in the Appalachian region of the country. With this in mind, the impact upon the Nation's coal production is compounded.

The ICF study we referred to earlier based its conclusions and assessment on the impacts to be realized if H.R. 13950 were enacted. But H.R. 2 is virtually the same bill as H.R. 13950, and it should be understood that most of the data contained in the ICF study still applies. As is usual when major and controversial issues confront the Congress there undoubtedly will be attempts to discredit the ICF report and its starkly disturbing conclusions. But there has been an even more disturbing attempt to distort the conclusions this report contained. For example, the study was completed by ICF, Inc. on January 24 of this year and forwarded to EPA and CEQ. Within the span of only 1 week, the final draft summary was almost entirely rewritten, though not by the independent ICF, Inc. experts, but by certain Federal executive agencies which were asked only to comment on the final draft, not to rewrite it. The executive agencies explain that their agents offered "nonsubstantive clarifying language", implying that no one seriously violated the integrity of the final draft. For the benefit of our colleagues, we have extracted specific language from both the actual and the doctored versions to give you a clear picture of what took place. If you compare the language of the original January 24 version with the revised February 1 version produced by the executive agencies, you will find rhetorical excavation-work which is the envy of any stripminer:

ICF STUDY OF STRIP MINING LEGISLATION

Original

Version of January 24

"However, there are numerous provisions in H.R. 13950 not directly related to costs which could create major difficulties. Such impacts include (1) substantial production impacts that could result from possible interpretations of the alluvial valley provisions, (2) delays in permitting due to inability to comply within established timetables and/or insufficient administrative funding, (3) extensive litigation resulting from ambiguous and undefined terms, (4) unintended effects due to mismatches between the apparent intent and the actual wording, and (5) losses to coal reserve base."

"For example, while a moderate interpretation of the alluvial valley floor provisions could affect four mines with an additional production in 1978 of 12 million tons, a worst case interpretation could impact up to 51 million tons of western production by 1978 and 211 million tons by 1985."

"In addition there are several other non-cost provisions in H.R. 13950 in which the wording of the provisions could have effects quite different from the apparent Congressional intent."

"However, the actual wording could result in unnecessary restrictions, administrative inflexibility, and/or additional litigation."

"The reserve impacts of H.R. 13950 could range between 8.5 and 28.3 billion tons, or between 2.0 and 6.5 percent of total reserves. These impacts are equivalent to between 6.2 and 20.7 percent of strippable reserves."

"Imprecise wording in H.R. 13950 could lead to uncertain interpretation; which could significantly limit western surface coal mining."

"Imprecise and undefined terms create a high degree of uncertainty in predicting impacts, and could likely result in extensive litigation. A distinction can be made between flexibility and ambiguity. Flexibility refers to the ability of the regulators to make case-by-case decisions based upon clearly defined criteria. Ambiguity, on the other hand, refers to poorly defined criteria, which could result in judicial interpretation and regulatory inflexibility. Such imprecise terms include "existing coal mine," "valley floor," "undeveloped range land," "adversely effect," "not significant," and "substantial loss."

"The worst case assumption, that mining would be prohibited at any proposed

mine with any part of the lease area within an alluvial valley floor, could impact up to 51 million tons of production by 1978, 95 million tons by 1980 and 211 million tons by 1985. These impacts are detailed in Table D."

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	Low	Moderate	Worst case
1977	0 4		35
1978	0 12		51
1979	0 16		71
1980	0 20		95
1981	0 24		107
1982	0 30		138
1983	0 32		152
1984	0 35		185
1985	0 35		211"

"It is estimated that approximately 0.8 to 8.5 billion tons of reserves could be precluded from mining due to the surface owner's consent provision."

"In the course of this analysis of the impacts of H.R. 13950, several aspects of the bill appear to merit further consideration. The characteristic common to all of the issues raised here is that the adverse effects of the bill could be exacerbated due to the actual wording employed in H.R. 13950, which may not reflect Congressional intent."

"The provisions for declaring lands as unsuitable for mining appear to offer citizens an easier means of forcing hearings than is provided by the standard permit hearing process. Further, the regulatory authority has little flexibility in deciding whether hearings are actually warranted."

"The technology which might be required to control sedimentation is phrased differently from EPA's effluent guidelines. While it was interpreted in this report to require EPA's 1983 standard of 'best available technology economically achievable' in 1978, it could be interpreted differently and could result in

costly and time consuming litigation."

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Modified

Version as of February 4

"However, several provisions in H.R. 13950 are subject to varying interpretations. In the event that these terms are given very stringent interpretations, the impacts could be substantially higher."

"For example, while a moderate scenario of the alluvial valley floor provisions could affect four mines with an additional production in 1978 of 12 million tons, a high impact interpretation could impact up to 25 million tons of western production by 1978 and 104 million tons by 1985."

"In addition there are several other non-cost provisions in H.R. 13950 in which the wording of the provisions could result in additional restrictions, administrative inflexibility, and/or delays."

(Language deleted in this version.)

"The reserve impacts of H.R. 13950 could range between 8.1 and 20.0 billion tons, or between 1.9 and 5.5 percent of total reserves. These impacts are equivalent to between 5.9 and 17.6 percent of strippable reserves."

"Some words and phrases in H.R. 13950 are subject to varying interpretations. In the event that these terms were given a very stringent interpretation, the impacts of H.R. 13950 could range substantially higher."

"Certain phrases on Section 510(b)(5) are subject to different interpretations. For example, it is not clear whether the term "undeveloped range lands" includes lands which have the potential for hay production. Nor is it clear what kind of changes in water quality and quantity could constitute "adverse effects" within the meaning of Section 5010(b)(5)(B). Other phrases may also be interpreted differently. Some of these uncertainties may be resolved when administrative regulations defining these terms are promulgated under the statute. Others will be clarified as regulatory authorities proceed to administer the Act on a permit by permit basis. Finally, the possibility exists that judicial interpretations of these terms may in some cases be sought."

"The high impact assumption, that mining would be prohibited at about one-half of the proposed mines having any part of the lease area within an alluvial valley floor, could impact up to 17 million tons of production by 1978, 47 million tons by 1980 and 104 million tons by 1985. These impacts are detailed in Table D."

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ALLUVIAL VALLEY FLOOR PRODUCTION IMPACTS \*4\*[Millions of tons]

	Low	Moderate	High
1977	0 4		17
1978	0 12		25
1979	0 16		35
1980	0 20		47
1981	0 24		53
1982	0 30		68
1983	0 32		75
1984	0 35		91
1985	0 35		194"

"It is estimated that approximately 0.4 to 4.2 billion tons of reserves could be precluded from mining due to the surface owner's consent provision."

"In the course of this analysis of the impacts of H.R. 13950, several aspects of the bill appear to merit further consideration. The characteristic common to all of the issues raised here is that the impacts of the bill could be exacerbated due to varying interpretations, which in some cases differ from the apparent intent (as reflected in the statutory language and committee report)."

"The provisions for declaring lands as unsuitable for mining could possibly offer citizens an easier means of forcing hearings than is provided by the standard permit hearing process."

"The technology which might be required to control sedimentation is is phrased differently from EPA's effluent guidelines. It was interpreted in this report to accelerate EPA's 1963 standard of 'best available technology economically achievable' into 1978."

We believe that we can safely conclude that the substantial changes which were made by the executive branch in the summary conclusions of the ICF, Inc. report constitute an obvious attempt to slant the facts in favor of H.R. 2 or

any similar strip mining legislation. Repeated attempts to obtain refutation of these facts by the proponents of the bill have been met with vague generalities and denials while the true ICF conclusions have been largely ignored. We think this constitutes an important point when the Nation's future welfare and energy sufficiency depends on the truth about this bill.

In his appearance before the House Energy and Environment Subcommittee on February 8, Secretary Andrus was asked if he was familiar with the ICF, Inc. study, and if so, did he base any of his recommendations concerning H.R. 2 on its contents. He answered "No," to both questions. The Secretary was then asked if he would recommend that the Subcommittee postpone consideration of H.R. 2 until such time as the Department got around to reviewing the study or until President Carter had formulated and forwarded to the Congress his long-range energy policy. To this, the Secretary also gave two "Nos." It is important to note that on February 7, the day before, in testifying before the Senate Public Lands and Resources Subcommittee on S. 7, Secretary Andrus did indicate that he was aware of the ICF study.

In view of what appears to have been substantial tampering with the conclusions reached by ICF's independent expert study perpetrated by certain executive agencies and the feigning of ignorance by the Secretary of the Interior relative to his awareness of this study, we might conclude that perhaps there has been a deliberate effort to deceive the Congress and the public concerning the real impacts of H.R. 2 and the significant coal losses it guarantees.

We would ask our colleagues to consider what we have just described, and to ask yourselves what a reasonable, objective observer might conclude about what has taken place. He would probably conclude that there has not been much hard thinking going on, that this bill before us is indeed ambiguous and the administration so seemingly divided on important aspects of stripmining that all the President's men would just as soon we vote this thing through and call it a day.

We would suggest, however, that this is not the way responsible Government works. We are less concerned about individuals or groups in the executive branch who might need to save face than we are about the millions out of work.

If the seriousness of President Carter's energy message is to be believed, and we think it is, Congress must decide once and for all whether or not

national stripmining legislation is needed to promote coal development, and if so, is H.R. 2 the proper vehicle with which to do it? We believe it is not.

To summarize the objectionable features of this bill, we believe that.  
H.R.  
2 will -

(1) impose arbitrary, confusing, unnecessary and unreasonable procedural requirements on the surface mining of coal. The results will be disastrous to consumers and small coal operators, making the bill anticonsumer and anti-small-business legislation;

(2) illogically require each State to designate areas unsuitable for surface coal mining based solely on some regulators arbitrary determination of whether reclamation is physically and economically possible. It allows no consideration of new mining and advanced reclamation methods or other factors influencing a surface coal mine operator's economic ability to demonstrate that proper reclamation of such lands can be accomplished;

(3) needlessly impose a costly, burdensome, and onerous tasks upon any coal operator requiring him to submit detailed information with each permit application to surface mine coal. The economic impact and high cost of supplying such sophisticated and costly information will ultimately force many small coal operators (whose contributions to the energy supply are essential) out of business;

(4) impose arbitrary and unreasonable environmental protection performance standards by: (a) prohibiting the placement of spoil and so forth on the downslope in contour surface coal mining even though it could be properly shaped, graded and revegetated. Again this is an anti-small-business provision since it is largely small operators who operate on steep slopes; (b) requiring the restoration of the approximate original contour of the land after surface mining by backfilling, compacting and grading of the land with all highwalls, spoil piles, and depressions eliminated. In many cases these steps may be unnecessary for putting the mined land in a responsible condition. When they are not necessary this requirement imposes a very costly and often physically impossible burden of finding enough soil to fill in the area, replace the overburden and topsoil and restore the land to its "approximate original contour"; and (c) requiring absolute preservation of the hydrologic integrity of alluvial valley floors and the restoration of the water recharge capacity of the minesite to approximate premining conditions as a prerequisite to obtaining a permit to surface mine coal. This assumes that nature's hydrological conditions, which are sometimes inadequate indeed, must be forever preserved and never improved. This last requirement would necessitate the possession of the

omnipotent powers only a deity could possess.

(5) regulate underground coal mining operations and the surface effects of underground coal mining by imposing arbitrary and unreasonable procedural and environmental standards. The regulation of underground mining is a separate subject and should not be confused with surface mining regulation.

(6) require the enforcement of unreasonable permit provisions that are overly harsh and will needlessly discourage mining. This bill includes civil penalties of up to \$5,000 per day and criminal penalties of a \$10,000 fine and/or 1 year's imprisonment as well as authority to issue arbitrary "shutdown orders" by inspectors and individuals from various Federal agencies as well as the States with limited and varying expertise or knowledge of surface mining operations and problems. This adds a new burden to the Federal courts and sends forth still greater swarms of Federal agents.

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(7) permit citizen's suits, and public participation in all procedural matters and allow for almost constant legal intervention by third parties thus creating a level of litigious harassment which could lead to deliberate abuse of the legal process.

(8) impose a reclamation fee of 35 cents per ton on surfacemined coal and 15 cents per ton on deep-mined coal. The proceeds will pay for land reclamation. This anticonsumer provision will inequitably increase costs of electrical energy for citizens who buy from coal burning utilities.

(9) grant veto power to land surface owners over disposition of federally owned as well as privately owned subsurface coal where the surface estate is a private ownership. All the people of America own this Federal coal and we believe they have a right to use it, especially at a time of energy shortage and crisis. Even more serious is the provision whereby the private owners of coal under lands the surface of which is owned by others will be preempted from having their coal mined if the surface owner does not consent. This is clearly unconstitutional and must be stricken from this bill.

Finally, we would say to our colleagues, that if the energy crisis described by President Carter is real (and we believe it is) and if those charged with protecting the people of America and their interests do indeed wish to increase energy production (and we do) and if in fact, coal is to be one of the central

and essential resources to meet this need, then this legislation should be soundly rejected.

How can any of us rush to the media to trumpet our concern with the energy problem and then go home and explain that we voted in favor of a bill which could reduce coal production by up to 200 million tons by 1985 and removes possibly 8 1/2 billion tons of coal from ever being mined? We cannot justify such hypocrisy and your constituents who need heat, light, and jobs, we believe, will share our view.

Yes, we do want to preserve the environment. And without this bill, strip mining still will have to take that proper and important concern into full account because of existing Federal and State law.

But human beings are also an important part of the environment - we believe the most important part of all.

BOB BAUMAN.

KEITH SEBELIUS.

STEVE SYMMS.

MICKEY EDWARDS.

ELDON RUDD.

MANUEL LUJAN, Jr.